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

1.1. Product identifier

Name of Substance: synthetic butadiene - alpha-methylstyrene polymer
Name of IUPAC: benzene, (1-methyleneyl)-, polymer with buta-1,3-diene butadiene -α-methylstyrene rubber;
Synonyms: 1,3-butadiene, polymer with alpha-methylstyrene poly(butadiene -co-2-phenylpropene)

Product name, grades:
Registration # for 1,3-butadiene: 01-2119471988-16-0033
(CAS#106-99-0; EC#203-450-8)
Index No(CLP): 601-013-00-X
Registration for 2-phenylpropene:
(alpha-methylstyrene)
(CAS#98-83-9; EC#202-705-0)
Index No(CLP): 601-027-00-6
Registration for oil filler:
(CAS#64741-88-4; EC#265-090-8)
Index No(CLP): 649-454-00-7

for oil filler:
(CAS#68783-04-0; EC#272-180-0)
Index No(CLP): 649-532-00-0

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; or
- 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 and 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.
1.2. Relevant identified uses of the substance
1.2.1. Identified use(s)
Most common technical functions: tyre production, technical rubber parts (profiles, hoses, shoe soles, belt production, technical rubber goods), rubber compound.

1.2.2. Uses advised against
Uses other than those given in section 1.2.1 are not recommended unless an assessment is completed, prior to commencement of that use, which demonstrates that the use will be controlled.

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-Elysées, 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

Manufacturer
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)

Emergency telephone number: 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
Classification according to Regulation (EC) No 1272/2008 (CLP)
Not classified as a hazardous substance.

2.2. Label elements
Labelling according to Regulation (EC) No 1272/2008 (CLP)
Not applicable.

2.3. Specific hazard
No significant health hazard in normal industrial use conditions.
Contact of melted/ heated product may cause thermal burns.
Processing vapours may form when product is heated at high temperatures. Processing vapours may content thermal decomposition products which can irritate eyes and respiratory tract.
Combustible solid.
Not classified as PBT or vPvB.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS
This product is a synthetic rubber consisting of 64 - 69% co-polymer from butadiene and alpha-methylstyrene (22 - 25% bound alpha-methylstyrene), 26 - 29% oil filler (CAS#64741-88-
4/EC#265-090-8 or CAS#68783-04-0/EC#272-180-0), 0.3 - 0.7% antioxidant (amino-phenolic), 4.2 – 5.8% organic acids (fatty acids, C_{14-18}). The product may contain traces of alpha-methylstyrene (monomer): < 0.07%.

Formula:

\[
\begin{array}{c}
- \text{CH}_2 - \text{CH} = \text{CH} - \text{CH}_2 - m \\
\end{array}
\begin{array}{c}
\left\{ \begin{array}{c}
\text{CH}_3 \\
\text{C}_6\text{H}_5
\end{array} \right\}
\end{array}
\begin{array}{c}
- \text{CH}_2 - \text{CH} - n
\end{array}
\]

where

m = 0.7 - is the number of polybutadiene block fragments
n = 0.3 - is the number of alpha-methylstyrene block fragments.

<table>
<thead>
<tr>
<th>Name</th>
<th>EC #</th>
<th>CAS #</th>
<th>Content,%</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,3-Butadiene, polymer with alpha-methylstyrene</td>
<td>none</td>
<td>25034-68-8</td>
<td>64 – 69</td>
<td>none</td>
</tr>
<tr>
<td>Distillates (petroleum), solvent-refined heavy paraffinic (oil filler)</td>
<td>265-090-8</td>
<td>64741-88-4</td>
<td>26.0 - 29.0</td>
<td>none*</td>
</tr>
<tr>
<td>Extracts (petroleum), solvent refined heavy paraffinic distillate solvent</td>
<td>272-180-0</td>
<td>68783-04-0</td>
<td>26.0 - 29.0</td>
<td>none**</td>
</tr>
</tbody>
</table>

*The substance is not classified as carcinogenic (GHS08, Carc 1B, H350) as it complies with Note L (IP 346 < 3%; viscosity > 20.5 mm²/s at 40 °C) having polynuclear aromatic hydrocarbon content < 3% determined in accordance with IP 346 (dimethyl sulfoxide extraction) (Annex VI – Regulation EC 1272/2008).

**This product is not classified as dangerous according to current European legislation (EC No 1272/2008) (IP 346 < 3 %, Viscosity > 20.5 mm²/s at 40 °C).

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
Butadiene-alpha-methylstyrene rubber at normal conditions is stable, non-volatile, causes non-exhaustive effects. Spontaneous penetration of rubber into human organism is impossible.
Inhalation poisoning is unlikely.
Contact with eyes may cause mechanical damage.
Contact with skin has no effects.
If eye/skin contact with hot product occurs, obtain immediate medical attention.
Thermal decomposition products inhalation may irritate respiratory system and eye.

Inhalation
No hazard in normal use of product.
In case the processing vapours penetrate the respiratory airways, do the following:
Immediately move an exposed person to fresh air at once. Keep warm and at rest. If there is respiratory distress give oxygen. If respiration stops or shows signs of failing, apply artificial respiration. Get medical attention.

**Ingestion**
Wash out mouth with water and give plenty of water to drink, provided 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**
There are no risks in normal industrial use conditions. If molten material comes in contact with the skin, do not apply ice but cool under ice water or running stream of water. DO NOT attempt to remove the material from skin. Removal could result in severe tissue damage. Seek medical attention immediately.

**Eye contact**
Rinse immediately eye with plenty of low pressure water for at least 15 minutes. Remove any contact lenses. Consult a physician if required.

4.2. Most important symptoms and effects, both acute and delayed
Inhalation symptoms: Thermal decomposition products inhalation may irritate respiratory system, eye irritation.

Skin contact symptoms: Contact with hot product may cause serious burns.

Eye contact symptoms: Eye contact may cause mechanical damage, irritation of eyes mucous. Contact with hot product may cause serious burns.

Ingestion/aspiration symptoms: Ingestion/aspiration may cause irritation of digestive tract. May cause gastrointestinal blockage.

4.3. Indication of any immediate medical attention and special treatment needed
If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

<table>
<thead>
<tr>
<th>SECTION 5: FIREFIGHTING MEASURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1. Extinguishing media</td>
</tr>
<tr>
<td>Use water with wetting agent, water spray, air-filled foam, chemical foam, extinguishing vapour, carbon dioxide type fire extinguisher, foam extinguisher, solid-extinguishing agents, dry chemical, ground chalk, sand.</td>
</tr>
</tbody>
</table>

5.2. Special hazards arising from the substance or mixture, combustion products, resulting gases
Combustion generates irritating and toxic fumes.
Burning causes emissions of carbon oxides (CO; CO₂).
Unusual fire & explosion hazards: none.

5.3. Advice for firefighters
Firefighting procedures
Keep away from sources of ignition, no smoking.
Extinguish fire keeping safe distance. Not yet ignited rubber briquettes to be kept cool by means of water spraying.

Special protective equipment for firefighters
Wear canvas protective suit, gloves, helmets, face shields, rubber or kersey boots, gas mask.
In proximity to 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, protective equipment and emergency procedures
Take precautionary measures against static discharges.
Ensure adequate ventilation.
Remove sources of ignition, provide workplace ventilation, air monitoring of the workplace, avoid contact with skin and eyes.

6.2. Environmental precautions
Do not allow penetration of the product into water reservoirs, surface and ground water, sewer ducts and soil.
Preventing disposal into water reservoirs of contaminated water without treatment.
Monitor content of hazardous substances in the air.
Provide sealing of process equipment.

6.3. Methods and materials for containment and cleaning up
When the product gets into water or ground collect the product in a separate container for recycling or disposal.

6.4. Reference to other sections
For additional information, refer to Section 8, Exposure Controls and Personal Protection equipment.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling
Handle in accordance with good industrial hygiene and safety practice.
Avoid all sources of ignition.
Avoid contact with eyes and skin. Do not swallow.
Do not ingest or inhale combustion or decomposition products.
Provide input-extract and local ventilation of work zones.
Regularly control work zone air.
Workers should be protected from the possibility of contact with molten product.

7.2. Conditions for safe storage, including any incompatibilities
Store in a dry, well-ventilated area, at temperature not exceeding 40 °C.
Keep away from direct sunlight, atmospheric precipitation and incompatible substances in a closed container.

7.3. Specific end use(s)
Please check the identified uses given in Section 1.2 of this safety data sheet.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters
8.1.1. Occupational Exposure Limits
For 1,3-butadiene, polymer with alpha-methylstyrene (CAS#25034-68-8): not established
Occupational Exposure Limits for the possible products of thermal degradation (see section 10.6):  
1) for alpha-methylstyrene (2-Phenylpropene): International Limit Values

<table>
<thead>
<tr>
<th>SUBSTANCE</th>
<th>2-Phenylpropene&lt;br&gt;CAS#98-83-9</th>
<th>LTEL 8 hr TWA ppm</th>
<th>LTEL 8 hr TWA mg/m³</th>
<th>STEL ppm</th>
<th>STEL mg/m³</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>50</td>
<td>246</td>
<td>100</td>
<td>492</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Belgium</td>
<td>50</td>
<td>246</td>
<td>100</td>
<td>492</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Denmark</td>
<td>50</td>
<td>240</td>
<td>100</td>
<td>480</td>
<td></td>
<td></td>
</tr>
<tr>
<td>European Union</td>
<td>50</td>
<td>246</td>
<td>100</td>
<td>492</td>
<td></td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>25</td>
<td>123</td>
<td>100</td>
<td>492</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Germany (AGS)</td>
<td>50</td>
<td>250</td>
<td>100 (1)</td>
<td>500 (1)</td>
<td>(1) 15 minutes average value</td>
<td></td>
</tr>
<tr>
<td>Germany (DFG)</td>
<td>50</td>
<td>250</td>
<td>100</td>
<td>500</td>
<td>STV 15 minutes average value</td>
<td></td>
</tr>
<tr>
<td>Italy</td>
<td>50</td>
<td>246</td>
<td>100</td>
<td>492</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hungary</td>
<td>-</td>
<td>246</td>
<td>-</td>
<td>492</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latvia</td>
<td>50</td>
<td>246</td>
<td>100 (1)</td>
<td>49 (1)</td>
<td>(1) 15 minutes average value</td>
<td></td>
</tr>
<tr>
<td>Poland</td>
<td>-</td>
<td>240</td>
<td>-</td>
<td>480</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spain</td>
<td>50</td>
<td>246</td>
<td>100</td>
<td>492</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sweden</td>
<td>20</td>
<td>98</td>
<td>50 (1)</td>
<td>245 (1)</td>
<td>(1) Short-term value, 15 minutes average value</td>
<td></td>
</tr>
<tr>
<td>Switzerland</td>
<td>50</td>
<td>250</td>
<td>100</td>
<td>500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Netherlands</td>
<td>-</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>United Kingdom</td>
<td>50</td>
<td>246</td>
<td>100</td>
<td>491</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA-NIOSH</td>
<td>50</td>
<td>240</td>
<td>100 (1)</td>
<td>485 (1)</td>
<td>(1) 15 minutes average value</td>
<td></td>
</tr>
<tr>
<td>USA-OSHA</td>
<td>-</td>
<td>-</td>
<td>100</td>
<td>480</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1) GESTIS International Limit values: http://limitvalue.ifa.dguv.de/

2) for buta-1,3-diene: International Limit Values

<table>
<thead>
<tr>
<th>SUBSTANCE</th>
<th>Buta-1,3-diene&lt;br&gt;CAS#106-99-0</th>
<th>LTEL 8 hr TWA ppm</th>
<th>LTEL 8 hr TWA mg/m³</th>
<th>STEL ppm</th>
<th>STEL mg/m³</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>5</td>
<td>11</td>
<td>20</td>
<td>44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Belgium</td>
<td>2</td>
<td>4.5</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Denmark</td>
<td>10</td>
<td>22</td>
<td>20</td>
<td>44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Germany (AGS)</td>
<td>2 (1)</td>
<td>0.2 (2)</td>
<td>5 (1)</td>
<td>0.5 (2)</td>
<td>16(1)(3)</td>
<td>40(1)(3)</td>
</tr>
<tr>
<td>(1) workplace exposure concentration corresponding to the proposed tolerable cancer risk (see background document: Germany AGS); (2) workplace exposure concentration corresponding to the proposed preliminary acceptable cancer risk (see background document: Germany AGS); (3) 15 minutes average value</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hungary</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Latvia</td>
<td>-</td>
<td>100</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poland</td>
<td>-</td>
<td>4.4</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spain</td>
<td>2</td>
<td>4.5</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sweden</td>
<td>0.5</td>
<td>1</td>
<td>5 (1)</td>
<td>10 (1)</td>
<td>(1) Short-term value, 15 minutes average value</td>
<td></td>
</tr>
</tbody>
</table>
8.1.2. DNEL/ PNEC values from the CSR in accordance with REACH regulation

8.1.2.1. For 1,3-butadiene, polymer with alpha-methylstyrene

DN(M)ELs for workers have not been derived.
DN(M)ELs for the general population have not been derived.
DNEL and PNECs for freshwater, saltwater, sediment and soil have not been derived.

8.1.2.2. For alpha-methylstyrene (CAS#98-83-9/EC#202-705-0)

DN(M)ELs for workers
DNEL Long Term, inhalative: 50 ppm (246 mg/m³).
DNEL Long Term, dermal: 38 mg/kg bw/d.

DN(M)ELs for the general population
No DNEL/DMEL is proposed.

PNEC water
PNEC water (freshwater): 0.008 mg/L.
PNEC water (marine water): 0.0008 mg/L.
PNEC water (intermittent release): 0.01645 mg/L.

PNEC sediment
PNEC sediment (freshwater): 0.583 mg/kg dwt.
PNEC sediment (marine water): 0.0583 mg/kg dwt.

PNEC soil
PNEC soil: 0.112 mg/kg dwt.

PNEC for sewage treatment plant
PNEC STP: 66.15 mg/L.

8.1.2.3 For 1,3-butadiene (CAS#106-99-0/EC#203-450-8)

DN(M)ELs for workers
DMEL, Long-term - systemic effects, Inhalation: 2.21 mg/m³

DN(M)ELs for the general population
DMEL, Long-term - systemic effects, Inhalation: 0.0664 mg/m³

PNEC water
No PNEC water (freshwater, marine water, intermittent release) is proposed.
Substance is a gas and is extremely unlikely to reside in the aquatic compartment. Deriving an aquatic PNEC for a gas is unreasonable and technically of little use for risk assessment as the substance will not be present in the aquatic environment.
PNEC sediment
No PNEC sediment (freshwater, marine water) is proposed. Substance is a gas and is extremely unlikely to reside in the sediment compartment. Deriving a sediment PNEC for a gas is unreasonable and technically of little use for risk assessment as the substance will not be present in the sediment environment.

PNEC soil
No PNEC soil is proposed. Substance is a gas and is extremely unlikely to reside in the terrestrial compartment. Deriving a soil PNEC for a gas is unreasonable and technically of little use for risk assessment as the substance will not be present in the terrestrial environment.

PNEC for sewage treatment plant
No PNEC STP is proposed. Substance is a gas and is extremely unlikely to reside in the aquatic compartment. Deriving an aquatic PNEC for a gas is unreasonable and technically of little use for risk assessment as the substance will not be present in the aquatic environment.

8.2. Exposure controls
8.2.1. Technical safety measures
Provide adequate forced-air and exhaust ventilation in work zones. Compulsory monitoring of air conditions in work areas. Sealing and grounding of equipment and communications. Usage of intrinsically safe equipment.

8.2.2. Personal protection equipment
Use of personal protective equipment must be consistent with good occupational hygiene practices. Hygiene measures:
Personal hygiene and industrial sanitation in the production at the facility (wash hands at the end of each work shift and before eating, drinking, smoking or using the toilet).

Eye/Face protection
Wear Goggles giving complete protection to eyes (BS EN 166).

Skin Protection (Hand and Body)
Wear approved protective gloves (Nitrile rubber. BS EN 374). If contact with hot product is anticipated, gloves should be heat-resistant and thermally insulated. Wear insulating gloves BS EN407 (heat). Wear apron or other protective clothing and antistatic boots.

Respiratory Protection
Not required (if is used workplace conditions). In emergency or in case of increase of hazardous substances concentration at the workplace wear positive pressure MSHA/NIOSH-approved self-contained breathing apparatus (BS EN 14387:2004). Use filter type A (against vapours of organic substances) according to EN 141 (Class 1 up to 0.1 Vol-%, Class 2 up to 0.5 Vol-%, Class 3 exceeding 1 Vol-%).

8.2.3. Environmental Exposure Controls
None specific. Do not allow penetration of the product into water reservoirs, surface and ground water, sewer ducts and soil. Preventing disposal into water reservoirs of contaminated water without treatment. Provide sealing of process equipment.
## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state (at 20 °C and 1013 hPa)</td>
<td>Elastic solid (firm homogeneous spongy mass); elastic solid (firm homogeneous spongy mass).</td>
<td>visual method</td>
</tr>
<tr>
<td>Colour</td>
<td>From brown to dark-brown.</td>
<td>visual method</td>
</tr>
<tr>
<td>Odour</td>
<td>Peculiar, at processing temperatures slight odour of organic compounds is possible.</td>
<td>sensory examination</td>
</tr>
<tr>
<td>pH (Value)</td>
<td>Not applicable, insoluble.</td>
<td>-</td>
</tr>
<tr>
<td>Melting Point (°C) / Freezing Point (°C)</td>
<td>Not available.</td>
<td>-</td>
</tr>
<tr>
<td>Initial boiling point/boiling range (°C)</td>
<td>Not available.</td>
<td>-</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available.</td>
<td>-</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Does not ignite spontaneously, burn only upon entering into a source of fire.</td>
<td>-</td>
</tr>
<tr>
<td>Upper/lower flammability or Explosive limit ranges</td>
<td>Not available.</td>
<td>-</td>
</tr>
<tr>
<td>Vapour Pressure (hPa)</td>
<td>Not available (does not evaporate).</td>
<td>-</td>
</tr>
<tr>
<td>Vapour Density (Air=1)</td>
<td>Not available (does not evaporate).</td>
<td>-</td>
</tr>
<tr>
<td>Density (g/cm³)</td>
<td>0.932</td>
<td>ASTM D 792</td>
</tr>
<tr>
<td>Solubility (Water)</td>
<td>Insoluble.</td>
<td>-</td>
</tr>
<tr>
<td>Solubility (Other)</td>
<td>In aromatic and aliphatic solvents (benzene, toluene, heptane, hexane, gasoline).</td>
<td>-</td>
</tr>
<tr>
<td>Partition Coefficient n-Octanol/Water</td>
<td>Not available.</td>
<td>-</td>
</tr>
<tr>
<td>Ignition temperature (°C)</td>
<td>325 ± 15</td>
<td>ISO 4589-84 (GOST 12.1.044)</td>
</tr>
<tr>
<td>Auto Ignition Temperature (°C)</td>
<td>360 ± 15</td>
<td>ISO 4589-84 (GOST 12.1.044)</td>
</tr>
<tr>
<td>Decomposition Temperature (°C)</td>
<td>Not available.</td>
<td>-</td>
</tr>
<tr>
<td>Viscosity according to Mooney (MML 1+4) conv. units (at 100 °C)</td>
<td>46 - 54</td>
<td>ASTM D 1646 (GOST R 54552)</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Non explosive.</td>
<td>-</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>Not available.</td>
<td>-</td>
</tr>
<tr>
<td>Granulometry</td>
<td>Not applicable, substance is not marketed or used in granular form.</td>
<td>-</td>
</tr>
</tbody>
</table>

### 9.2. Other information

None.
SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity
Product is stable under all ordinary circumstances at ambient temperatures. Product may oxidise, thermal decomposition.

10.2. Chemical stability
Product is stable under normal conditions.

10.3. Possibility of hazardous reactions
Not specific.

10.4. Conditions to avoid
Avoid naked flame, prolonged heat, contact with incompatible substances. Keep away from heat and sources of ignition.

10.5. Incompatible materials
Oxidising agents, acids, alkalis, aromatic solvents.

10.6. Hazardous decomposition products
None under normal conditions at ambient temperatures. Combustion products: carbon oxides. Thermal decomposition products may include trace amounts of monomers: alpha-methylstyrene and 1,3-butadiene.

SECTION 11: TOXICOLOGICAL INFORMATION

General information: No significant health hazard in normal industrial use conditions. According to CLP Regulation the product is a mixture of poly (styrene-co-butadiene) rubber, oil filler (distillates (petroleum), solvent-refined heavy paraffinic or extracts (petroleum), solvent refined heavy paraffinic distillate solvent).

<table>
<thead>
<tr>
<th>Property</th>
<th>Synthetic butadiene - alpha-methylstyrene polymer (CAS#25034-68-8)</th>
<th>Distillates (petroleum), solvent-refined heavy paraffinic (oil filler) (CAS#64741-88-4/EC#265-090-8) or extracts (petroleum), solvent refined heavy paraffinic distillate solvent (oil filler) (CAS#68783-04-0/EC#272-180-0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routes of Exposure</td>
<td>At ambient temperature the product is a non-volatile elastic solid. There is no potential for inhalation exposure.</td>
<td></td>
</tr>
</tbody>
</table>

**Acute toxicity**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>LD50: &gt;5000 mg/kg bw (rat) (FBEPH, BT#001560, 1999)</td>
<td>Oil filler (CAS#64741-88-4/EC#265-090-8):</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LD50/oral/rat : &gt;5000 mg/kg (OECD guideline 401)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Oil filler (CAS#68783-04-0/EC#272-180-0):</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LD50/oral/rat : &gt;5000 mg/kg</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Not classified. No data available</td>
<td>Oil filler (CAS#64741-88-4/EC#265-090-8):</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LC50/inhalation/4h/rat : &gt;5.0 mg/l (OECD guideline 402)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Oil filler (CAS#68783-04-0/EC#272-180-0):</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LC50/inhalation/rat : &gt;5.53 mg/l</td>
</tr>
<tr>
<td>Property</td>
<td>Synthetic butadiene - alpha-methylstyrene polymer (CAS#25034-68-8)</td>
<td>Distillates (petroleum), solvent-refined heavy paraffinic (oil filler) (CAS#64741-88-4/EC#265-090-8) or extracts (petroleum), solvent refined heavy paraffinic distillate solvent (oil filler) (CAS#68783-04-0/EC#272-180-0)</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>-----------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Dermal</td>
<td>Not classified. No data available</td>
<td>Oil filler (CAS#64741-88-4/EC#265-090-8): LD50/dermal/rabbit: &gt;5000 mg/kg (OECD guideline 403) Oil filler (CAS#68783-04-0/EC#272-180-0): LD50/dermal/rabbit: &gt;5000 mg/kg</td>
</tr>
</tbody>
</table>

### Irritation/Corrosivity

| Skin irritation/corrosion                    | Not classified. Skin contact with melted/heated product may cause serious thermal burns. (Experimental result. RU Guidelines: RU 2102-79 (Dermal irritation. Single exposure; long-term - systemic effects).) | Not irritating or corrosive. |
| Eye irritation                               | Not classified. Contact with eyes may cause mechanical damage. Eye contact with melted/heated product may cause serious thermal burns. Thermal decomposition products may cause irritation of eye. | Not irritating or corrosive. |
| Respiratory tract                            | Not classified. Thermal decomposition products inhalation may cause irritation of respiratory system. | Not irritating or corrosive. |

### Sensitisation

| Skin sensitisation                          | Not classified. No data available. (Experimental result. RU Guideline: RU 1.1578-96 (Skin sensitisation)) | Not sensitising. |
| Respiratory system                          | Not classified. No data available. (Experimental result. RU Guideline: RU 1.1578-96 (Respiratory sensitisation)) | Not sensitising. |

### Repeated dose toxicity

| Chronic inhalation toxicity                 | Not classified. No data available. | Not classified. No data available. |
| Chronic dermal toxicity                     | Not classified. No data available. | Not classified. No data available. |

### Germ cell mutagenicity


### Carcinogenicity

| Carcinogenicity                             | Not classified. No data available. | Not classified. No data available. |

### Toxicity for reproduction
<table>
<thead>
<tr>
<th>Property</th>
<th>Synthetic butadiene - alpha-methylstyrene polymer (CAS#25034-68-8)</th>
<th>Distillates (petroleum), solvent-refined heavy paraffinic (oil filler) (CAS#64741-88-4/EC#265-090-8) or extracts (petroleum), solvent refined heavy paraffinic distillate solvent (oil filler) (CAS#68783-04-0/EC#272-180-0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effects on fertility</td>
<td>Not classified. No data available</td>
<td>Oil filler (CAS#64741-88-4/EC#265-090-8): Not classified. NOAEL (oral) = 1000 mg/kg bw/day (OECD 421). Oil filler (CAS#68783-04-0/EC#272-180-0): No adverse effects on reproductive organs have been noted in multiple dermal or inhalation repeat dose studies (28-day) or carcinogenesis bioassays.</td>
</tr>
<tr>
<td>Developmental toxicity</td>
<td>Not classified. No data available</td>
<td>Not classified. No data available</td>
</tr>
<tr>
<td>STOT - single exposure</td>
<td>Not classified. No data available</td>
<td>Not classified. No data available</td>
</tr>
<tr>
<td>STOT - repeated exposure</td>
<td>Not classified. No data available</td>
<td>Not classified. No data available</td>
</tr>
<tr>
<td>Other effects</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

**SECTION 12: ECOLOGICAL INFORMATION**

<table>
<thead>
<tr>
<th>Property</th>
<th>Synthetic butadiene - alpha-methylstyrene polymer (CAS#25034-68-8)</th>
<th>Distillates (petroleum), solvent-refined heavy paraffinic (oil filler) (CAS#64741-88-4/EC#265-090-8) or extracts (petroleum), solvent refined heavy paraffinic distillate solvent (oil filler) (CAS#68783-04-0/EC#272-180-0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>General information</td>
<td>At normal conditions rubber is a very stable product. Does not form toxic compounds with other substances in air and water. Pollution of water ponds and soil with polymer flakes may occur only if production, handling and transportation rules are not followed, in case of effluent discharge without treatment, as a result of emergencies and accidents.</td>
<td>Oil filler (CAS#64741-88-4/EC#265-090-8): Product does not meet the criteria for classification as an environmental hazard. As this substance is a complex petroleum product with unknown and variable composition belonging on the group of petroleum products having variable and low water solubility, aquatic toxicity testing is not technically feasible for this product itself. Aquatic and chronic toxicity is evaluated based on the aquatic toxicity test results of different petroleum products and using toxicity predictions obtained using the PETROTOX model for petroleum substances (CONCAWE; appendix 5 in CSR of other lubricant oils). Based on the available information this substance is not considered to possess acute or chronic aquatic toxicity. Oil filler (CAS#68783-04-0/EC#272-180-0): Product does not meet the criteria for classification as an environmental hazard.</td>
</tr>
<tr>
<td>Property</td>
<td>Synthetic butadiene - alpha-methylstyrene polymer (CAS#25034-68-8)</td>
<td>Distillates (petroleum), solvent-refined heavy paraffinic (oil filler) (CAS#64741-88-4/EC#265-090-8) or extracts (petroleum), solvent refined heavy paraffinic distillate solvent (oil filler) (CAS#68783-04-0/EC#272-180-0)</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Aquatic toxicity                             | Not expected to be acutely toxic, but material may mechanically cause adverse effects if ingested by waterfowl or aquatic life. | **Short-term aquatic toxicity**  
Oil filler (CAS#64741-88-4/EC#265-090-8):  
Toxicity to fish (*Pimephales promelas*): LL50 (96 h): >100 mg/L;  
NOEL: >= 100 mg/L (OECD 203).  
Toxicity test on aquatic invertebrates (*Daphnia magna*):  
EL50 (48 h): >10 000 mg/L;  
NOEL: >= 10 000 mg/L (OECD 202).  
Toxicity to algae growth inhibition (*Pseudokirchnerella subcapitata*):  
NOEL (72 h): >= 100 mg/L (OECD 201).  
Toxicity to other organisms: not applicable (product does not meet the criteria for classification as an environmental hazard).  
Oil filler (CAS#68783-04-0/EC#272-180-0):  
Acute aquatic algae EL50 (72 h) > 1000 mg/L  
Acute aquatic fish (28 d) NOEL: 27 mg/L  
Short-term toxicity on invertebrate (*Daphnia magna*, 48 h) EL50 >100 mg/L  
Long-term toxicity on invertebrate (*Daphnia magna*, 21 days) EL50 >1000 mg/L |
| Biodegradation                                | No specific ecological data are available for this product. This water-insoluble rubber is expected to be inert in the environment. No appreciable biodegradation is expected. | Oil filler (CAS#64741-88-4/EC#265-090-8):  
Product is not readily biodegradable (OECD guidelines 301 B and 301F):  
31 % degradation after 28 d (O2 consumption).  
/Biodegradation for this complex hydrocarbon UVCB-substance is based on the test results of different petroleum products and modelling of hydrocarbon blocks using PETRORISK model (CONCAWE).  
Oil filler (CAS#68783-04-0/EC#272-180-0):  
No aquatic biodegradability studies have been conducted on substances in this Group. However, the main constituents of treated distillate aromatic extracts are aromatic hydrocarbons, including polycyclic compounds and cycloalkanes, and these generic types of hydrocarbon are known to be resistant to biodegradation. |
| Chemical degradation                          | Not investigated.                                                 | Oil filler (CAS#64741-88-4/EC#265-090-8):  
Resistant to hydrolysis because this product lacks a functional group that is hydrolytically reactive.  
Oil filler (CAS#68783-04-0/EC#272-180-0):  
Hydrocarbons present in treated distillate aromatic extracts are not susceptible to hydrolysis under environmental conditions. |
Property | Synthetic butadiene - alpha-methylstyrene polymer (CAS#25034-68-8) | Distillates (petroleum), solvent-refined heavy paraffinic (oil filler) (CAS#64741-88-4/EC#265-090-8) or extracts (petroleum), solvent refined heavy paraffinic distillate solvent (oil filler) (CAS#68783-04-0/EC#272-180-0)
---|---|---
Bioaccumulative potential | Not investigated. | In accordance with the results of CONCAWE modelling, potential of bioaccumulation or adsorption to soil cannot be neglected. As this substance is a hydrocarbon UVCB, testing of BCF-factor and partition-coefficient is not technically feasible. Therefore, bioaccumulation is evaluated based on the hydrocarbon blocks of different petroleum products using PETRORISK model (CONCAWE).
Mobility in soil | Not investigated. | No data available.
Results of PBT and vPvB assessment | Can be stated that the substance does not fulfil the PBT criteria (not PBT) and not the vPvB criteria (not vPvB). | No hydrocarbon structure that meets the PBT/vPvB criteria (CONCAWE 2010b).
Other effects | No information available. | No information available.

Water hazard classification: according to the German VwVwS: WGK- 0 (not classified).

**SECTION 13: DISPOSAL CONSIDERATIONS**

13.1. Waste treatment methods
Disposal should be in accordance with local, state and national legislation. Waste water has to be treated. Packaging waste (paper bags) shall be collected and send for recycling. Plastic waste shall be removed to disposal.

13.2. Additional Information
European Waste Code (2001/118/EC): 19 12 04 plastic and rubber

**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**

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
EU regulations: authorisations - not applicable; restrictions on use – none.
National regulations: unknown.

15.2. Chemical safety assessment
Chemical Safety Assessment (CSA) is not required for the substance since it is not subject to registration as a polymer according to the provisions of Article 2(9) of REACH.
Chemical Safety Report has been performed for monomers
1,3-butadiene (CAS#106-99-0/EC#203-450-8); alpha-methylstyrene (CAS#98-83-9/EC #202-705-0); oil filler: distillates (petroleum), solvent refined heavy paraffinic (CAS#64741-88-4/EC#265-
090-8); oil filler: extracts (petroleum), solvent refined heavy paraffinic distillate solvent (CAS#68783-04-0/EC#272-180-0).

**SECTION 16: OTHER INFORMATION**

### 16.1. Indication of changes

<table>
<thead>
<tr>
<th>VERSION</th>
<th>Date of change</th>
<th>Section</th>
<th>Description of changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version: 1.0</td>
<td>11/11/2016</td>
<td>All</td>
<td>Initially created SDS.</td>
</tr>
</tbody>
</table>

### 16.2. Abbreviations and acronyms

- **AGS**: The German Committee on Hazardous Substances (Ausschuss für Gefahrstoffe – AGS)
- **ACGIH**: American Conference of Industrial Hygienists
- **DFG**: Germany Research Foundation
- **DMEL**: Derived Minimal Effect Levels
- **DNEL**: Derived No Effect Level
- **LD50**: Lethal Dose to 50% of a test population (Median Lethal Dose)
- **LTEL**: Long Term Exposure Limit
- **MSHA**: Mine Safety and Health Administration
- **NIOSH**: National Institute for Occupational Safety and Health (USA CDC)
- **OSHA**: Occupational Safety & Health Administration (USA)
- **PNEC**: Predicted No Effect Concentration
- **PBT**: Persistent, bioaccumulative, toxic chemical
- **vPvB**: Very Persistent, Very Bioaccumulative
- **STEL**: Short Term Exposure Limit
- **STOT**: Specific Target Organ Toxicity
- **STP**: Sewage treatment plant
- **TWA**: Time Weighted Average

### 16.3. Key literature references and sources

**EU DIRECTIVES**

NATIONAL REGULATIONS (GERMANY)
Major Accident Hazard Legislation 82/501/EWG.

Russian Register of Potentially Hazardous Chemical and Biological Substances (FBEPH).

RU Guideline 2102-79. Assessment of skin exposure of hazardous chemical compounds and justification of permissible levels of skin pollution (Ministry of Health of the Russian Federation).
RU Guideline 1.1578-96. Requirements to statement of experimental studies on justification of permissible concentration levels of industrial chemical allergens in workplace air and in atmosphere. (Ministry of Health of the Russian Federation).

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END OF SDS