

2-ethylhexyl acrylate

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Issue date: 25 Jan 2017 Revision date: 23 Jul 2020 Version: 3.1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	: Substance
Trade name	: 2-ethylhexyl acrylate
IUPAC name	: 2-ethylhexyl acrylate
EC Index-No.	: 607-107-00-7
EC-No.	: 203-080-7
CAS-No.	: 103-11-7
REACH registration No	: 01-2119453158-37-0040
Type of product	: Stabilized product
Formula	: C ₁₁ H ₂₀ O ₂
Synonyms	: 1-hexanol, 2-ethyl-, acrylate / 2-ethyl-1-hexanolacrylate / 2-ethylhexyl 2-propenoate / 2-ethylhexyl acrylate / 2-ethylhexyl ester acrylic acid / 2-ethylhexyl propenoate / 2-propenoic acid 2-ethylhexyl ester / 2-propenoic acid, 2-ethylhexyl ester / octyl acrylate / propenoic acid 2-ethylhexyl ester / 2EHA, EHA, AE2H
Product group	: Raw material
BIG No	: 10122

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category	: Industrial use, Professional use
Use of the substance/mixture	: Monomer Binding agent
Function or use category	: Intermediates, Laboratory chemicals

Title	Use descriptors
Polymerisation at production facilities (ES Ref.: ES2)	SU8, SU9, PC32, PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, ERC6c, ERC6d
Polymerisation at downstream user facilities (ES Ref.: ES3)	SU8, SU9, SU12, PC32, PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, ERC6c, ERC6d
Use of formulated monomeric 2-EHA up to 21% in paints and adhesives (ES Ref.: ES4b)	SU12, SU19, PC1, PC9a, PC32, PROC5, PROC7, PROC9, PROC10, PROC11, PROC19, ERC6c, ERC6d, ERC8c, ERC8f
Use as laboratory reagent (ES Ref.: ES5)	SU8, SU9, SU24, PC21, PROC15, ERC1
Formulation of monomeric 2-EHA up to 21% in paints and adhesives (ES Ref.: ES4a)	SU12, SU19, PC1, PC9a, PC32, PROC1, PROC2, PROC3, PROC5, PROC8a, PROC8b, PROC9, ERC2

Full text of use descriptors: see section 16

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer	Only Representative
SIBUR-NEFTEKHIM JSC	Gazprom Marketing and Trading France
Eastern Industrial Zone 390	avenue des Champs-Élysées 68
Dzerzhinsk - Russian Federation	75008 Paris - France
T +7 8313 27-59-09 - F +7 8313 27-59-09	T +33 1 42 99 73 50 - F +33 1 42 99 73 99
infosnh@snh.sibur.ru	didier.lebout@gazprom-mt.com

1.4. Emergency telephone number

Emergency number : +7 8313 27-59-09 (round the clock)

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Country	Official advisory body	Address	Emergency number	Comment
Australia	NSW Poisons Information Centre The Children's Hospital at Westmead	Locked Bag 4001 NSW 2145 Westmead	13 11 26	
Belgium	Centre Anti-Poisons/Antigifcentrum c/o Hôpital Central de la Base - Reine Astrid	Rue Bruyn 1 1120 Bruxelles/Brussel	+32 70 245 245	Please dial: 070 245 245 for any urgent questions about intoxication (free of charge 24/7), if not accessible, dial: 02 264 96 30 (standard fee)
Croatia	Centar za kontrolu otrovanja Institut za medicinska istraživanja i medicinu rada	Ksaverska Cesta 2 p.p. 291 10000 Zagreb	+385 1 234 8342	
Denmark	Giftlinjen Bispebjerg Hospital	Bispebjerg Bakke 23 2400 København NV	+45 82 12 12 12	
Estonia	Mürgistusteabekeskus	Gonsiori 29 15027 Tallinn	16662 +372 626 93 90	
Finland	Myrkytystietokeskus	Stenbäckinkatu 9 PO BOX 100 29 Helsinki	+358 9 471 977 +358 800 147 111	
Greece	Poisons Information Centre Children's Hospital P&A Kyriakou	11762 Athens	+30 2 10 779 3777	
Greece	Department of Forensic Medicine & Toxicology Aristotle University of Thessaloniki, Medical Faculty	54006 Thessaloniki		
Latvia	Valsts Toksikoloģijas centrs, Saindēšanās un zāļu informācijas centrs	Hipokrāta 2 1038 Rīga	+371 67 04 24 73	
Lithuania	Apsinuodijimų informacijos biuras	Birutės g. 56 8110 Vilnius	+370 5 236 20 52 +370 687 53378	
Luxembourg	Centre Anti-Poisons/Antigifcentrum c/o Hôpital Central de la Base - Reine Astrid	Rue Bruyn 1 1120 Bruxelles/Brussel	+352 8002 5500	
Malta	Medicines & Poisons Info Office	Mater Dei Hospital MSD Msida	+356 2545 6504	
Norway	Giftinformasjonen Helsedirektoratet	P.O. Box 7000 St. Olavs Plass 130 Oslo	+47 22 591300	
Slovakia	Národné toxikologické informačné centrum Univerzitná nemocnica Bratislava, pracoviško Kramáre, Klinika pracovného lekárstva a toxikológie	Limbová 5 833 05 Bratislava	+421 2 54 77 41 66	
Slovenia	Center za klinično toksikologijo in farmakologijo Interna klinika, UKCL	Zaloška cesta 7 1525 Ljubljana	+386 41 650 500	
Sweden	Giftinformationscentralen	Box 60 500 171 76 Stockholm	112 – begär Giftinformation +46 10 456 6700 (Från utlandet)	
Switzerland	Tox Info Suisse	Freiestrasse 16 8032 Zürich	145	(from abroad: +41 44 251 51 51) non urgent inquiry: +41 44 251 66 66
Turkey	Ulusal Zehir Merkezi (UZEM) Refik Saydam Hıfzıssıhha Merkezi Başkanlığı	Cemal Gürsel Cd. No: 18 Sıhhiye Çankaya 06590 Ankara	114	Information is provided to public and medical personnel on poisoning incidents

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via 114.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin corrosion/irritation, Category 2	H315
Skin sensitisation, Category 1	H317
Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation	H335
Hazardous to the aquatic environment — Chronic Hazard, Category 3	H412

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

May cause respiratory irritation. Causes skin irritation. May cause an allergic skin reaction. Harmful to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)

:



GHS07

Signal word (CLP)

: Warning

Hazard statements (CLP)

: H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H335 - May cause respiratory irritation.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements (CLP)

: P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 - Wash hands thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, eye protection, face protection.
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 - Call a POISON CENTRE or doctor if you feel unwell.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2-ethylhexyl acrylate	(CAS-No.) 103-11-7	≥ 99.5	Skin Irrit. 2, H315

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(Note D)	(EC-No.) 203-080-7 (EC Index-No.) 607-107-00-7 (REACH-no) 01-2119453158-37-0040		Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Chronic 3, H412
4-methoxyphenol (Stabilizer)	(CAS-No.) 150-76-5 (EC-No.) 205-769-8 (EC Index-No.) 604-044-00-7	0.001 – 0.002	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 Skin Sens. 1, H317

Full text of H-statements: see section 16

Note D : Certain substances which are susceptible to spontaneous polymerisation or decomposition are generally placed on the market in a stabilised form. It is in this form that they are listed in Part 3. However, such substances are sometimes placed on the market in a non-stabilised form. In this case, the supplier must state on the label the name of the substance followed by the words 'non-stabilised'.

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.
First-aid measures after inhalation	: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
First-aid measures after skin contact	: Wash immediately with lots of water. Soap may be used. Do not apply (chemical) neutralizing agents without medical advice. Take victim to a doctor if irritation persists.
First-aid measures after eye contact	: Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply (chemical) neutralizing agents without medical advice. Take victim to an ophthalmologist if irritation persists.
First-aid measures after ingestion	: Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Call Poison Information Centre (www.big.be/antigif.html). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation	: Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Dry/sore throat. Coughing. EXPOSURE TO HIGH CONCENTRATIONS: Respiratory difficulties.
Symptoms/effects after skin contact	: Red skin. Tingling/irritation of the skin.
Symptoms/effects after eye contact	: May cause slight irritation. Redness.
Symptoms/effects after ingestion	: Vomiting. Abdominal pain.
Chronic symptoms	: Skin rash/inflammation.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Quick-acting ABC powder extinguisher. Quick-acting BC powder extinguisher. Quick-acting class B foam extinguisher. Quick-acting CO₂ extinguisher. Class B foam (not alcohol-resistant).
- Unsuitable extinguishing media : Water (quick-acting extinguisher, reel); risk of puddle expansion. Water; risk of puddle expansion.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : DIRECT FIRE HAZARD: Material presenting a fire hazard. INDIRECT FIRE HAZARD: Temperature above flashpoint: higher fire/explosion hazard. Substance contains stabilizer against polymerization. Heat destroys stabilizer against polymerization.
- Explosion hazard : INDIRECT EXPLOSION HAZARD: Heat may cause pressure rise in tanks/drums: explosion risk.
- Hazardous decomposition products in case of fire : Upon combustion: CO and CO₂ are formed.

5.3. Advice for firefighters

- Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: seal off low-lying areas. Exposure to fire/heat: have neighbourhood close doors and windows.
- Firefighting instructions : Cool tanks/drums with water spray/remove them into safety. Physical explosion risk: extinguish/cool from behind cover. Do not move the load if exposed to heat. After cooling: persistent risk of physical explosion.
- Protection during firefighting : Heat/fire exposure: compressed air apparatus (EN 136 + EN 137).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Protective equipment : Gloves (EN 374). Face shield (EN 166). Protective clothing (EN 14605 or EN 13034).
- Emergency procedures : Mark the danger area. No naked flames. Wash contaminated clothes.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- For containment : Contain released product, pump into suitable containers. Plug the leak, cut off the supply.
- Methods for cleaning up : Take up liquid spill into inert absorbent material, e.g.: sand, earth, vermiculite. Scoop absorbed substance into closing containers. Damaged/cooled tanks must be emptied. Clean contaminated surfaces with a soap solution. Wash clothing and equipment after handling.
- Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Keep away from naked flames/heat. Use earthed equipment. At temperature > flashpoint: use spark-/explosionproof appliances. In finely divided state: use spark-/explosionproof appliances. Finely divided: keep away from ignition sources/sparks. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Keep the substance free from contamination. Thoroughly clean/dry the installation before use. Keep container tightly closed.
- Hygiene measures : Observe very strict hygiene - avoid contact.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store in a dry place. Keep out of direct sunlight.
- Incompatible products : Oxidizing agent. Strong acids. Strong bases. Copper, bronze, brass. Aluminium oxides. reducing materials. Amines. Aldehydes. Ethers.
- Storage temperature : ≤ 30 °C
- Heat and ignition sources : KEEP SUBSTANCE AWAY FROM: heat sources. flames or sparks.
- Information on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents. reducing agents. (strong) acids. (strong) bases. amines.
- Storage area : Store in a cool area. Ventilation at floor level. Provide the tank with earthing. Keep only in the original container. Store only in a stabilized state. Keep under air (oxygen). Recommended oxygen level is 5 to 21 vol. %. Meet the legal requirements.
- Special rules on packaging : SPECIAL REQUIREMENTS: closing. clean. opaque. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
- Packaging materials : SUITABLE MATERIAL: steel. stainless steel. aluminium. HDPE. polypropylene. glass.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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Austria - Occupational Exposure Limits

MAK (mg/m ³)	82 mg/m ³
MAK (ppm)	10 ppm
MAK Short time value (mg/m ³)	82 mg/m ³ (Mow)
MAK Short time value (ppm)	10 ppm (Mow)
Remark (AT)	Sh
Regulatory reference	BGBl. II Nr. 238/2018

Germany - Occupational Exposure Limits (TRGS 900)

Occupational exposure limit value (mg/m ³)	38 mg/m ³
Occupational exposure limit value (ppm)	5 ppm
Peak exposure limitation factor	1(I)
TRGS 900 Remark	DFG;Sh;Y;11
TRGS 900 Regulatory reference	TRGS900

Latvia - Occupational Exposure Limits

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Occupational exposure limit value - Eight hours (mg/m ³)	1 mg/m ³
Poland - Occupational Exposure Limits	
NDS (mg/m ³)	35 mg/m ³
NDSCh (mg/m ³)	70 mg/m ³
Remark (PL)	Skóra (Oznakowanie substancji notacją „skóra” oznacza, że wchłanianie substancji przez skórę może być tak samo istotne jak przy narażeniu drogą oddechową).
Regulatory reference	Dz. U. 2018 poz. 1286
Switzerland - Occupational Exposure Limits	
Occupational exposure limit value - Eight hours (ppm)	5 ppm
Occupational exposure limit value - Eight hours (mg/m ³)	38 mg/m ³
Occupational exposure limit value - Short term (ppm)	5 ppm
Occupational exposure limit value - Short term (mg/m ³)	38 mg/m ³

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DNEL/DMEL (Workers)	
Acute - local effects, dermal	0.242 mg/cm ²
Long-term - local effects, inhalation	37.5 mg/m ³
DNEL/DMEL (General population)	
Acute - local effects, dermal	0.242 mg/cm ²
Long-term - local effects, inhalation	4.5 mg/m ³
PNEC (Water)	
PNEC aqua (freshwater)	2.72 µg/l
PNEC aqua (marine water)	0.272 µg/l
PNEC aqua (intermittent, freshwater)	11 µg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	0.126 mg/kg dwt
PNEC sediment (marine water)	12.6 µg/kg dw
PNEC (Soil)	
PNEC soil	1 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	2.3 mg/l

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station. Provide adequate general and local exhaust ventilation. Take precautionary measures against static discharge.

Materials for protective clothing:

GIVE GOOD RESISTANCE: nitrile rubber. butyl rubber. plastics

Hand protection:

Gloves

Eye protection:

Face shield (EN 166)

Skin and body protection:

Protective clothing (EN 14605 or EN 13034)

Respiratory protection:

High gas/vapour concentration: full face mask with filter type A

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Environmental exposure controls:

Avoid release to the environment.

Other information:

Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Molecular mass	: 184.28 g/mol
Colour	: Colourless.
Odour	: Pleasant odour.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: -90 °C
Freezing point	: No data available
Boiling point	: 215 °C (1013 hPa)
Flash point	: 86 °C (Closed cup, 1013 hPa)
Auto-ignition temperature	: 252 °C (1013 hPa)
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: 0.24 hPa (25 °C)
Relative vapour density at 20 °C	: 6.4
Relative density	: 0.88 (20 °C)
Relative density of saturated gas/air mixture	: 1
Density	: 887 kg/m ³
Solubility	: Insoluble in water. Water: 9.6 mg/l (25 °C, EU Method A.6: Water solubility)
Partition coefficient n-octanol/water (Log Pow)	: 4.64 (Experimental value, Equivalent or similar to OECD 107, 25 °C)
Viscosity, kinematic	: 1.973 mm ² /s
Viscosity, dynamic	: 1.75 mPa·s (20 °C, OECD 114: Viscosity of Liquids)
Explosive properties	: No data available
Oxidising properties	: No data available
Lower explosive limit (LEL)	: 0.8 vol %
Upper explosive limit (UEL)	: 6 vol %

9.2. Other information

Specific conductivity	: 610 pS/m
Saturation concentration	: 9.1 g/m ³ (50 °C)
VOC content	: 100 %
Other properties	: Gas/vapour heavier than air at 20°C. Slightly volatile. May generate electrostatic charges.
SAPT	: > 50 °C at the inhibitor level of more than 13 ppm

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts violently with (strong) oxidizers. Reacts with (some) acids/bases. Unstabilized product: polymerizes on exposure to light, on exposure to impurities and on exposure to some compounds e.g.: (strong) oxidizers and (strong) reducers. Polymerizes on exposure to temperature rise.

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10.2. Chemical stability

Unstable on exposure to heat. Unstable on exposure to light.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

4-methoxyphenol (150-76-5)

LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: EU Method B.3 (Acute Toxicity (Dermal)), Guideline: other:OECD No 423 Acute Oral Toxicity – Acute Toxic Class Method
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LD50 oral rat	4435 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Experimental value, Oral, 7 day(s))
LD50 dermal rabbit	7522 mg/kg bodyweight (24 h, Rabbit, Experimental value, Dermal, 14 day(s))
LC50 inhalation rat (mg/l)	> 1.19 mg/l (Equivalent or similar to OECD 403, 8 h, Rat, Male / female, Experimental value, Inhalation (vapours))

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : May cause an allergic skin reaction.
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

2-ethylhexyl acrylate (103-11-7)

NOAEL (chronic, oral, animal/male, 2 years)	919 mg/kg bodyweight Animal: mouse, Animal sex: male, Remarks on results: other:Effect type: carcinogenicity (migrated information)
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Reproductive toxicity : Not classified
STOT-single exposure : May cause respiratory irritation.
STOT-repeated exposure : Not classified

4-methoxyphenol (150-76-5)

LOAEL (oral, rat, 90 days)	300 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test), Guideline: other:EPA OPPTS 870.3650 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
NOAEL (oral, rat, 90 days)	150 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening

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Test), Guideline: other:EPA OPPTS 870.3650 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

Aspiration hazard : Not classified

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Viscosity, kinematic : 1.973 mm²/s

Potential adverse human health effects and symptoms : Practically non-toxic if swallowed (LD50 oral, rat > 2000 mg/kg). Causes skin irritation. Non-toxic in contact with skin (LD50 skin > 5000 mg/kg). May cause respiratory irritation. Slightly harmful by inhalation. Not irritant to eyes.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.

Ecology - air : Not included in the list of substances which may contribute to the greenhouse effect (IPCC). Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014). Photolysis in the air. Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).

Ecology - water : Toxic to crustacea. Harmful to crustacea with long lasting effects. Toxic to fishes. Groundwater pollutant. Fouling to shoreline. Inhibition of activated sludge. Toxic to algae. Harmful to algae, with long-term consequences.

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Harmful to aquatic life with long lasting effects.

Not rapidly degradable

4-methoxyphenol (150-76-5)

LC50 fish 1	28.5 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 Daphnia 1	3 mg/l Test organisms (species): Daphnia magna
EC50 72h algae (1)	54.7 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h algae (2)	19 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
LOEC (chronic)	> 1.45 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	0.68 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

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LC50 fish 1	1.81 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Semi-static system, Fresh water, Experimental value, GLP)
EC50 Daphnia 1	1.3 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
EC50 96h algae (1)	2.65 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
ErC50 (algae)	1.71 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, GLP)

12.2. Persistence and degradability

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Persistence and degradability	Readily biodegradable in water.
ThOD	2.6 g O ₂ /g substance
BOD (% of ThOD)	0.09

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12.3. Bioaccumulative potential

2-ethylhexyl acrylate (103-11-7)

BCF fish 1	232.8 l/kg (BCFBAF v3.01, Estimated value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	4.64 (Experimental value, Equivalent or similar to OECD 107, 25 °C)
Bioaccumulative potential	Potential for bioaccumulation ($4 \geq \text{Log Kow} \leq 5$).

12.4. Mobility in soil

2-ethylhexyl acrylate (103-11-7)

Surface tension	68.2 mN/m (20 °C, 90 %, EU Method A.5: Surface tension)
Partition coefficient n-octanol/water (Log Koc)	2.63 (log Koc, SRC PCKOCWIN v1.66, QSAR)
Ecology - soil	Low potential for adsorption in soil.

12.5. Results of PBT and vPvB assessment

Component

2-ethylhexyl acrylate (103-11-7)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
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12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	:	Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	:	Do not discharge into drains or the environment. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber with energy recovery. May be discharged to wastewater treatment installation.
Additional information	:	Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.
European List of Waste (LoW) code	:	15 01 10* - packaging containing residues of or contaminated by dangerous substances

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
Not regulated	Not regulated	Not regulated	UN 9003	Not regulated
14.2. UN proper shipping name				
Not regulated	Not regulated	Not regulated	Substances with a flash-point above 60 °C and not more than 100 °C	Not regulated
Transport document description				
Not regulated	Not regulated	Not regulated	UN 9003 Substances with a flash-point above 60 °C and not more than 100 °C, 9	Not regulated

2-ethylhexyl acrylate

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14.3. Transport hazard class(es)

Not regulated	Not regulated	Not regulated	9	Not regulated
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14.4. Packing group

Not regulated	Not regulated	Not regulated	Not applicable	Not regulated
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14.5. Environmental hazards

Not regulated	Not regulated	Not regulated	Dangerous for the environment : No	Not regulated
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No supplementary information available

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Carriage permitted (ADN) : T

Rail transport

Not regulated

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

2-ethylhexyl acrylate is not on the REACH Candidate List

2-ethylhexyl acrylate is not on the REACH Annex XIV List

2-ethylhexyl acrylate is not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

2-ethylhexyl acrylate is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

VOC content : 100 %

15.1.2. National regulations

Germany

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG)
Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG)

Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to AwSV; ID No. 13)

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Technical Instructions on Air Quality Control (TA Luft) : 5.2.5 Organic Substances. Class I

BfR : V. Polyesterene produced exclusively from the Polymerisation of Sterene. VI. Styrene Copolymers and Graft Polymers, and Mixtures of Polyesterene with other polymers.

Netherlands

ABM category : A(3) - hazardous for aquatic organisms, may have longterm hazardous effects in aquatic environment

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SZW-lijst van kankerverwekkende stoffen	: The substance is not listed
SZW-lijst van mutagene stoffen	: The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding	: The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid	: The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling	: The substance is not listed

Sweden

PRIO database listed. Priority Level: Priority risk reduction substance; Criteria: Allergenic

Switzerland

Packaging inks : Annex 10 listed. Part A: evaluation substances. List 1. Specific migration limit= 0,05 mg/kg.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes:

Version	Date of change	Section	Comments
1.0	25/01/2017	All	Initial SDS.
1.1	07/12/2018	9	Physical and chemical properties were updated.
2.0	14/05/2019	1-16, Annex	SDS have been corrected in according to the new data of Registration dossier, Chemical Safety Report
3.0	09/07/2020	1-16, Annex	SDS have been revised and updated in according to the new data. SDS format has been changed
3.1	23/07/2020	Annex	Annex format has been changed

Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BLV	Biological limit value
CAS-No.	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
EC-No.	European Community number
EN	European Standard
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
vPvB	Very Persistent and Very Bioaccumulative
WGK	Water Hazard Class

Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3

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Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.

Full text of use descriptors	
ERC1	Manufacture of the substance
ERC2	Formulation into mixture
ERC6c	Use of monomer in polymerisation processes at industrial site (inclusion or not into/onto article)
ERC6d	Use of reactive process regulators in polymerisation processes at industrial site (inclusion or not into/onto article)
ERC8c	Widespread use leading to inclusion into/onto article (indoor)
ERC8f	Widespread use leading to inclusion into/onto article (outdoor)
PC1	Adhesives, sealants
PC21	Laboratory chemicals
PC32	Polymer preparations and compounds
PC9a	Coatings and paints, thinners, paint removers
PROC1	Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
PROC10	Roller application or brushing
PROC11	Non-industrial spraying
PROC15	Use as laboratory reagent
PROC19	Manual activities involving hand contact
PROC2	Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC3	Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
PROC4	Chemical production where opportunity for exposure arises
PROC5	Mixing or blending in batch processes
PROC7	Industrial spraying
PROC8a	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC8b	Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC9	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
SU12	Manufacture of plastics products, including compounding and conversion
SU19	Building and construction work
SU24	Scientific research and development
SU8	Manufacture of bulk, large scale chemicals (including petroleum products)
SU9	Manufacture of fine chemicals

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

2-ethylhexyl acrylate

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Annex to the safety data sheet

Product exposure scenario(s)

ES Type	ES title
Worker	Polymerisation at production facilities
Worker	Polymerisation at downstream user facilities
Worker	Formulation of monomeric 2-EHA up to 21% in paints and adhesives
Worker	Use of formulated monomeric 2-EHA up to 21% in paints and adhesives
Worker	Use as laboratory reagent

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

1. ES2: Polymerisation at production facilities

1.1. Title section

Polymerisation at production facilities

ES Ref.: ES2
ES Type: Worker

Environment

CS 1	Industrial use of process regulators/monomers for polymerisation	PC32, ERC6c, ERC6d
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Worker

CS 2A	Chemical production where opportunity for exposure arises	PROC4, PC32
CS 2B	Chemical production where opportunity for exposure arises	PROC4, PC32
CS 2C	Chemical production where opportunity for exposure arises	PROC4, PC32
CS 2D	Chemical production where opportunity for exposure arises	PROC4, PC32
CS 3	Use in batch and other process where opportunity for exposure arises	PROC5, PC32
CS 4	Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions	PROC1, PC32
CS 5	Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions	PROC2, PC32
CS 6	Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition	PROC3, PC32
CS 7A	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities	PROC8a, PC32
CS 7B	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities	PROC8a, PC32
CS 7C	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities	PROC8a, PC32
CS 7D	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities	PROC8a, PC32
CS 8A	Transfer of substance or mixture (charging and discharging) at dedicated facilities	PROC8b, PC32
CS 8B	Transfer of substance or mixture (charging and discharging) at dedicated facilities	PROC8b, PC32
CS 8C	Transfer of substance or mixture (charging and discharging) at dedicated facilities	PROC8b, PC32
CS 8D	Transfer of substance or mixture (charging and discharging) at dedicated facilities	PROC8b, PC32
CS 9A	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)	PROC9, PC32
CS 9B	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)	PROC9, PC32
CS 9C	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)	PROC9, PC32
CS 9D	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)	PROC9, PC32

Processes, tasks, activities covered	Use of monomer in polymerisation processes at industrial site (inclusion or not into/onto article) Industrial useX
Assessment method	Used ECETOC TRA model

1.2. Conditions of use affecting exposure

1.2.1. Control of environmental exposure: Industrial use of process regulators/monomers for polymerisation (PC32, ERC6c, ERC6d)

PC32	Polymer preparations and compounds
ERC6c	Use of monomer in polymerisation processes at industrial site (inclusion or not into/onto article)
ERC6d	Use of reactive process regulators in polymerisation processes at industrial site (inclusion or not into/onto article)
Assessment method	EUSES

Product (article) characteristics

Physical form of product	Liquid
Concentration of substance in product	100 %

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Amount used, frequency and duration of use (or from service life)	
Amount per use	66300 t/yr
Daily amount per site	73 t/d
Annual site tonnage	21900 t/yr
Fraction of Regional tonnage used locally:	0.33
Emission days	300 days/yr
Continuous release	

Technical and organisational conditions and measures	
Not relevant	
Not relevant	

Conditions and measures related to sewage treatment plant	
Sewage treatment plant	Yes. Freshwater. Marine water. Assessment
Release rate	> 2000 m³/d
No application of sewage sludge to soil	
STP effluent. Total Concentration of Contaminants. µg/L	< 10

Conditions and measures related to treatment of waste (including article waste)	
Not relevant	
Not relevant	

Other conditions affecting environmental exposure	
Receiving surface water flow is 18000 m³/d	

1.2.2. Control of worker exposure: Chemical production where opportunity for exposure arises (PROC4, PC32)

PROC4	Chemical production where opportunity for exposure arises
PC32	Polymer preparations and compounds

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	> 4 h/day

Technical and organisational conditions and measures	
Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection. None	
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure	
Palm of both hands	
Covers outdoor use	

1.2.3. Control of worker exposure: Chemical production where opportunity for exposure arises (PROC4, PC32)

PROC4	Chemical production where opportunity for exposure arises
PC32	Polymer preparations and compounds

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	> 4 h/day

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Conditions and measures related to personal protection, hygiene and health evaluation

Respiratory protection. Yes Effectiveness. 90%

Protective gloves. Yes Effectiveness. 90%

Other conditions affecting workers exposure

Palm of both hands

Indoor use

1.2.4. Control of worker exposure: Chemical production where opportunity for exposure arises (PROC4, PC32)

PROC4 Chemical production where opportunity for exposure arises

PC32 Polymer preparations and compounds

Product (article) characteristics

Physical form of product Liquid

Concentration of substance in product 100 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration > 4 h/day

Technical and organisational conditions and measures

Local exhaust ventilation

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Conditions and measures related to personal protection, hygiene and health evaluation

Respiratory protection. None Effectiveness. 90%

Protective gloves. Yes Effectiveness. 90%

Other conditions affecting workers exposure

Palm of both hands

Indoor use

1.2.5. Control of worker exposure: Chemical production where opportunity for exposure arises (PROC4, PC32)

PROC4 Chemical production where opportunity for exposure arises

PC32 Polymer preparations and compounds

Product (article) characteristics

Physical form of product Liquid

Concentration of substance in product 100 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration < 4 h/day

Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Conditions and measures related to personal protection, hygiene and health evaluation

Respiratory protection. None Effectiveness. 90%

Protective gloves. Yes Effectiveness. 90%

Other conditions affecting workers exposure

Palm of both hands

Indoor use

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

1.2.6. Control of worker exposure: Use in batch and other process where opportunity for exposure arises (PROC5, PC32)

PROC5	Mixing or blending in batch processes
PC32	Polymer preparations and compounds

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	< 25 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	> 4 h/day

Technical and organisational conditions and measures	
Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure	
Palm of both hands	
Indoor use	

1.2.7. Control of worker exposure: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1, PC32)

PROC1	Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
PC32	Polymer preparations and compounds

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	> 4 h/day

Technical and organisational conditions and measures	
Not applicable. Use in a closed system	
Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure	
Palm of one hand	
Indoor use	

1.2.8. Control of worker exposure: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2, PC32)

PROC2	Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PC32	Polymer preparations and compounds

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	> 4 h/day

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes

Effectiveness. 90%

Other conditions affecting workers exposure

Palm of both hands

Indoor use

1.2.9. Control of worker exposure: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3, PC32)

PROC3	Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration	> 4 h/day
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Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes

Effectiveness. 90%

Other conditions affecting workers exposure

Palm of one hand

Indoor use

1.2.10. Control of worker exposure: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a, PC32)

PROC8a	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration	< 4 h/day
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Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes

Effectiveness. 90%

Other conditions affecting workers exposure

Both hands

Covers outdoor use

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

1.2.11. Control of worker exposure: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a, PC32)

PROC8a	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PC32	Polymer preparations and compounds

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	> 4 h/day

Technical and organisational conditions and measures	
Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection. Yes	Effectiveness. 90%
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure	
Both hands	
Indoor use	

1.2.12. Control of worker exposure: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a, PC32)

PROC8a	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PC32	Polymer preparations and compounds

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	> 4 h/day

Technical and organisational conditions and measures	
Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	
Local exhaust ventilation	

Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection. None	Effectiveness. 90%
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure	
Both hands	
Indoor use	

1.2.13. Control of worker exposure: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a, PC32)

PROC8a	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PC32	Polymer preparations and compounds

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	< 1 h/day

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Conditions and measures related to personal protection, hygiene and health evaluation

Respiratory protection. None Effectiveness. 90%

Protective gloves. Yes Effectiveness. 90%

Other conditions affecting workers exposure

Both hands

Indoor use

1.2.14. Control of worker exposure: Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC8b, PC32)

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

PC32 Polymer preparations and compounds

Product (article) characteristics

Physical form of product Liquid

Concentration of substance in product 100 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration > 4 h/day

Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes Effectiveness. 90%

Other conditions affecting workers exposure

Palm of both hands

Covers outdoor use

1.2.15. Control of worker exposure: Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC8b, PC32)

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

PC32 Polymer preparations and compounds

Product (article) characteristics

Physical form of product Liquid

Concentration of substance in product 100 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration > 4 h/day

Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Conditions and measures related to personal protection, hygiene and health evaluation

Respiratory protection. Yes Effectiveness. 90%

Protective gloves. Yes Effectiveness. 90%

Other conditions affecting workers exposure

Palm of both hands

Indoor use

1.2.16. Control of worker exposure: Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC8b, PC32)

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

PC32	Polymer preparations and compounds
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Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	> 4 h/day

Technical and organisational conditions and measures	
Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	
Local exhaust ventilation	

Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection. None	Effectiveness. 90%
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure	
Palm of both hands	
Indoor use	

1.2.17. Control of worker exposure: Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC8b, PC32)

PROC8b	Transfer of substance or mixture (charging and discharging) at dedicated facilities
PC32	Polymer preparations and compounds

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	< 4 h/day

Technical and organisational conditions and measures	
Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection. None	Effectiveness. 90%
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure	
Palm of both hands	
Indoor use	

1.2.18. Control of worker exposure: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC9, PC32)

PROC9	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
PC32	Polymer preparations and compounds

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	> 4 h/day

Technical and organisational conditions and measures	
Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes	Effectiveness. 90%
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Other conditions affecting workers exposure

Palm of both hands	
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Covers outdoor use	
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1.2.19. Control of worker exposure: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC9, PC32)

PROC9	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
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PC32	Polymer preparations and compounds
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Product (article) characteristics

Physical form of product	Liquid
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Concentration of substance in product	100 %
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Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration	> 4 h/day
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Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
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Ensure operatives are trained to minimise exposures	
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Conditions and measures related to personal protection, hygiene and health evaluation

Respiratory protection. Yes	Effectiveness. 90%
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Protective gloves. Yes	Effectiveness. 90%
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Other conditions affecting workers exposure

Palm of both hands	
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Indoor use	
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1.2.20. Control of worker exposure: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC9, PC32)

PROC9	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
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PC32	Polymer preparations and compounds
------	------------------------------------

Product (article) characteristics

Physical form of product	Liquid
--------------------------	--------

Concentration of substance in product	100 %
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Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration	> 4 h/day
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Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
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Ensure operatives are trained to minimise exposures	
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Local exhaust ventilation	
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Conditions and measures related to personal protection, hygiene and health evaluation

Respiratory protection. None	Effectiveness. 90%
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Protective gloves. Yes	Effectiveness. 90%
------------------------	--------------------

Other conditions affecting workers exposure

Palm of both hands	
--------------------	--

Indoor use	
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1.2.21. Control of worker exposure: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC9, PC32)

PROC9	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
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PC32	Polymer preparations and compounds
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2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Product (article) characteristics

Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration	< 4 h/day
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Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation

Respiratory protection. None	Effectiveness. 90%
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure

Palm of both hands	
Indoor use	

1.3. Exposure estimation and reference to its source

1.3.1. Environmental release and exposure Industrial use of process regulators/monomers for polymerisation (PC32, ERC6c, ERC6d)

Information for contributing exposure scenario

Release route		Release rate		
Release fraction to air from process (initial release prior to RMM):		0.1 %		
Release fraction to wastewater from process (initial release prior to RMM):		0.001 %		
Release fraction to soil from process (initial release prior to RMM):		0 %		
Protection target	Unit	Exposure estimation	PNEC	RCR
Freshwater	mg/l	0.00143	2.72	0.526
Marine water	mg/l	0.000133	0.272	0.489
Freshwater sediment	mg/kg wet weight	0.0145	0.126	0.53
Marine water sediment	mg/l	0.000132	12.6	0.48
Sewage treatment plant	mg/l	0.01	2.3	0.004
Soil	mg/kg wet weight	0.00182	1	0.0021

1.3.2. Worker exposure Chemical production where opportunity for exposure arises (PROC4, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR
Acute - Local - Dermal	0.1 mg/m ³	0.41
Acute - Local - Inhalation	26.9 mg/m ³	0.72

1.3.3. Worker exposure Chemical production where opportunity for exposure arises (PROC4, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR
Acute - Local - Dermal	0.1 mg/m ²	0.41
Acute - Local - Inhalation	3.84 mg/m ³	0.1

1.3.4. Worker exposure Chemical production where opportunity for exposure arises (PROC4, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR
Acute - Local - Dermal	0.1 mg/m ²	0.41
Acute - Local - Inhalation	3.84 mg/m ³	0.1

1.3.5. Worker exposure Chemical production where opportunity for exposure arises (PROC4, PC32)

Information for contributing exposure scenario

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	23 mg/m ³	0.61	

1.3.6. Worker exposure Use in batch and other process where opportunity for exposure arises (PROC5, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.12 mg/m ²	0.5	
Acute - Local - Inhalation	23 mg/m ³	0.61	

1.3.7. Worker exposure Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.01 mg/m ²	0.041	
Acute - Local - Inhalation	0.0768 mg/m ³	0.002	

1.3.8. Worker exposure Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.02 mg/m ²	0.083	
Acute - Local - Inhalation	7.68 mg/m ³	0.2	

1.3.9. Worker exposure Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.01 mg/m ²	0.041	
Acute - Local - Inhalation	23 mg/m ³	0.61	

1.3.10. Worker exposure Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	32.2 mg/m ³	0.86	

1.3.11. Worker exposure Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	7.68 mg/m ³	0.2	

1.3.12. Worker exposure Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	7.68 mg/m ³	0.2	

1.3.13. Worker exposure Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a, PC32)

Information for contributing exposure scenario

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	15.4 mg/m ³	0.41	

1.3.14. Worker exposure Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC8b, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	26.9 mg/m ³	0.72	

1.3.15. Worker exposure Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC8b, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	3.84 mg/m ³	0.1	

1.3.16. Worker exposure Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC8b, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	1.15 mg/m ³	0.031	

1.3.17. Worker exposure Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC8b, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	23 mg/m ³	0.61	

1.3.18. Worker exposure Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC9, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	26.9 mg/m ³	0.72	

1.3.19. Worker exposure Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC9, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	3.84 mg/m ³	0.1	

1.3.20. Worker exposure Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC9, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	3.84 mg/m ³	0.1	

1.3.21. Worker exposure Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC9, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	23 mg/m ³	0.61	

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

1.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

1.4.1. Environment

No data available

1.4.2. Health

No data available

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

2. ES3: Polymerisation at downstream user facilities

2.1. Title section

Polymerisation at downstream user facilities	
ES Ref.: ES3	
ES Type: Worker	

Environment

CS 1	Industrial use of process regulators/monomers for polymerisation	PC32, ERC6c, ERC6d
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Worker

CS 2A	Chemical production where opportunity for exposure arises	PROC4, PC32
CS 2B	Chemical production where opportunity for exposure arises	PROC4, PC32
CS 2C	Chemical production where opportunity for exposure arises	PROC4, PC32
CS 2D	Chemical production where opportunity for exposure arises	PROC4, PC32
CS 3	Mixing or blending in batch processes	PROC5, PC32
CS 4	Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions	PROC1, PC32
CS 5	Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions	PROC2, PC32
CS 6	Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition	PROC3, PC32
CS 7A	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities	PROC8a, PC32
CS 7B	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities	PROC8a, PC32
CS 7C	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities	PROC8a, PC32
CS 7D	Transfer of substance or mixture (charging and discharging) at dedicated facilities	PROC8b, PC32
CS 8A	Transfer of substance or mixture (charging and discharging) at dedicated facilities	PROC8b, PC32
CS 8B	Transfer of substance or mixture (charging and discharging) at dedicated facilities	PROC8b, PC32
CS 8C	Transfer of substance or mixture (charging and discharging) at dedicated facilities	PROC8b, PC32
CS 8D	Transfer of substance or mixture (charging and discharging) at dedicated facilities	PROC8b, PC32
CS 9A	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)	PROC9, PC32
CS 9B	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)	PROC9, PC32
CS 9C	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)	PROC9, PC32
CS 9D	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)	PROC9, PC32

Processes, tasks, activities covered	Use of monomer in polymerisation processes at industrial site (inclusion or not into/onto article) Industrial useX
Assessment method	Used ECETOC TRA model

2.2. Conditions of use affecting exposure

2.2.1. Control of environmental exposure: Industrial use of process regulators/monomers for polymerisation (PC32, ERC6c, ERC6d)

PC32	Polymer preparations and compounds
ERC6c	Use of monomer in polymerisation processes at industrial site (inclusion or not into/onto article)
ERC6d	Use of reactive process regulators in polymerisation processes at industrial site (inclusion or not into/onto article)
Assessment method	EUSES

Product (article) characteristics

Physical form of product	Liquid
Concentration of substance in product	100 %

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Amount used, frequency and duration of use (or from service life)	
Amount per use	73700 t/yr
Daily amount per site	24.6 t/d
Annual site tonnage	7370 t/yr
Fraction of Regional tonnage used locally:	0.1
Emission days	300 days/yr
Continuous release	

Technical and organisational conditions and measures	
Not relevant	

Conditions and measures related to sewage treatment plant	
Sewage treatment plant	Yes. Freshwater. Marine water. Assessment
Release rate	> 2000 m³/d
Sludge. Not specified	

Conditions and measures related to treatment of waste (including article waste)	
Not relevant	

Other conditions affecting environmental exposure	
Receiving surface water flow is 18000 m³/d	

2.2.2. Control of worker exposure: Chemical production where opportunity for exposure arises (PROC4, PC32)

PROC4	Chemical production where opportunity for exposure arises
PC32	Polymer preparations and compounds

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	> 4 h/day

Technical and organisational conditions and measures	
Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection. None	
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure	
Palm of both hands	
Covers outdoor use	

2.2.3. Control of worker exposure: Chemical production where opportunity for exposure arises (PROC4, PC32)

PROC4	Chemical production where opportunity for exposure arises
PC32	Polymer preparations and compounds

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	> 4 h/day

Technical and organisational conditions and measures	
Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Conditions and measures related to personal protection, hygiene and health evaluation

Respiratory protection. Yes	Effectiveness. 90%
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure

Palm of both hands	
Indoor use	

2.2.4. Control of worker exposure: Chemical production where opportunity for exposure arises (PROC4, PC32)

PROC4	Chemical production where opportunity for exposure arises
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration	> 4 h/day
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Technical and organisational conditions and measures

Local exhaust ventilation	
Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation

Respiratory protection. None	Effectiveness. 90%
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure

Palm of both hands	
Indoor use	

2.2.5. Control of worker exposure: Chemical production where opportunity for exposure arises (PROC4, PC32)

PROC4	Chemical production where opportunity for exposure arises
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration	< 4 h/day
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Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation

Respiratory protection. None	Effectiveness. 90%
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure

Palm of both hands	
Indoor use	

2.2.6. Control of worker exposure: Mixing or blending in batch processes (PROC5, PC32)

PROC5	Mixing or blending in batch processes
PC32	Polymer preparations and compounds

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	< 25 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	> 4 h/day

Technical and organisational conditions and measures	
Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure	
Palm of both hands	
Indoor use	

2.2.7. Control of worker exposure: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1, PC32)

PROC1	Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
PC32	Polymer preparations and compounds

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	> 4 h/day

Technical and organisational conditions and measures	
Not applicable. Use in a closed system	
Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure	
Palm of one hand	
Indoor use	

2.2.8. Control of worker exposure: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2, PC32)

PROC2	Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PC32	Polymer preparations and compounds

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	> 4 h/day

Technical and organisational conditions and measures	
Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Ensure operatives are trained to minimise exposures

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes

Effectiveness. 90%

Other conditions affecting workers exposure

Palm of both hands

Indoor use

2.2.9. Control of worker exposure: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3, PC32)

PROC3	Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration	> 4 h/day
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Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes

Effectiveness. 90%

Other conditions affecting workers exposure

Palm of one hand

Indoor use

2.2.10. Control of worker exposure: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a, PC32)

PROC8a	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration	< 4 h/day
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Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes

Effectiveness. 90%

Other conditions affecting workers exposure

Both hands

Covers outdoor use

2.2.11. Control of worker exposure: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a, PC32)

PROC8a	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
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2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

PC32	Polymer preparations and compounds
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Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	> 4 h/day

Technical and organisational conditions and measures	
Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection. Yes	Effectiveness. 90%
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure	
Both hands	
Indoor use	

2.2.12. Control of worker exposure: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a, PC32)

PROC8a	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PC32	Polymer preparations and compounds

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	> 4 h/day

Technical and organisational conditions and measures	
Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	
Local exhaust ventilation	

Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection. None	Effectiveness. 90%
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure	
Both hands	
Indoor use	

2.2.13. Control of worker exposure: Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC8b, PC32)

PROC8b	Transfer of substance or mixture (charging and discharging) at dedicated facilities
PC32	Polymer preparations and compounds

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	< 1 h/day

Technical and organisational conditions and measures	
Supervision in place to check that the risk management measures in place are being used	

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Conditions and measures related to personal protection, hygiene and health evaluation

Respiratory protection. None

Effectiveness. 90%

Protective gloves. Yes

Effectiveness. 90%

Other conditions affecting workers exposure

Both hands

Indoor use

2.2.14. Control of worker exposure: Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC8b, PC32)

PROC8b

Transfer of substance or mixture (charging and discharging) at dedicated facilities

PC32

Polymer preparations and compounds

Product (article) characteristics

Physical form of product

Liquid

Concentration of substance in product

100 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration

> 4 h/day

Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes

Effectiveness. 90%

Other conditions affecting workers exposure

Palm of both hands

Covers outdoor use

2.2.15. Control of worker exposure: Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC8b, PC32)

PROC8b

Transfer of substance or mixture (charging and discharging) at dedicated facilities

PC32

Polymer preparations and compounds

Product (article) characteristics

Physical form of product

Liquid

Concentration of substance in product

100 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration

> 4 h/day

Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Conditions and measures related to personal protection, hygiene and health evaluation

Respiratory protection. Yes

Effectiveness. 90%

Protective gloves. Yes

Effectiveness. 90%

Other conditions affecting workers exposure

Palm of both hands

Indoor use

2.2.16. Control of worker exposure: Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC8b, PC32)

PROC8b

Transfer of substance or mixture (charging and discharging) at dedicated facilities

PC32

Polymer preparations and compounds

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	> 4 h/day

Technical and organisational conditions and measures	
Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	
Local exhaust ventilation	

Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection. None	Effectiveness. 90%
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure	
Palm of both hands	
Indoor use	

2.2.17. Control of worker exposure: Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC8b, PC32)

PROC8b	Transfer of substance or mixture (charging and discharging) at dedicated facilities
PC32	Polymer preparations and compounds

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	< 4 h/day

Technical and organisational conditions and measures	
Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection. None	Effectiveness. 90%
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure	
Palm of both hands	
Indoor use	

2.2.18. Control of worker exposure: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC9, PC32)

PROC9	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
PC32	Polymer preparations and compounds

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	> 4 h/day

Technical and organisational conditions and measures	
Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Ensure operatives are trained to minimise exposures	
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Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure	
Palm of both hands	
Covers outdoor use	

2.2.19. Control of worker exposure: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC9, PC32)

PROC9	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
PC32	Polymer preparations and compounds

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	> 4 h/day

Technical and organisational conditions and measures	
Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection. Yes	Effectiveness. 90%
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure	
Palm of both hands	
Indoor use	

2.2.20. Control of worker exposure: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC9, PC32)

PROC9	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
PC32	Polymer preparations and compounds

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	> 4 h/day

Technical and organisational conditions and measures	
Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	
Local exhaust ventilation	

Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection. None	Effectiveness. 90%
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure	
Palm of both hands	
Indoor use	

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

2.2.21. Control of worker exposure: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC9, PC32)

PROC9	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration	< 4 h/day
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Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation

Respiratory protection. None	Effectiveness. 90%
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure

Palm of both hands	
Indoor use	

2.3. Exposure estimation and reference to its source

2.3.1. Environmental release and exposure Industrial use of process regulators/monomers for polymerisation (PC32, ERC6c, ERC6d)

Information for contributing exposure scenario

Release route		Release rate			
Release fraction to air from process (initial release prior to RMM):		0.1 %			
Release fraction to wastewater from process (initial release prior to RMM):		0.001 %			
Release fraction to soil from process (initial release prior to RMM):		0 %			
Protection target	Unit	Exposure estimation	PNEC	RCR	
Freshwater	mg/l	0.00169	2.72	0.621	
Marine water	mg/l	0.000158	0.272	0.581	
Freshwater sediment	mg/kg wet weight	0.017	0.126	0.62	
Marine water sediment	mg/l	0.00159	12.6	0.58	
Sewage treatment plant	mg/l	0.0126	2.3	0.005	
Soil	mg/kg wet weight	0.0108	1	0.012	

2.3.2. Worker exposure Chemical production where opportunity for exposure arises (PROC4, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	26.9 mg/m ³	0.72	

2.3.3. Worker exposure Chemical production where opportunity for exposure arises (PROC4, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	3.84 mg/m ³	0.1	

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

2.3.4. Worker exposure Chemical production where opportunity for exposure arises (PROC4, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	3.84 mg/m ³	0.1	

2.3.5. Worker exposure Chemical production where opportunity for exposure arises (PROC4, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	23 mg/m ³	0.61	

2.3.6. Worker exposure Mixing or blending in batch processes (PROC5, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.12 mg/m ²	0.5	
Acute - Local - Inhalation	23 mg/m ³	0.61	

2.3.7. Worker exposure Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.01 mg/m ²	0.041	
Acute - Local - Inhalation	0.0768 mg/m ³	0.002	

2.3.8. Worker exposure Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.02 mg/m ²	0.083	
Acute - Local - Inhalation	7.68 mg/m ³	0.2	

2.3.9. Worker exposure Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.01 mg/m ²	0.041	
Acute - Local - Inhalation	23 mg/m ³	0.61	

2.3.10. Worker exposure Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	32.2 mg/m ³	0.86	

2.3.11. Worker exposure Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	7.68 mg/m ³	0.2	

2.3.12. Worker exposure Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a, PC32)

Information for contributing exposure scenario

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	7.68 mg/m ³	0.2	

2.3.13. Worker exposure Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC8b, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	15.4 mg/m ³	0.41	

2.3.14. Worker exposure Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC8b, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	26.9 mg/m ³	0.72	

2.3.15. Worker exposure Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC8b, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	3.84 mg/m ³	0.1	

2.3.16. Worker exposure Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC8b, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	1.15 mg/m ³	0.031	

2.3.17. Worker exposure Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC8b, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	23 mg/m ³	0.61	

2.3.18. Worker exposure Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC9, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	26.9 mg/m ³	0.72	

2.3.19. Worker exposure Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC9, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	3.84 mg/m ³	0.1	

2.3.20. Worker exposure Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC9, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	3.84 mg/m ³	0.1	

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

2.3.21. Worker exposure Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC9, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	23 mg/m ³	0.61	

2.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

2.4.1. Environment

No data available

2.4.2. Health

No data available

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

3. ES4a: Formulation of monomeric 2-EHA up to 21% in paints and adhesives

3.1. Title section

Formulation of monomeric 2-EHA up to 21% in paints and adhesives	
ES Ref.: ES4a	
ES Type: Worker	

Environment

CS 1	Formulation of preparations	PC1, PC9a, PC32, ERC2
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Worker

CS 2A	Mixing or blending in batch processes. Concentration of substance <21%	PROC5, PC1, PC9a, PC32
CS 3	Use in closed process, no likelihood of exposure	PROC1, PC1, PC9a, PC32
CS 4	Use in closed, continuous process with occasional controlled exposure (e.g. sampling)	PROC2, PC1, PC9a, PC32
CS 5	Use in closed batch process (synthesis or formulation); Industrial setting	PROC3, PC1, PC9a, PC32
CS 6A	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities	PROC8a, PC1, PC9a, PC32
CS 6B	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities	PROC8a, PC1, PC9a, PC32
CS 6C	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities	PROC8a, PC1, PC9a, PC32
CS 6D	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities	PROC8a, PC1, PC9a, PC32
CS 7A	Transfer of substance or mixture (charging and discharging) at dedicated facilities	PROC8b, PC1, PC9a, PC32
CS 7B	Transfer of substance or mixture (charging and discharging) at dedicated facilities	PROC8b, PC1, PC9a, PC32
CS 7C	Transfer of substance or mixture (charging and discharging) at dedicated facilities	PROC8b, PC1, PC9a, PC32
CS 7D	Transfer of substance or mixture (charging and discharging) at dedicated facilities	PROC8b, PC1, PC9a, PC32
CS 8	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)	PROC9, PC1, PC9a, PC32
CS 2B	Mixing or blending in batch processes. Concentration of substance <21%	PROC5, PC1, PC9a, PC32
CS 2C	Mixing or blending in batch processes. Concentration of substance <21%	PROC5, PC1, PC9a, PC32
CS 2D	Mixing or blending in batch processes. Concentration of substance <21%	PROC5, PC1, PC9a, PC32

Processes, tasks, activities covered	Formulation
Assessment method	Used ECETOC TRA model

3.2. Conditions of use affecting exposure

3.2.1. Control of environmental exposure: Formulation of preparations (PC1, PC9a, PC32, ERC2)

PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds
ERC2	Formulation into mixture
Assessment method	EUSES

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	≤ 21 %

Amount used, frequency and duration of use (or from service life)	
Amount per use	5000 t/yr
Daily amount per site	13.3 t/d
Annual site tonnage	4000 t/yr
Fraction of Regional tonnage used locally:	0.8
Emission days	300 days/yr
Continuous release	

Technical and organisational conditions and measures	
Not relevant	

Conditions and measures related to sewage treatment plant	
Sewage treatment plant	Yes. Freshwater. Marine water. Assessment
Release rate	> 2000 m ³ /d
No application of sewage sludge to soil	
STP effluent. Total Concentration of Contaminants. µg/L	≤ 10

Conditions and measures related to treatment of waste (including article waste)	
Not relevant	

Other conditions affecting environmental exposure	
Receiving surface water flow is 18000 m ³ /d	

3.2.2. Control of worker exposure: Mixing or blending in batch processes. Concentration of substance <21% (PROC5, PC1, PC9a, PC32)

PROC5	Mixing or blending in batch processes
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	> 4 h/day

Technical and organisational conditions and measures	
Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure	
Palm of both hands	
Covers outdoor use	

3.2.3. Control of worker exposure: Use in closed process, no likelihood of exposure (PROC1, PC1, PC9a, PC32)

PROC1	Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	> 4 h/day

Technical and organisational conditions and measures	
Not applicable. Use in a closed system	
Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure	
Palm of one hand	
Indoor use	

3.2.4. Control of worker exposure: Use in closed, continuous process with occasional controlled exposure (e.g. sampling) (PROC2, PC1, PC9a, PC32)

PROC2	Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	> 4 h/day

Technical and organisational conditions and measures	
Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure	
Palm of both hands	
Indoor use	

3.2.5. Control of worker exposure: Use in closed batch process (synthesis or formulation); Industrial setting (PROC3, PC1, PC9a, PC32)

PROC3	Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	> 4 h/day

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes

Effectiveness. 90%

Other conditions affecting workers exposure

Palm of one hand

Indoor use

3.2.6. Control of worker exposure: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a, PC1, PC9a, PC32)

PROC8a	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product Liquid

Concentration of substance in product 100 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration < 4 h/day

Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes

Effectiveness. 90%

Other conditions affecting workers exposure

Both hands

Covers outdoor use

3.2.7. Control of worker exposure: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a, PC1, PC9a, PC32)

PROC8a	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product Liquid

Concentration of substance in product 100 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration > 4 h/day

Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Conditions and measures related to personal protection, hygiene and health evaluation

Respiratory protection. Yes Effectiveness. 90%

Protective gloves. Yes Effectiveness. 90%

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Other conditions affecting workers exposure

Both hands	
Indoor use	

3.2.8. Control of worker exposure: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a, PC1, PC9a, PC32)

PROC8a	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration	> 4 h/day
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Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	
Local exhaust ventilation	

Conditions and measures related to personal protection, hygiene and health evaluation

Respiratory protection. None	Effectiveness. 90%
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure

Both hands	
Indoor use	

3.2.9. Control of worker exposure: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a, PC1, PC9a, PC32)

PROC8a	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration	< 1 h/day
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Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation

Respiratory protection. None	Effectiveness. 90%
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure

Both hands	
Indoor use	

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

3.2.10. Control of worker exposure: Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC8b, PC1, PC9a, PC32)

PROC8b	Transfer of substance or mixture (charging and discharging) at dedicated facilities
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration	> 4 h/day
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Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes	Effectiveness. 90%
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Other conditions affecting workers exposure

Palm of both hands	
Covers outdoor use	

3.2.11. Control of worker exposure: Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC8b, PC1, PC9a, PC32)

PROC8b	Transfer of substance or mixture (charging and discharging) at dedicated facilities
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration	> 4 h/day
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Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation

Respiratory protection. Yes	Effectiveness. 90%
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure

Palm of both hands	
Indoor use	

3.2.12. Control of worker exposure: Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC8b, PC1, PC9a, PC32)

PROC8b	Transfer of substance or mixture (charging and discharging) at dedicated facilities
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	> 4 h/day

Technical and organisational conditions and measures	
Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	
Local exhaust ventilation	

Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection. None	Effectiveness. 90%
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure	
Palm of both hands	
Indoor use	

3.2.13. Control of worker exposure: Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC8b, PC1, PC9a, PC32)

PROC8b	Transfer of substance or mixture (charging and discharging) at dedicated facilities
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	< 4 h/day

Technical and organisational conditions and measures	
Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection. None	Effectiveness. 90%
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure	
Palm of both hands	
Indoor use	

3.2.14. Control of worker exposure: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC9, PC1, PC9a, PC32)

PROC9	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	< 25 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	> 4 h/day

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes

Effectiveness. 90%

Other conditions affecting workers exposure

Palm of both hands

Indoor use

3.2.15. Control of worker exposure: Mixing or blending in batch processes. Concentration of substance <21% (PROC5, PC1, PC9a, PC32)

PROC5	Mixing or blending in batch processes
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product

Liquid

Concentration of substance in product

100 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration

> 4 h/day

Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes

Effectiveness. 90%

Respiratory protection. Yes

Effectiveness. 90%

Other conditions affecting workers exposure

Palm of both hands

Indoor use

3.2.16. Control of worker exposure: Mixing or blending in batch processes. Concentration of substance <21% (PROC5, PC1, PC9a, PC32)

PROC5	Mixing or blending in batch processes
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product

Liquid

Concentration of substance in product

100 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration

> 4 h/day

Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Local exhaust ventilation

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes

Effectiveness. 90%

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Other conditions affecting workers exposure

Palm of both hands

Indoor use

3.2.17. Control of worker exposure: Mixing or blending in batch processes. Concentration of substance <21% (PROC5, PC1, PC9a, PC32)

PROC5	Mixing or blending in batch processes
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product Liquid

Concentration of substance in product 100 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration > 4 h/day

Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes

Effectiveness. 90%

Other conditions affecting workers exposure

Palm of both hands

Indoor use

3.3. Exposure estimation and reference to its source

3.3.1. Environmental release and exposure Formulation of preparations (PC1, PC9a, PC32, ERC2)

Information for contributing exposure scenario

Release route	Release rate
Release fraction to air from process (initial release prior to RMM):	0.1 %
Release fraction to wastewater from process (initial release prior to RMM):	0.3 %
Release fraction to soil from process (initial release prior to RMM):	0.01 %

Protection target	Unit	Exposure estimation	PNEC	RCR
Freshwater	mg/l	0.00143	2.72	0.526
Marine water	mg/l	0.000132	0.272	0.485
Freshwater sediment	mg/l	0.0145	0.126	0.53
Marine water sediment	mg/l	0.00133	12.6	0.48
Sewage treatment plant	mg/l	0.01	2.3	0.004
Soil	mg/kg wet weight	0.000411	1	0.00047

3.3.2. Worker exposure Mixing or blending in batch processes. Concentration of substance <21% (PROC5, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR
Acute - Local - Dermal	0.2 mg/m ²	0.83
Acute - Local - Inhalation	26.9 mg/m ³	0.72

3.3.3. Worker exposure Use in closed process, no likelihood of exposure (PROC1, PC1, PC9a, PC32)

Information for contributing exposure scenario

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.01 mg/m ²	0.041	
Acute - Local - Inhalation	0.0768 mg/m ³	0.002	

3.3.4. Worker exposure Use in closed, continuous process with occasional controlled exposure (e.g. sampling) (PROC2, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.02 mg/m ²	0.083	
Acute - Local - Inhalation	7.68 mg/m ³	0.2	

3.3.5. Worker exposure Use in closed batch process (synthesis or formulation); Industrial setting (PROC3, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.01 mg/m ²	0.041	
Acute - Local - Inhalation	23 mg/m ³	0.61	

3.3.6. Worker exposure Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	32.2 mg/m ³	0.86	

3.3.7. Worker exposure Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	7.68 mg/m ³	0.2	

3.3.8. Worker exposure Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	7.68 mg/m ³	0.2	

3.3.9. Worker exposure Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	15.4 mg/m ³	0.41	

3.3.10. Worker exposure Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC8b, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	26.9 mg/m ³	0.72	

3.3.11. Worker exposure Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC8b, PC1, PC9a, PC32)

Information for contributing exposure scenario

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	3.84 mg/m ³	0.1	

3.3.12. Worker exposure Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC8b, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	1.15 mg/m ³	0.031	

3.3.13. Worker exposure Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC8b, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	23 mg/m ³	0.61	

3.3.14. Worker exposure Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC9, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.06 mg/m ²	0.25	
Acute - Local - Inhalation	23 mg/m ³	0.61	

3.3.15. Worker exposure Mixing or blending in batch processes. Concentration of substance <21% (PROC5, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.2 mg/m ²	0.83	
Acute - Local - Inhalation	3.84 mg/m ³	0.1	

3.3.16. Worker exposure Mixing or blending in batch processes. Concentration of substance <21% (PROC5, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.2 mg/m ²	0.83	
Acute - Local - Inhalation	3.84 mg/m ³	0.1	

3.3.17. Worker exposure Mixing or blending in batch processes. Concentration of substance <21% (PROC5, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.2 mg/m ²	0.83	
Acute - Local - Inhalation	23 mg/m ³	0.61	

3.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

3.4.1. Environment

No data available

3.4.2. Health

No data available

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

4. ES4b: Use of formulated monomeric 2-EHA up to 21% in paints and adhesives

4.1. Title section

Use of formulated monomeric 2-EHA up to 21% in paints and adhesives	
ES Ref.: ES4b	
ES Type: Worker	

Environment		
CS 1	Industrial use of process regulators/monomers for polymerisation processes in paints and adhesives	PC1, PC9a, PC32, ERC6c, ERC6d
CS 1B	Widespread use leading to inclusion into/onto article / professional setting/ Covers indoor and outdoor use	PC1, PC9a, PC32, ERC8c, ERC8f

Worker		
CS 2A	Mixing or blending in batch process of preparations containing up to 21% 2-EHA in professional settings	PROC5, PC1, PC9a, PC32
CS 2B	Mixing or blending in batch process of preparations containing up to 21% 2-EHA in professional settings	PROC5, PC1, PC9a, PC32
CS 2C	Mixing or blending in batch process of preparations containing up to 21% 2-EHA in professional settings	PROC5, PC1, PC9a, PC32
CS 2D	Mixing or blending in batch process of preparations containing up to 21% 2-EHA in professional settings	PROC5, PC1, PC9a, PC32
CS 3A	Mixing or blending in batch process to produce a mixture at <21% in industrial settings	PROC5, PC1, PC9a, PC32
CS 3B	Mixing or blending in batch process to produce a mixture at <21% in industrial settings	PROC5, PC1, PC9a, PC32
CS 3C	Mixing or blending in batch process to produce a mixture at <21% in industrial settings	PROC5, PC1, PC9a, PC32
CS 3D	Mixing or blending in batch process to produce a mixture at <21% in industrial settings	PROC5, PC1, PC9a, PC32
CS 4A	Industrial spraying	PROC7, PC1, PC9a, PC32
CS 4B	Industrial spraying	PROC7, PC1, PC9a, PC32
CS 4C	Industrial spraying	PROC7, PC1, PC9a, PC32
CS 5	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)/ industrial setting	PROC9, PC1, PC9a, PC32
CS 6A	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)/ professional setting	PROC9, PC1, PC9a, PC32
CS 6B	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)/ professional setting	PROC9, PC1, PC9a, PC32
CS 6C	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)/ professional setting	PROC9, PC1, PC9a, PC32
CS 6D	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)/ professional setting	PROC9, PC1, PC9a, PC32
CS 7A	Roller application or brushing/ professional setting	PROC10, PC1, PC9a, PC32
CS 7B	Roller application or brushing/ professional setting	PROC10, PC1, PC9a, PC32
CS 7C	Roller application or brushing/ professional setting	PROC10, PC1, PC9a, PC32
CS 7D	Roller application or brushing/ professional setting	PROC10, PC1, PC9a, PC32
CS 7E	Roller application or brushing/ professional setting	PROC10, PC1, PC9a, PC32
CS 8A	Roller application or brushing/ industrial setting	PROC10, PC1, PC9a, PC32
CS 8B	Roller application or brushing/ industrial setting	PROC10, PC1, PC9a, PC32
CS 8C	Roller application or brushing/ industrial setting	PROC10, PC1, PC9a, PC32
CS 8D	Roller application or brushing/ industrial setting	PROC10, PC1, PC9a, PC32
CS 9A	Non-industrial spraying	PROC11, PC1, PC9a, PC32
CS 9B	Non-industrial spraying	PROC11, PC1, PC9a, PC32
CS 9C	Non-industrial spraying	PROC11, PC1, PC9a, PC32
CS 9D	Non-industrial spraying	PROC11, PC1, PC9a, PC32
CS 10A	Hand-mixing with intimate contact and only PPE available	PROC19, PC1, PC9a, PC32
CS 10B	Hand-mixing with intimate contact and only PPE available	PROC19, PC1, PC9a, PC32
CS 10C	Hand-mixing with intimate contact and only PPE available	PROC19, PC1, PC9a, PC32

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

CS 10D	Hand-mixing with intimate contact and only PPE available	PROC19, PC1, PC9a, PC32
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Processes, tasks, activities covered	Industrial useX Professional useX
Assessment method	Used ECETOC TRA model

4.2. Conditions of use affecting exposure

4.2.1. Control of environmental exposure: Industrial use of process regulators/monomers for polymerisation processes in paints and adhesives (PC1, PC9a, PC32, ERC6c, ERC6d)

PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds
ERC6c	Use of monomer in polymerisation processes at industrial site (inclusion or not into/onto article)
ERC6d	Use of reactive process regulators in polymerisation processes at industrial site (inclusion or not into/onto article)
Assessment method	EUSES

Product (article) characteristics

Physical form of product	Liquid
Concentration of substance in product	21 %

Amount used, frequency and duration of use (or from service life)

Amount per use	2500 t/yr
Daily amount per site	1.667 kg/day
Annual site tonnage	500 t/yr
Fraction of Regional tonnage used locally:	0.2
Emission days	300 days/yr
Continuous release	

Technical and organisational conditions and measures

Not relevant	
Not relevant	

Conditions and measures related to sewage treatment plant

Sewage treatment plant	Yes. Freshwater. Marine water. Assessment
Release rate	> 2000 m ³ /d
No application of sewage sludge to soil	
STP effluent. Total Concentration of Contaminants. µg/L	≤ 10

Conditions and measures related to treatment of waste (including article waste)

Not relevant	
Not relevant	

Other conditions affecting environmental exposure

Receiving surface water flow is 18000 m ³ /d	
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4.2.2. Control of environmental exposure: Widespread use leading to inclusion into/onto article / professional setting/ Covers indoor and outdoor use (PC1, PC9a, PC32, ERC8c, ERC8f)

PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds
ERC8c	Widespread use leading to inclusion into/onto article (indoor)
ERC8f	Widespread use leading to inclusion into/onto article (outdoor)
Assessment method	EUSES

Product (article) characteristics

Physical form of product	Liquid
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2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Concentration of substance in product	21 %
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Amount used, frequency and duration of use (or from service life)	
Amount per use	2500 t/yr
Daily amount per site	6.67 kg/day
Annual site tonnage	1 t/yr
Fraction of Regional tonnage used locally:	0.0004
Emission days	150 days/yr
Continuous release	

Technical and organisational conditions and measures	
Not relevant	
Not relevant	

Conditions and measures related to sewage treatment plant	
Sewage treatment plant	None

Conditions and measures related to treatment of waste (including article waste)	
Not relevant	
Not relevant	

Other conditions affecting environmental exposure	
Receiving surface water flow is 18000 m ³ /d	

4.2.3. Control of worker exposure: Mixing or blending in batch process of preparations containing up to 21% 2-EHA in professional settings (PROC5, PC1, PC9a, PC32)

PROC5	Mixing or blending in batch processes
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	< 25 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	> 4 h/day

Technical and organisational conditions and measures	
Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure	
Palm of both hands	
Covers outdoor use	

4.2.4. Control of worker exposure: Mixing or blending in batch process of preparations containing up to 21% 2-EHA in professional settings (PROC5, PC1, PC9a, PC32)

PROC5	Mixing or blending in batch processes
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	< 25 %

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration > 4 h/day

Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes Effectiveness. 90%

Respiratory protection. Yes Effectiveness. 90%

Other conditions affecting workers exposure

Palm of both hands

Indoor use

4.2.5. Control of worker exposure: Mixing or blending in batch process of preparations containing up to 21% 2-EHA in professional settings (PROC5, PC1, PC9a, PC32)

PROC5	Mixing or blending in batch processes
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product Liquid

Concentration of substance in product < 25 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration > 4 h/day

Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Local exhaust ventilation

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes Effectiveness. 90%

Other conditions affecting workers exposure

Palm of both hands

Indoor use

4.2.6. Control of worker exposure: Mixing or blending in batch process of preparations containing up to 21% 2-EHA in professional settings (PROC5, PC1, PC9a, PC32)

PROC5	Mixing or blending in batch processes
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product Liquid

Concentration of substance in product < 25 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration > 4 h/day

Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure	
Palm of both hands	
Indoor use	

4.2.7. Control of worker exposure: Mixing or blending in batch process to produce a mixture at <21% in industrial settings (P ROC5, PC1, PC9a, PC32)

PROC5	Mixing or blending in batch processes
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	< 25 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	> 4 h/day

Technical and organisational conditions and measures	
Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure	
Palm of both hands	
Covers outdoor use	

4.2.8. Control of worker exposure: Mixing or blending in batch process to produce a mixture at <21% in industrial settings (P ROC5, PC1, PC9a, PC32)

PROC5	Mixing or blending in batch processes
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	< 25 %

Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	> 4 h/day

Technical and organisational conditions and measures	
Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves. Yes	Effectiveness. 90%
Respiratory protection. Yes	Effectiveness. 90%

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Other conditions affecting workers exposure

Palm of both hands

Indoor use

4.2.9. Control of worker exposure: Mixing or blending in batch process to produce a mixture at <21% in industrial settings (P ROC5, PC1, PC9a, PC32)

PROC5	Mixing or blending in batch processes
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product

Liquid

Concentration of substance in product

< 25 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration

> 4 h/day

Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Local exhaust ventilation

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes

Effectiveness. 90%

Other conditions affecting workers exposure

Palm of both hands

Indoor use

4.2.10. Control of worker exposure: Mixing or blending in batch process to produce a mixture at <21% in industrial settings (PROC5, PC1, PC9a, PC32)

PROC5	Mixing or blending in batch processes
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product

Liquid

Concentration of substance in product

< 25 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration

> 4 h/day

Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes

Effectiveness. 90%

Other conditions affecting workers exposure

Palm of both hands

Indoor use

4.2.11. Control of worker exposure: Industrial spraying (PROC7, PC1, PC9a, PC32)

PROC7	Industrial spraying
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2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product	Liquid
Concentration of substance in product	< 25 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration	> 4 h/day
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Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	
Local exhaust ventilation	

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes	Effectiveness. 90%
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Other conditions affecting workers exposure

Hands and forearms	
Indoor use	

4.2.12. Control of worker exposure: Industrial spraying (PROC7, PC1, PC9a, PC32)

PROC7	Industrial spraying
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product	Liquid
Concentration of substance in product	< 25 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration	> 4 h/day
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Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes	Effectiveness. 90%
Wear suitable respiratory protection.	Effectiveness. 90%

Other conditions affecting workers exposure

Hands and forearms	
Covers outdoor use	

4.2.13. Control of worker exposure: Industrial spraying (PROC7, PC1, PC9a, PC32)

PROC7	Industrial spraying
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product	Liquid
Concentration of substance in product	< 25 %

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration < 15 min/day

Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes Effectiveness. 90%

Other conditions affecting workers exposure

Hands and forearms

Covers outdoor use

4.2.14. Control of worker exposure: Transfer of substance or mixture into small containers (dedicated filling line, including weighing)/ industrial setting (PROC9, PC1, PC9a, PC32)

PROC9	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product Liquid

Concentration of substance in product < 25 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration > 4 h/day

Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes Effectiveness. 90%

Other conditions affecting workers exposure

Palm of both hands

Indoor use

4.2.15. Control of worker exposure: Transfer of substance or mixture into small containers (dedicated filling line, including weighing)/ professional setting (PROC9, PC1, PC9a, PC32)

PROC9	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product Liquid

Concentration of substance in product < 25 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration > 4 h/day

Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes Effectiveness. 90%

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Other conditions affecting workers exposure

Palm of both hands	
Covers outdoor use	

4.2.16. Control of worker exposure: Transfer of substance or mixture into small containers (dedicated filling line, including weighing)/ professional setting (PROC9, PC1, PC9a, PC32)

PROC9	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product	Liquid
Concentration of substance in product	< 25 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration	> 4 h/day
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Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes	Effectiveness. 90%
Wear respiratory protection.	Effectiveness. 90%

Other conditions affecting workers exposure

Palm of both hands	
Indoor use	

4.2.17. Control of worker exposure: Transfer of substance or mixture into small containers (dedicated filling line, including weighing)/ professional setting (PROC9, PC1, PC9a, PC32)

PROC9	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product	Liquid
Concentration of substance in product	< 25 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration	> 4 h/day
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Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	
Local exhaust ventilation	

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes	Effectiveness. 90%
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Other conditions affecting workers exposure

Palm of both hands	
Indoor use	

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

4.2.18. Control of worker exposure: Transfer of substance or mixture into small containers (dedicated filling line, including weighing)/ professional setting (PROC9, PC1, PC9a, PC32)

PROC9	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product	Liquid
Concentration of substance in product	< 25 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration	< 4 h/day
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Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes	Effectiveness. 90%
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Other conditions affecting workers exposure

Palm of both hands	
Indoor use	

4.2.19. Control of worker exposure: Roller application or brushing/ professional setting (PROC10, PC1, PC9a, PC32)

PROC10	Roller application or brushing
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product	Liquid
Concentration of substance in product	< 25 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration	< 1 h/day
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Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes	Effectiveness. 90%
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Other conditions affecting workers exposure

Both hands	
Covers outdoor use	

4.2.20. Control of worker exposure: Roller application or brushing/ professional setting (PROC10, PC1, PC9a, PC32)

PROC10	Roller application or brushing
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product	Liquid
Concentration of substance in product	< 25 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration	> 4 h/day
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2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes Effectiveness. 90%

Wear respiratory protection. Effectiveness. 90%

Other conditions affecting workers exposure

Both hands

Covers outdoor use

4.2.21. Control of worker exposure: Roller application or brushing/ professional setting (PROC10, PC1, PC9a, PC32)

PROC10	Roller application or brushing
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product Liquid

Concentration of substance in product < 25 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration > 4 h/day

Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes Effectiveness. 90%

Wear respiratory protection. Effectiveness. 90%

Other conditions affecting workers exposure

Both hands

Indoor use

4.2.22. Control of worker exposure: Roller application or brushing/ professional setting (PROC10, PC1, PC9a, PC32)

PROC10	Roller application or brushing
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product Liquid

Concentration of substance in product < 25 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration < 4 h/day

Technical and organisational conditions and measures

Local exhaust ventilation

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes Effectiveness. 90%

Other conditions affecting workers exposure

Both hands

Indoor use

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

4.2.23. Control of worker exposure: Roller application or brushing/ professional setting (PROC10, PC1, PC9a, PC32)

PROC10	Roller application or brushing
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product	Liquid
Concentration of substance in product	< 25 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration	< 1 h/day
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Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes	Effectiveness. 90%
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Other conditions affecting workers exposure

Both hands	
Indoor use	

4.2.24. Control of worker exposure: Roller application or brushing/ industrial setting (PROC10, PC1, PC9a, PC32)

PROC10	Roller application or brushing
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product	Liquid
Concentration of substance in product	< 25 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration	> 4 h/day
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Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes	Effectiveness. 90%
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Other conditions affecting workers exposure

Both hands	
Covers outdoor use	

4.2.25. Control of worker exposure: Roller application or brushing/ industrial setting (PROC10, PC1, PC9a, PC32)

PROC10	Roller application or brushing
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product	Liquid
Concentration of substance in product	< 25 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration	> 4 h/day
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2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes Effectiveness. 90%

Wear respiratory protection. Effectiveness. 90%

Other conditions affecting workers exposure

Both hands

Indoor use

4.2.26. Control of worker exposure: Roller application or brushing/ industrial setting (PROC10, PC1, PC9a, PC32)

PROC10	Roller application or brushing
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product Liquid

Concentration of substance in product < 25 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration > 4 h/day

Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Local exhaust ventilation

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes Effectiveness. 90%

Other conditions affecting workers exposure

Both hands

Indoor use

4.2.27. Control of worker exposure: Roller application or brushing/ industrial setting (PROC10, PC1, PC9a, PC32)

PROC10	Roller application or brushing
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product Liquid

Concentration of substance in product < 25 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration < 4 h/day

Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes Effectiveness. 90%

Other conditions affecting workers exposure

Both hands

Indoor use

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

4.2.28. Control of worker exposure: Non-industrial spraying (PROC11, PC1, PC9a, PC32)

PROC11	Non-industrial spraying
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product	Liquid
Concentration of substance in product	< 25 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration	> 4 h/day
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Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation

Wear respiratory protection.	Effectiveness. 90%
Protective gloves. Yes	Effectiveness. 95%

Other conditions affecting workers exposure

Hands and forearms	
Covers outdoor use	

4.2.29. Control of worker exposure: Non-industrial spraying (PROC11, PC1, PC9a, PC32)

PROC11	Non-industrial spraying
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product	Liquid
Concentration of substance in product	< 25 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration	< 15 min/day
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Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes	Effectiveness. 95%
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Other conditions affecting workers exposure

Hands and forearms	
Covers outdoor use	

4.2.30. Control of worker exposure: Non-industrial spraying (PROC11, PC1, PC9a, PC32)

PROC11	Non-industrial spraying
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product	Liquid
Concentration of substance in product	< 25 %

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration	> 4 h/day
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Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
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Ensure operatives are trained to minimise exposures	
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Local exhaust ventilation	
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Conditions and measures related to personal protection, hygiene and health evaluation

Wear respiratory protection.	Effectiveness. 90%
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Protective gloves. Yes	Effectiveness. 95%
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Other conditions affecting workers exposure

Hands and forearms	
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Indoor use	
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4.2.31. Control of worker exposure: Non-industrial spraying (PROC11, PC1, PC9a, PC32)

PROC11	Non-industrial spraying
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product	Liquid
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Concentration of substance in product	< 25 %
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Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration	< 1 h/day
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Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
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Ensure operatives are trained to minimise exposures	
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Local exhaust ventilation	
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Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes	Effectiveness. 95%
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Other conditions affecting workers exposure

Hands and forearms	
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Indoor use	
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4.2.32. Control of worker exposure: Hand-mixing with intimate contact and only PPE available (PROC19, PC1, PC9a, PC32)

PROC19	Manual activities involving hand contact
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product	Liquid
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Concentration of substance in product	< 25 %
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Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration	> 4 h/day
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Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
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Ensure operatives are trained to minimise exposures	
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Conditions and measures related to personal protection, hygiene and health evaluation

Wear respiratory protection.	Effectiveness. 90%
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Protective gloves. Yes	Effectiveness. 98%
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2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Other conditions affecting workers exposure

Hands and forearms, and more

Covers outdoor use

4.2.33. Control of worker exposure: Hand-mixing with intimate contact and only PPE available (PROC19, PC1, PC9a, PC32)

PROC19	Manual activities involving hand contact
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product Liquid

Concentration of substance in product < 25 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration < 1 h/day

Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Conditions and measures related to personal protection, hygiene and health evaluation

Protective gloves. Yes Effectiveness. 98%

Other conditions affecting workers exposure

Hands and forearms, and more

Covers outdoor use

4.2.34. Control of worker exposure: Hand-mixing with intimate contact and only PPE available (PROC19, PC1, PC9a, PC32)

PROC19	Manual activities involving hand contact
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product Liquid

Concentration of substance in product < 25 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration > 4 h/day

Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure operatives are trained to minimise exposures

Local exhaust ventilation

Conditions and measures related to personal protection, hygiene and health evaluation

Wear respiratory protection. Effectiveness. 90%

Protective gloves. Yes Effectiveness. 98%

Other conditions affecting workers exposure

Hands and forearms, and more

Indoor use

4.2.35. Control of worker exposure: Hand-mixing with intimate contact and only PPE available (PROC19, PC1, PC9a, PC32)

PROC19	Manual activities involving hand contact
PC1	Adhesives, sealants
PC9a	Coatings and paints, thinners, paint removers
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product Liquid

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Concentration of substance in product	< 25 %
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Amount used (or contained in articles), frequency and duration of use/exposure	
Exposure duration	< 1 h/day

Technical and organisational conditions and measures	
Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	

Conditions and measures related to personal protection, hygiene and health evaluation	
Protective gloves. Yes	Effectiveness. 98%

Other conditions affecting workers exposure	
Hands and forearms, and more	
Indoor use	

4.3. Exposure estimation and reference to its source

4.3.1. Environmental release and exposure Industrial use of process regulators/monomers for polymerisation processes in paints and adhesives (PC1, PC9a, PC32, ERC6c, ERC6d)

Information for contributing exposure scenario					
Release route			Release rate		
Release fraction to air from process (initial release prior to RMM):			0.1 %		
Release fraction to wastewater from process (initial release prior to RMM):			0.5 %		
Release fraction to soil from process (initial release prior to RMM):			0.5 %		
Protection target	Unit	Exposure estimation	PNEC	RCR	
Freshwater	mg/l	0.00143	2.72	0.526	
Marine water	mg/l	0.000132	0.272	0.485	
Secondary Poisoning		<		<	
Freshwater sediment	mg/kg wet weight	< 0.0145	0.126	< 0.53	
Marine water sediment	mg/l	0.00133	12.6	0.48	
Sewage treatment plant	mg/l	0.01	2.3	0.004	
Soil	mg/kg wet weight	0.0000584	1	0.000066	

4.3.2. Environmental release and exposure Widespread use leading to inclusion into/onto article / professional setting/ Covers indoor and outdoor use (PC1, PC9a, PC32, ERC8c, ERC8f)

Information for contributing exposure scenario					
Release route			Release rate		
Release fraction to air from process (initial release prior to RMM):			0.1 %		
Release fraction to wastewater from process (initial release prior to RMM):			0.5 %		
Release fraction to soil from process (initial release prior to RMM):			0.5 %		
Protection target	Unit	Exposure estimation	PNEC	RCR	
Freshwater	mg/l	0.0021	2.72	0.772	
Marine water	mg/l	0.000199	0.272	0.732	
Freshwater sediment	mg/kg dwt	0.0212	0.126	0.77	
Marine water sediment	mg/l	0.00201	12.6	0.73	
Sewage treatment plant	mg/l	0.0167	2.3	0.0073	
Soil	mg/l wet weight	0.00000065	1	0.00000074	

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

4.3.3. Worker exposure Mixing or blending in batch process of preparations containing up to 21% 2-EHA in professional settings (PROC5, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.12 mg/m ²	0.5	
Acute - Local - Inhalation	32.2 mg/m ³	0.86	

4.3.4. Worker exposure Mixing or blending in batch process of preparations containing up to 21% 2-EHA in professional settings (PROC5, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.12 mg/m ²	0.5	
Acute - Local - Inhalation	4.61 mg/m ³	0.12	

4.3.5. Worker exposure Mixing or blending in batch process of preparations containing up to 21% 2-EHA in professional settings (PROC5, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.12 mg/m ²	0.5	
Acute - Local - Inhalation	9.21 mg/m ³	0.25	

4.3.6. Worker exposure Mixing or blending in batch process of preparations containing up to 21% 2-EHA in professional settings (PROC5, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.12 mg/m ²	0.5	
Acute - Local - Inhalation	27.6 mg/m ³	0.74	

4.3.7. Worker exposure Mixing or blending in batch process to produce a mixture at <21% in industrial settings (PROC5, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.12 mg/m ²	0.5	
Acute - Local - Inhalation	23 mg/m ³	0.61	

4.3.8. Worker exposure Mixing or blending in batch process to produce a mixture at <21% in industrial settings (PROC5, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.12 mg/m ²	0.5	
Acute - Local - Inhalation	23 mg/m ³	0.61	

4.3.9. Worker exposure Mixing or blending in batch process to produce a mixture at <21% in industrial settings (PROC5, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.12 mg/m ²	0.5	
Acute - Local - Inhalation	23 mg/m ³	0.61	

4.3.10. Worker exposure Mixing or blending in batch process to produce a mixture at <21% in industrial settings (PROC5, PC1, PC9a, PC32)

Information for contributing exposure scenario

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.12 mg/m ²	0.5	
Acute - Local - Inhalation	23 mg/m ³	0.61	

4.3.11. Worker exposure Industrial spraying (PROC7, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.12 mg/m ²	0.5	
Acute - Local - Inhalation	23 mg/m ³	0.61	

4.3.12. Worker exposure Industrial spraying (PROC7, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.12 mg/m ²	0.5	
Acute - Local - Inhalation	32.2 mg/m ³	0.86	

4.3.13. Worker exposure Industrial spraying (PROC7, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.12 mg/m ²	0.5	
Acute - Local - Inhalation	32.2 mg/m ³	0.86	

4.3.14. Worker exposure Transfer of substance or mixture into small containers (dedicated filling line, including weighing)/ industrial setting (PROC9, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.06 mg/m ²	0.25	
Acute - Local - Inhalation	23 mg/m ³	0.61	

4.3.15. Worker exposure Transfer of substance or mixture into small containers (dedicated filling line, including weighing)/ professional setting (PROC9, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.06 mg/m ²	0.25	
Acute - Local - Inhalation	32.2 mg/m ³	0.86	

4.3.16. Worker exposure Transfer of substance or mixture into small containers (dedicated filling line, including weighing)/ professional setting (PROC9, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.06 mg/m ²	0.25	
Acute - Local - Inhalation	4.61 mg/m ³	0.12	

4.3.17. Worker exposure Transfer of substance or mixture into small containers (dedicated filling line, including weighing)/ professional setting (PROC9, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.06 mg/m ²	0.25	
Acute - Local - Inhalation	9.21 mg/m ³	0.25	

4.3.18. Worker exposure Transfer of substance or mixture into small containers (dedicated filling line, including weighing)/ professional setting (PROC9, PC1, PC9a, PC32)

Information for contributing exposure scenario

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.06 mg/m ²	0.25	
Acute - Local - Inhalation	27.6 mg/m ³	0.74	

4.3.19. Worker exposure Roller application or brushing/ professional setting (PROC10, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.12 mg/m ²	0.5	
Acute - Local - Inhalation	16.1 mg/m ³	0.43	

4.3.20. Worker exposure Roller application or brushing/ professional setting (PROC10, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.12 mg/m ²	0.5	
Acute - Local - Inhalation	8.06 mg/m ³	0.21	

4.3.21. Worker exposure Roller application or brushing/ professional setting (PROC10, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.12 mg/m ²	0.5	
Acute - Local - Inhalation	11.5 mg/m ³	0.31	

4.3.22. Worker exposure Roller application or brushing/ professional setting (PROC10, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.12 mg/m ²	0.5	
Acute - Local - Inhalation	13.8 mg/m ³	0.37	

4.3.23. Worker exposure Roller application or brushing/ professional setting (PROC10, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.12 mg/m ²	0.5	
Acute - Local - Inhalation	23 mg/m ³	0.61	

4.3.24. Worker exposure Roller application or brushing/ industrial setting (PROC10, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.12 mg/m ²	0.5	
Acute - Local - Inhalation	32.2 mg/m ³	0.86	

4.3.25. Worker exposure Roller application or brushing/ industrial setting (PROC10, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.12 mg/m ²	0.5	
Acute - Local - Inhalation	4.61 mg/m ³	0.12	

4.3.26. Worker exposure Roller application or brushing/ industrial setting (PROC10, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.12 mg/m ²	0.5	
Acute - Local - Inhalation	4.61 mg/m ³	0.12	

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

4.3.27. Worker exposure Roller application or brushing/ industrial setting (PROC10, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.12 mg/m ²	0.5	
Acute - Local - Inhalation	27.6 mg/m ³	0.74	

4.3.28. Worker exposure Non-industrial spraying (PROC11, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.15 mg/m ²	0.62	
Acute - Local - Inhalation	32.2 mg/m ³	0.86	

4.3.29. Worker exposure Non-industrial spraying (PROC11, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.15 mg/m ²	0.62	
Acute - Local - Inhalation	32.2 mg/m ³	0.86	

4.3.30. Worker exposure Non-industrial spraying (PROC11, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.15 mg/m ²	0.62	
Acute - Local - Inhalation	9.21 mg/m ³	0.25	

4.3.31. Worker exposure Non-industrial spraying (PROC11, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.15 mg/m ²	0.62	
Acute - Local - Inhalation	18.4 mg/m ³	0.49	

4.3.32. Worker exposure Hand-mixing with intimate contact and only PPE available (PROC19, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.06 mg/m ²	0.25	
Acute - Local - Inhalation	8.06 mg/m ³	0.21	

4.3.33. Worker exposure Hand-mixing with intimate contact and only PPE available (PROC19, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.06 mg/m ²	0.25	
Acute - Local - Inhalation	16.1 mg/m ³	0.43	

4.3.34. Worker exposure Hand-mixing with intimate contact and only PPE available (PROC19, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.06 mg/m ²	0.25	
Acute - Local - Inhalation	11.5 mg/m ³	0.31	

4.3.35. Worker exposure Hand-mixing with intimate contact and only PPE available (PROC19, PC1, PC9a, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.06 mg/m ²	0.25	

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Acute - Local - Inhalation

23 mg/m³

0.61

4.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

4.4.1. Environment

No data available

4.4.2. Health

No data available

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

5. ES5: Use as laboratory reagent

5.1. Title section

Use as laboratory reagent	
ES Ref.: ES5	
ES Type: Worker	

Environment		
CS 1A	Production/ industrial setting	PC32, ERC1
CS 1B	Production/ industrial setting	PC32, ERC1
CS 1C	Production/ industrial setting	PC32, ERC1

Worker		
CS 2	Use as laboratory reagent	PROC15, PC32

Processes, tasks, activities covered	Use of small quantities within laboratory settings within enclosed or contained systems, including incidental exposures during material transfers and equipment cleaning Industrial use
Assessment method	Used ECETOC TRA model

5.2. Conditions of use affecting exposure

5.2.1. Control of environmental exposure: Production/ industrial setting (PC32, ERC1)

PC32	Polymer preparations and compounds
ERC1	Manufacture of the substance
Assessment method	EUSES

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used, frequency and duration of use (or from service life)	
Daily amount per site	314 t/d
Annual site tonnage	94200 t/yr
Fraction of Regional tonnage used locally:	1
Emission days	300 days/yr
Continuous release	

Technical and organisational conditions and measures	
Not relevant	
Not relevant	

Conditions and measures related to sewage treatment plant	
Sewage treatment plant	Yes. Freshwater. Marine water. Assessment
Release rate	> 2000 m ³ /d
No application of sewage sludge to soil	
STP effluent. Total Concentration of Contaminants. µg/L	< 10

Conditions and measures related to treatment of waste (including article waste)	
Not relevant	
Not relevant	

Other conditions affecting environmental exposure	
Receiving surface water flow is 18000 m ³ /d	

5.2.2. Control of environmental exposure: Production/ industrial setting (PC32, ERC1)

PC32	Polymer preparations and compounds
ERC1	Manufacture of the substance
Assessment method	EUSES

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used, frequency and duration of use (or from service life)	
Daily amount per site	145 t/d
Annual site tonnage	43500 t/yr
Fraction of Regional tonnage used locally:	1
Emission days	300 days/yr
Continuous release	

Technical and organisational conditions and measures	
Not relevant	
Not relevant	

Conditions and measures related to sewage treatment plant	
Sewage treatment plant	Yes. Freshwater. Marine water. Assessment
Release rate	> 2000 m ³ /d
No application of sewage sludge to soil	
STP effluent. Total Concentration of Contaminants. µg/L	< 10

Conditions and measures related to treatment of waste (including article waste)	
Not relevant	
Not relevant	

Other conditions affecting environmental exposure	
Receiving surface water flow is 18000 m ³ /d	

5.2.3. Control of environmental exposure: Production/ industrial setting (PC32, ERC1)

PC32	Polymer preparations and compounds
ERC1	Manufacture of the substance
Assessment method	EUSES

Product (article) characteristics	
Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used, frequency and duration of use (or from service life)	
Daily amount per site	24.2 t/d
Annual site tonnage	7250 t/yr
Fraction of Regional tonnage used locally:	1
Emission days	300 days/yr
Continuous release	

Technical and organisational conditions and measures	
Not relevant	
Not relevant	

Conditions and measures related to sewage treatment plant	
Sewage treatment plant	Yes. Freshwater. Marine water. Assessment
Release rate	> 2000 m ³ /d
No application of sewage sludge to soil	
STP effluent. Total Concentration of Contaminants. µg/L	< 10

Conditions and measures related to treatment of waste (including article waste)	
Not relevant	
Not relevant	

Other conditions affecting environmental exposure	
Receiving surface water flow is 18000 m ³ /d	

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

5.2.4. Control of worker exposure: Use as laboratory reagent (PROC15, PC32)

PROC15	Use as laboratory reagent
PC32	Polymer preparations and compounds

Product (article) characteristics

Physical form of product	Liquid
Concentration of substance in product	100 %

Amount used (or contained in articles), frequency and duration of use/exposure

Exposure duration	> 4 h/day
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Technical and organisational conditions and measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	
Ensure operatives are trained to minimise exposures	
Local exhaust ventilation	

Conditions and measures related to personal protection, hygiene and health evaluation

Respiratory protection. None	
Protective gloves. Yes	Effectiveness. 90%

Other conditions affecting workers exposure

Palm of one hand	
Indoor use	

5.3. Exposure estimation and reference to its source

5.3.1. Environmental release and exposure Production/ industrial setting (PC32, ERC1)

Information for contributing exposure scenario

Release route		Release rate			
Release fraction to air from process (initial release prior to RMM):		0.01 %			
Release fraction to wastewater from process (initial release prior to RMM):		0.3 %			
Release fraction to soil from process (initial release prior to RMM):		0.01 %			
Protection target	Unit	Exposure estimation	PNEC	RCR	
Freshwater	mg/l	0.00143	2.72	0.526	
Marine water	mg/l	0.000132	0.272	0.485	
Freshwater sediment	mg/kg wet weight	0.0145	0.126	0.53	
Marine water sediment	mg/l	0.00133	12.6	0.48	
Sewage treatment plant	mg/l	0.01	2.3	0.004	
Soil	mg/kg wet weight	0.00264	1	0.003	

5.3.2. Environmental release and exposure Production/ industrial setting (PC32, ERC1)

Information for contributing exposure scenario

Release route		Release rate			
Release fraction to air from process (initial release prior to RMM):		0.01 %			
Release fraction to wastewater from process (initial release prior to RMM):		0.3 %			
Release fraction to soil from process (initial release prior to RMM):		0.01 %			
Protection target	Unit	Exposure estimation	PNEC	RCR	
Freshwater	mg/l	0.00143	2.72	0.526	
Marine water	mg/l	0.000132	0.272	0.485	
Freshwater sediment	mg/kg wet weight	0.0145	0.126	0.53	
Marine water sediment	mg/l	0.00133	12.6	0.48	
Sewage treatment plant	mg/l	0.01	2.3	0.004	
Soil	mg/kg wet weight	0.00122	1	0.0014	

2-ethylhexyl acrylate

Annex to the safety data sheet: Exposure scenario

CAS-No.: 103-11-7 Product form: Substance Physical state: Liquid Substance type: Mono-constituent

5.3.3. Environmental release and exposure Production/ industrial setting (PC32, ERC1)

Information for contributing exposure scenario

Release route		Release rate			
Release fraction to air from process (initial release prior to RMM):		0.01 %			
Release fraction to wastewater from process (initial release prior to RMM):		0.3 %			
Release fraction to soil from process (initial release prior to RMM):		0.01 %			
Protection target	Unit	Exposure estimation	PNEC	RCR	
Freshwater	mg/l	0.00143	2.72	0.526	
Marine water	mg/l	0.000132	0.272	0.49	
Freshwater sediment	mg/kg wet weight	0.0145	0.126	0.53	
Marine water sediment	mg/l	0.00133	12.6	0.48	
Sewage treatment plant	mg/l	0.01	2.3	0.004	
Soil	mg/kg wet weight	0.000203	1	0.00023	

5.3.4. Worker exposure Use as laboratory reagent (PROC15, PC32)

Information for contributing exposure scenario

Route of exposure and type of effects	Exposure estimate	RCR	
Acute - Local - Dermal	0.1 mg/m ²	0.41	
Acute - Local - Inhalation	3.84 mg/m ³	0.1	

5.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

5.4.1. Environment

No data available

5.4.2. Health

No data available