

SUBUR TOGLIATTI LLC

SAFETY DATA SHEET

According to EC Regulations 1907/2006 (REACH), 1272/2008 (CLP) & 453/2010

BUTYL RUBBER (IIR) Isobutylene-Isoprene rubber

GRADE IIR -1675

Version: 2.3
Created: 01/07/2016

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

1.1 Product identifier

| | |
|---|--|
| Name of Substance: | Poly (isoprene- <i>co</i> -isobutene) |
| Name of IUPAC | 2-methylprop-1-ene, polymer with 2-methylbuta-1.3-diene |
| Synonyms | isobutylene, polymer with isoprene; 1.3-Butadiene, 2-methyl-, polymer with 2-methyl-1-propene |
| TRADE NAMES: | Synthetic Butyl Rubber (IIR) |
| PRODUCT NAME, GRADES | IIR -1675 |
| Registration #: for isoprene (CAS #78-79-5; EC #201-143-3) <i>Index No(CLP): 601-014-00-5</i> | 01-2119457891-29-0001 |
| Registration #: for 2-methylpropene-1 (CAS #115-11-7; EC #204-066-3) <i>Index No(CLP): 601-012-00-4</i> | 01-2119456616-32-0007 01-2119456616-32-0006 |

1.2 Relevant identified uses of the substance

Most common technical function of synthetic butyl rubber: tyre production, technical rubber parts (profiles, hoses, shoe soles, belt production, technical rubber goods), rubber compound, medical production.

DISCLAIMER

This product is a polymer and is not classified as dangerous under criteria of Directives No 67/458/EEC, No 1999/45/EC and Regulation (EC) No 1272/2008 (Regulation CLP). This polymer does not contain substances classified as dangerous under Article 59.2 Regulation (EC) No 1272/2008, namely:

- *in an individual concentration of ≥ 1 % by weight for non-gaseous mixtures posing human health or environmental;*
- *in an individual concentration of ≥ 0.1 % by weight for non-gaseous mixtures that is carcinogenic category 2 or toxic to reproduction category 1A, 1B and 2, skin sensitiser category 1, respiratory sensitiser category 1, or has effects on or via lactation or is persistent, bioaccumulative and toxic (PBT) in accordance with the criteria set out in Annex XIII or very persistent and very bioaccumulative (vPvB) in accordance with the criteria set out in Annex XIII; or*
- *a substance for which there are Community workplace exposure limits.*

In accordance with mentioned above, this product does not require an official e-SDS as per Regulations (EC) No 1907/2006 (articles 31.1; 31.2) and Commission Regulation (EU) No 453/2010.

This e-SDS is developed in good faith to provide a customer with sufficient information allowing to take necessary measures to comply with relevant HSE requirements.

1.3 Details of the supplier of the safety data sheet

Only representative

Company name: Gazprom Marketing and Trading France
Address: 68 avenue des Champs-Élysées, 75008, Paris, France
Contact Telephone: +33 1 42 99 73 50
Fax: +33 1 42 99 73 99
Email Address: yury.severinchik@gazprom-mt.com

Supplier

Company name: SIBUR Togliatti LLC
Address: Novozavodskaya str. 8, 445007, Togliatti, Samara Region, Russian Federation
Phone: +7 8482 29-91-51; 23-11-04; 29-32-69
Fax: +7 8482 22-14-41; 70-15-18
Email Address: officetk@tltk.ru; office@tltk.ru
Emergency phone: +7 8482 36-91-51 (round the clock)

1.4 Emergency phone in the country of delivery: 112 (Please note that emergency numbers may vary depending upon the country of delivery though 112 remains valid as universal number)

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) No 1272/2008 (CLP/GHS)
Not classified as a hazardous substance.

2.2 Label elements

2.2.1 Labelling according to Regulation (EC) No 1272/2008 (CLP/GHS)
Not applicable.

2.3 Specific hazard

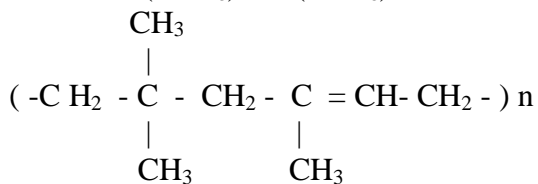
No significant health hazard in normal industrial use conditions.
Contact with melted/heated product may cause thermal burns.
Processing vapours, which can irritate eyes and respiratory tract, may form when product is heated to high temperatures.
Combustible solid.
Products of thermal decomposition – toxic.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

According to CLP Regulation the product is a mixture of Polymer and Additives.

This product is a synthetic rubber, consisting of at least 98.0% co-polymer from isoprene and isobutene (with 1.7-1.9% bound isoprene), calcium distearate (CAS#1592-23-0/ EC#216-472-8), antioxidants (CAS#68610-06-0 /EC#271-847-3 or CAS#128-37-0 /EC#204-881-4 or CAS#119-47-1/ EC# 204-327-1 or CAS#6683-19-8/ EC#229-722-6).

Formula: (C₄ H₈)_m (C₄ H₈)_n



| Component | Conc. % | CAS / EC # | Classification EC#1272/2008 (CLP) |
|---------------------------------------|---------|-----------------|-----------------------------------|
| Poly (isoprene- <i>co</i> -isobutene) | ≥98.0 | 9010-85-9/ none | none |

The product does not contain impurities or additives that could affect product's labelling and classification according to Regulation (EC) No 1272/2008 (CLP) in the concentration ranges specified.

SECTION 4. FIRST-AID MEASURES

4.1 Description of first aid measures

General information

Spontaneous penetration of Butyl Rubber into human organism is impossible.

Thermal destruction may occur at high temperatures producing isobutylene and isoprene.

Butyl Rubber at normal conditions is non-volatile, causes no exhaustive effects. Inhalational poisoning is not probable.

Contact with eyes may cause mechanical damage, irritation and conjunctivitis were not observed.

Contact with skin causes no irritation.

If the product has a high temperature, contact with skin causes burn.

Inhalation

If decomposition or thermal destruction products are inhaled:

Move an exposed person to fresh air at once. Keep warm and at rest. If there is a respiratory distress give oxygen. If respiration stops or shows signs of failing, apply artificial respiration. Get medical attention.

Ingestion

In case of accidental swallowing:

Rubber particles in case of accidental penetration of the airways may cause mechanical irritation of respiratory tract, cough. In this case the following actions are to be taken.

Wash the mouth with water and give plenty of water to drink, provided the person is conscious. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs naturally, have the exposed person lean forward. Get medical aid.

Skin contact

Remove contaminated clothing and wash skin with plenty of running water, under a shower if affected area is large enough to warrant this. Get medical attention.

Eye contact

Rinse immediately eye with plenty of low pressure water for at least 15 minutes.

Remove contact lenses. Get medical attention.

SECTION 5. FIRE-FIGHTING MEASURES

5.1 Specific hazards

Combustion generates irritating and toxic fumes.
Burning causes emission of carbon dioxide and oxygen.

5.2 Extinguishing media

The substance is flammable. Use foam, dry chemical, carbon dioxide, or water spray.

5.3 Special fire fighting procedures

Keep away from sources of ignition - no smoking.

5.4 Unusual fire & explosion hazards:

None.

5.5 Protective measures in case of fire

Wear full protective clothing and MSHA/NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions

See section 8.

6.2 Environmental precautions

Take precautionary measures against discharges into the environment.

6.3 Spill clean up methods

Sweep spilled substance into containers. Avoid generating dusty conditions and provide ventilation.
All equipment must be grounded.

SECTION 7. HANDLING AND STORAGE

7.1 Protection against fire and explosion

Observe fire safety rules.
Use extract and input ventilation.
Use antistatic and intrinsically safe equipment.
Assure air tightness of equipment and communications.

7.2 Usage precaution

Avoid inhaling vapors and fumes from hot rubber.
Use extract and input ventilation.
Use PPE if necessary.
Wash thoroughly after handling.
Avoid contact with eyes and skin.
Do not ingest or inhale.
Minimise dust generation and accumulation.
Remove all sources of ignition.
All equipment must be grounded.

7.3 Storage precautions

Store in a cool, dry, well-ventilated area away from direct sunlight and incompatible substances in a closed container.

Keep away from source of open fire.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Exposure limits

None listed.

8.2 Protective equipment

Protective gloves, safety goggles and protective clothing.

8.3 Respiratory equipment

Wear positive pressure self-contained breathing apparatus if warranted by workplace conditions.

8.4 Hand protection

Wear approved protective gloves.

8.5 Eye protection

Wear approved safety goggles.

8.5 Hygiene measures

Wash at the end of each work shift and before eating, drinking, smoking or using the toilet.

8.6 Skin protection

Wear protective clothing.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| Property | Value |
|---------------------------|--|
| Appearance | elastic solid (briquette) |
| Odour | peculiar |
| Colour | white to yellow |
| pH value | not applicable, insoluble in water |
| Ignition temperature | 189 °C |
| Auto-ignition temperature | 402 °C |
| Specific Gravity | 0.91-0.92 g/cm ³ |
| Solubility | insoluble in water and fats soluble in aromatic solvent |
| Explosive properties | non explosive |
| Granulometry | not applicable substance is not marketed or used in granular form |
| Other information | None |

SECTION 10. STABILITY AND REACTIVITY

10.1 Stability

The rubber is stable provided there is the antioxidant and the storage conditions are followed. High temperatures cause thermal destruction with emissions of isobutylene and isoprene.

10.2 Reactivity

Lack of antioxidant causes oxidation and thermal destruction.

10.3 Materials to avoid

Strong oxidising agents.

10.4 Conditions to avoid

Avoid high temperatures, naked flames, sparks, long term exposure to direct sunlight, contact with incompatible materials.

10.5 Hazardous decomposition products

Hazardous substances of thermal destruction: spirits, aldehydes, ketones, acids (C₁-C₄), carbon oxides.

SECTION 11. TOXICOLOGICAL INFORMATION

General

LD₅₀ (oral, rats): 10 000 mg/kg (Russian Register of Potentially Hazardous Chemical and Biological Substances /FBEPH)

Inhalation

Poly (isoprene-*co*-isobutene) has no local irritating effect on the gastrointestinal tract when inhaled, conjunctiva, skin-resorptive and sensitizing effect.

Ingestion

Not applicable.

Skin contact

There is no irritant effect on skin.

Eye contact

There is no irritant effect on eyes.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

The product is poorly biodegradable but does not pose a hazard to the environment.

12.2 Water Hazard Classification

According to the German VwVwS: WGK- 0 (not classified).

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 General information

Place into a suitable closed container for disposal.

13.2 Disposal methods

Dispose of in accordance with local and national regulations.

SECTION 14. TRANSPORT INFORMATION

General

The product is not covered by international regulations on the transport of dangerous goods.

UN: none.

SECTION 15. REGULATORY INFORMATION

REGULATORY

Chemical Safety Report has been performed for monomers: isoprene (CAS #78-79-5; EC #201-143-3) and 2-methylpropene-1 (CAS #115-11-7; EC #204-066-3).

SECTION 16. OTHER INFORMATION

16.1 Indication of changes

| VERSION | Date of change | Section | Description of changes |
|--------------|----------------|--|---|
| Version: 1.0 | 16/03/2010 | | First edition created according to recommendations of Regulations (EC) #1907/2006 (Article 31.1). |
| Version: 2.0 | 07/02/2011 | 1.1, 2 | Section 1.1, 2 was updated |
| Version: 2.1 | 23/12/2011 | 1.1; 3; 4; 5; 7; 9; 10; 11; 15; 16 | 1 Product name BK-1675N was renamed into IIR -1675 accordingly. 2. Section 1.1 was added. 3. DISCLAIMER was added on the first page 5. "Specific hazard" subsection was fully updated in Sections 5. 6. LC50 was added in Section 11. 7. Sections 3, 4; 7; 9, 10; 15, 16 were fully updated. |
| Version: 2.2 | 29/06/2015 | 2,3,16 | 1. Sections 2, 3; 16 were updated. |
| Version: 2.3 | 01/07/2016 | Title, 1.3 | Company name of the Supplier was changed from «Togliattikauchuk» on «SIBUR Togliatti». |

16.2 Abbreviations and acronyms

| | |
|------|---|
| LD50 | Lethal Dose to 50% of a test population (Median Lethal Dose) |
| LC50 | Lethal Concentration to 50 % of a test population |
| PBT | Persistent, bioaccumulative, toxic chemical |
| vPvB | Very Persistent, Very Bioaccumulative |
| UN | United Nations |
| WGK | Wassergefährdungsklasse (<i>German: Water Hazard Class</i>) |

16.3 Key literature references and sources

EU DIRECTIVES

REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission

Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

Regulation (EC) No 1272/2008 REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Regulations: Commission regulation (EU) no 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH).

DIRECTIVE 1999/45/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations Directive 67/548/EEC on the approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labeling of dangerous substances.

COMMISSION DECISION of 16 January 2001 amending Decision 2000/532/EC as regards the list of wastes (notified under document number (2001/118/EC).

NATIONAL REGULATIONS (GERMANY)

Major Accident Hazard Legislation 82/501/EWG.

Russian Register of Potentially Hazardous Chemical and Biological Substances (FBEPH).
2-methylpropene-, polymer with 2-methylbutadiene-1,3. Dossier of potentially hazardous chemical and biological substance # BT 000686, 1995, Ministry of Health of the Russian Federation.

DISCLAIMER

This information is based on our current level of knowledge. This information may be subject to revision as new knowledge and experience becomes available, and SIBUR makes no warranties and assumes no liability in connection with any use of this information. Since SIBUR cannot be aware of all aspects of your business and the impact the REACH Regulation has for your company, SIBUR strongly encourages you to get familiar with the REACH Regulation in order to comply with its requirements and timelines.