

SIBUR-KHIMPROM JSC

SAFETY DATA SHEET

According to Regulations (EC) 1907/2006 (REACH), (EC) 1272/2008 (CLP) & (EU) 2015/830

BIS(2-ETHYLHEXYL) TEREPHTHALATE

Version: 1.0

Date created: 25/01/2019

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

1.1. Product identifier

| | |
|------------------------|--|
| Product form: | Substance |
| Substance name: | Bis(2-ethylhexyl) terephthalate |
| Chemical name: | Bis(2-ethylhexyl) terephthalate |
| EC index No.: | Not applicable |
| EC No.: | 229-176-9 |
| CAS-No.: | 6422-86-2 |
| REACH registration No: | 01-2119446265-39-0023 |
| Formula: | C ₂₄ H ₃₈ O ₄ |
| Synonyms: | 1,4-bis(2-ethylhexyl) benzene-1,4-dicarboxylate dioctyl terephthalate (DOTP) di-2-ethylhexylterephthalate (DEHT) bis(2-ethylhexyl)-1,4-benzenedicarboxylate |
| Trade names: | Bis(2-ethylhexyl) terephthalate, DOTP (dioctyl terephthalate) |

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

1.2.1. Relevant identified uses

| | |
|-------------------------------|---|
| Use of the substance/mixture: | Formulation Distribution and storage Adhesives and sealants Coatings and inks Construction formulation additives Plasticizer (plastisol, PVC articles) Laboratory use For the detailed identified uses of the product see the Annex to this SDS. |
|-------------------------------|---|

Most common technical function of substance: Plastisizer

1.2.2. Uses advised against

Restrictions on use: 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-Élysées, 75008, Paris, France
Contact Telephone: +33 1 42 99 73 50

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 614055, Russian Federation
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 techservice@sibur.ru
 Emergency Telephone: +7 3422 90-87-05 (round the clock)
Importer: List of importers is available with the Only Representative

1.4. Emergency telephone number

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

This product is not classified as hazardous within the meaning of Regulation (EU) No 1272/2008.

2.2. Label elements**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard pictograms (CLP): Not applicable

Signal word (CLP): Not applicable

Hazard statements (CLP): Not applicable

Precautionary statements (CLP): Not applicable

EUH-statements: Not applicable

2.3. Other hazards

Other hazards not contributing to the classification: No significant health hazard in normal industrial use conditions. Product is combustible. Product is sensitive to static discharge, may accumulate a static charge which could act as an ignition source.
 Assessment PBT / vPvB: According to Annex XIII of Regulation (EC) No.1907/2006 (REACH):
 - not fulfilling PBT (persistent/bioaccumulative/toxic) criteria;
 - not fulfilling vPvB (very persistent/very bioaccumulative) criteria.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**3.1. Substances**

| Name | Product identifier | % | Classification [CLP] |
|---------------------------------|--|-----------------|----------------------|
| Bis(2-ethylhexyl) terephthalate | (CAS-No.) 6422-86-2 (EC No.) 229-176-9 (EC index No.) not applicable (REACH-no) 01-2119446265-39-0023 | 99.5 – 99.9% | Not classified |

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

3.2. Mixtures

Not applicable

SECTION 4. FIRST-AID MEASURES

4.1. Description of first aid measures

Product-specific hazards and other issues

No significant health hazard in normal industrial use conditions.

Elevated temperatures during processing may form hazardous gases/vapours which may be irritating to the eye, mucous membranes and respiratory tract.

First-aid measures general

Take care to self-protect by avoiding becoming contaminated. Move contaminated patient(s) out of the dangerous area. Take off all contaminated clothing and shoes.

IN CASE OF HEAVY OR PERSISTENT DISTURBANCES, CALL A DOCTOR OR SEEK MEDICAL ADVICE URGENTLY.

First-aid measures after inhalation

Remove person to fresh air and keep comfortable for breathing. If breathing difficulties persist: Get medical advice/attention.

First-aid measures after skin contact

Take off immediately all contaminated clothing after contact with skin, wash immediately with soap and plenty of water, for at least 15 minutes. If skin irritation occurs or in all cases of doubt seek medical advice.

First-aid measures after eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion

If swallowed, rinse mouth with water (only if the person is conscious) give nothing to drink and do not induce vomiting. If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus. Seek medical advice.

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

Symptoms/effects: In case of acute inhalation poisoning, adynamia and respiratory failure.

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

Advice to physician

Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media Water spray or fog. Dry extinguishing powder. Foam. Carbon dioxide.

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Fire hazard: Could burn but do not ignite readily. Slight fire hazard when exposed to heat or flame at or above a flash point.

Sensitivity to Static Discharge: Material may accumulate a static charge which could act as an ignition source.

Explosion hazard: Not explosive.

Hazardous decomposition products in case of fire: Carbon dioxide, carbon monoxide, other toxic gases.

5.3. Advice for firefighters

| | |
|---------------------------------|---|
| Firefighting instructions: | Move containers from fire area if you can do it without risk. Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Dispose of fire debris and contaminated fire fighting water in accordance with official regulations. |
| Protection during firefighting: | Do not attempt to take action without suitable protective equipment: self-contained breathing apparatus (NIOSH-approved or EN 133), complete protective clothing. |
| Further information: | Do not breathe fumes from fires or vapours from decomposition. |

SECTION 6. ACCIDENTAL RELEASE MEASURE

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

| | |
|----------------------|--|
| Emergency procedures | Stop leak if can be done without risk. Avoid contact with skin and eyes. Avoid breathing vapours or mists. Keep people away from and upwind of spill/leak. Ventilate spillage area. Keep away from heat and sources of ignition. |
|----------------------|--|

6.1.2. For emergency responders

| | |
|----------------------|--|
| Emergency procedures | Do not attempt to take action without suitable protective equipment. Absorb spill with inert material e.g.: sand, earth, vermiculite, then place in a container for chemical waste. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). |
|----------------------|--|

6.2. Environmental precautions

Avoid release to the environment. Prevent further leakage or spillage. Do not discharge product into the aquatic environment without pretreatment (biological treatment plant).

6.3. Methods and material for containment and cleaning up

Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Take up liquid spill into absorbent material, e.g.: sand, earth, vermiculite. Collect all waste in suitable and labelled containers and dispose according to local legislation.

For Small Spills: Take up with sand or other absorbent material and place in clean and dry containers for disposal. Clear area of unnecessary personnel. Isolate hazard area and deny entry.

For Large Spills: Flush spill area with water spray. Prevent runoff from entering drains, sewers, or streams. Dike for later disposal.

If liquid has been spilt in large quantities clean up promptly by scoop or vacuum.

Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

SECTION 8: Exposure controls/personal protection. SECTION 13: Disposal considerations.

SECTION 7. HANDLING AND STORAGE

7.1. Precautions for safe handling

| | |
|-------------------------------|--|
| Precautions for safe handling | Ensure adequate air ventilation. Avoid all unnecessary exposure. Wear personal protective equipment. |
|-------------------------------|--|

Handling this product may result in electrostatic accumulation. Use proper grounding procedures. Fire fighting equipment must be available.

Washing facility at the workplace required.

Keep container closed when not in use. Sufficient ventilation must be guaranteed for refilling, transfer, or open use. Fill only into clearly marked containers.

Hygiene measures

Take heed of usual occupational hygiene measures when handling chemical substances. Avoid contact with eyes and skin. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Apply fatty skin-care products after washing.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions

Containers have to be marked clearly and permanently. Keep container tightly closed. Keep the product away from direct sunlight, atmospheric precipitation and incompatible substances.

Incompatible materials

Oxidizing materials.

Storage area

Store in a cool, dry, well-ventilated area away from incompatible substances. Recommended temperature: from 0°C to 40°C.

Take precautionary measures against static discharge.

Packaging materials

Suitable containers: carbon steel, stainless steel.

7.3. Specific end use(s)

Not applicable.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

8.1.1. Occupational Exposure Limits

Not established.

8.1.2. DNEL/ PNEC values

| <i>Bis(2-ethylhexyl) terephthalate (CAS-No. 6422-86-2)</i> | |
|--|--|
| DNEL/DMEL (Workers) | |
| Acute - systemic effects, dermal | Not available |
| Acute - systemic effects, inhalation | Not available |
| Acute - local effects, dermal | Not available |
| Acute - local effects, inhalation | Not available |
| Long-term - systemic effects, dermal | 6.58 mg/kg bw/day. Most sensitive point: repeated dose toxicity |
| Long-term - systemic effects, inhalation | 23.2 mg/m³. Most sensitive point: repeated dose toxicity |
| Long-term - local effects, dermal | Not available |
| Long-term - local effects, inhalation | Not available |
| DNEL/DMEL (General population) | |
| Acute - systemic effects, dermal | Not available |
| Acute - systemic effects, inhalation | Not available |
| Acute - systemic effects, oral | Not available |
| Acute - local effects, dermal | Not available |
| Acute - local effects, inhalation | Not available |

| | |
|--|--|
| Long-term - systemic effects, dermal | 3.95 mg/kg bw/day Most sensitive point: repeated dose toxicity |
| Long-term - systemic effects, inhalation | 6.86 mg/m ³ Most sensitive point: repeated dose toxicity |
| Long-term - systemic effects, oral | 3.95 mg/kg bw/day Most sensitive point: repeated dose toxicity |
| Long-term - local effects, dermal | Not available |
| Long-term - local effects, inhalation | Not available |
| PNEC (water) | |
| PNEC aqua (freshwater) | 0.08 µg/l |
| PNEC aqua (marine water) | 0.008 µg/l |
| PNEC aqua (intermittent, freshwater) | 0.014 µg/l |
| PNEC (Sediment) | |
| PNEC sediment (freshwater) | 8.28 mg/kg wet wt 1.8 mg/kg wet wt (CSR) |
| PNEC sediment (marine water) | 0.828 µg/kg sediment dw 0.18 mg/kg wet wt (CSR) |
| PNEC (Soil) | |
| PNEC soil | 13.2 µg/kg wet wt |
| PNEC (Oral) | |
| PNEC oral (secondary poisoning) | 52.7 mg/kg food |
| PNEC (STP) | |
| PNEC sewage treatment plant | 1.0 mg/l |

8.2. Exposure controls

Appropriate engineering controls:

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels to an acceptable level.

Ensure adequate ventilation, especially in confined areas. Supplementary local exhaust ventilation, closed systems, or respiratory and eye protection may be needed in special circumstances; such as poorly ventilated spaces, heating, evaporation of liquids from large surfaces, spraying of mists, mechanical generation of dusts, drying of solids, etc. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Hand protection:

Wear protective gloves.

| Type | Material | Permeation | Thickness (mm) | Penetration | Standard |
|---------------------------|-------------------------|-------------------|----------------|---------------|----------|
| Chemical resistant gloves | Nitrile rubber (NBR) | 6 (> 480 minutes) | 0.55 | Not available | EN 374 |
| Chemical resistant gloves | Polyvinylchloride (PVC) | 6 (> 480 minutes) | 0.9 | Not available | EN 374 |

Other protective material may be used, depending on the situation, if adequate degradation and permeation data is available. If other chemicals are used in conjunction with this chemical, material selection should be based on protection for all chemicals present.

Eye protection:

Tightly fitting safety goggles. In addition to goggles, wear a face shield if there is a reasonable chance for splash to the face. Equipment should conform to EN 166.

Skin and body protection:

Wear suitable protective clothing. Working shoes (EN ISO 13287, EN 20347).

Respiratory protection:

If engineering controls do not maintain airborne concentrations below recommended exposure limits or to an acceptable level, an approved respirator must be worn.

Respirator type: a self-contained breathing apparatus with an appropriate, government approved, air-purifying filter, cartridge or canister.

Environmental exposure controls:

Avoid release to the environment/sewage system. If leakage can not be prevented, the substance needs to be suck off at the emersion point, if possible without danger. Observe the exposure limits, clean exhaust air if needed. If recycling is not practicable, dispose of in compliance with local regulations. Inform the responsible authorities in case of leakage into the atmosphere, or of entry into waterways, soil or drains.

Other information:

Protective equipment and clothing wash before reuse.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

| | |
|---|--|
| Physical state at 20 °C and 101.3 kPa | Colourless liquid |
| Melting / freezing point | ≤ - 67.2 °C at 1 atm (EU Method A.1) |
| Boiling point | 370 - 380 °C at 101325 Pa (EU Method A.2) |
| Relative density | 0.98 g/cm ³ at 20°C (EU Method A.3) |
| Vapour pressure | 0.001 Pa at 25 °C (EU Method A.4) |
| Surface tension | 31.7 – 33.7 mN/m at 22 °C (EU Method A.5) |
| Water solubility | 0.4 ug/L at 22.5°C |
| Partition coefficient n-octanol/water (log value) | Log Pow = 5.72 (OECD Guideline 107) |
| Flash point | 210-214 °C at 101.325 kPa (ASTM 3278) |
| Flammability | Not flammable |
| Explosive properties | Non explosive |
| Self-ignition temperature | 387 °C at 98 kPa (ASTM E659) |
| Oxidising properties | Not oxidizing |
| Viscosity (dynamic) | 65.8 mPa s at 25 °C (OECD Test Guideline 114) |
| Granulometry | Not applicable |
| Stability in organic solvents and identity of relevant degradation products | Not available. |
| Dissociation constant | pKa= -5,3 (QSAR) |

9.2. Other information

Not available.

SECTION 10. STABILITY AND REACTIVITY

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Violent reactions with strong oxidizing agents.

10.4. Conditions to avoid

Incompatible materials. Overheating. Ignition sources. Avoid contact with heat, sparks, open flame and static discharge.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. In the case of fire or at high temperatures, the formation of the following decomposition products is possible: carbon monoxide, carbon dioxide other toxic gases.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity

Substance is not classified, based on available data the classification criteria are not met.

| <i>Bis(2-ethylhexyl) terephthalate (CAS-No. 6422-86-2)</i> | |
|--|---|
| LD50, oral, rats | > 5000 mg/kg bw, 14 days (TSCA FHSA Regulations (1979): 16 CFR Part 1500.40) |
| LC50, inhalation, rats | Not available. |
| LD50, dermal, guinea pig | > 20 mL/kg bw, 24 hours |

Skin corrosion/irritation

Additional information

Not irritating
Erythema score: 0 of max. 0 (No erythema was observed at any time at any of the treated sites.).
Edema score: 0 of max. 0 (No edema was observed at any time at any of the treated sites.)
(Rabbit, OECD Guideline 404)

Serious eye

damage/irritation

Additional information

Not irritating
Cornea score: 0 of max. 0 (no corneal opacity was observed at any time during the study)
Iris score: 0 of max. 0 (no iritis was observed at any time during the study)
Chemosis score: 0 of max. 1; 1 hour only; fully reversible within: 72 hours (all other chemosis scores at 24 and 48 hours were 0)
(Rabbit, OECD Guideline 405)

Respiratory or skin sensitisation

Additional information

Not sensitizing.
Based on a weight-of-the-evidence assessment, di (2-ethylhexyl) terephthalate would not be classified for skin sensitization according to Regulation (EC) 1272/2008 (CLP).
No evidence of a sensitization response was observed when human volunteers were induced with di (2-ethylhexyl) terephthalate by application of 0.2 mL of a 0.5% solution of the test substance to the back three times a week for three weeks under semi-occlusive contact and then challenged at naïve sites on the back following a 10-17 day rest period.
In addition, there was no evidence of a sensitization response when guinea pigs were immunized with di (2-ethylhexyl) terephthalate

Germ cell mutagenicity
 Additional information by the footpad technique and challenged via dermal application.
 Genetic toxicity: negative
 Based on negative results in five *in vitro* studies (OECD Guideline 471) conducted in bacterial or mammalian cells as well as an *in vivo* study which failed to detect adverse effects on gene expression in fetal testes when dams were exposed to di (2-ethylhexyl) terephthalate during gestation, the total weight-of-the-evidence indicates that di (2-ethylhexyl) terephthalate is not expected to induce heritable mutations in the germ cells of humans

Carcinogenicity
 Based on a test data, di (2-ethylhexyl) terephthalate is unlikely to pose a significant risk for the development of any type of cancer in humans exposed to this chemical and would not be classified for carcinogenicity according to Regulation (EC) no. 1272/2008.

| <i>Bis(2-ethylhexyl) terephthalate (CAS-No. 6422-86-2)</i> | |
|--|---|
| NOAEL, inhalation, rat (carcinogenicity), | 12000 ppm (EPA OPPTS 870.4200) |
| Toxicity for reproduction | Based on test data, di (2- ethylhexyl) terephthalate is not classified for Reproductive Toxicity and for Developmental Toxicity according to Regulation (EC) no. 1272/2008. |

| <i>Bis(2-ethylhexyl) terephthalate (CAS-No. 6422-86-2)</i> | |
|--|---------------------------------------|
| NOAEL (effects on fertility), oral, rat | 10000 ppm (OECD Guideline 416) |
| NOAEL (developmental toxicity), oral, rat | 6000 ppm (OECD Guideline 414) |
| NOAEL (maternal toxicity), oral, mouse | 1000 ppm (female, OECD Guideline 414) |

STOT-single exposure Not classified. No data available.

Repeated dose toxicity Based on a weight-of-the-evidence assessment, di (2-ethylhexyl) terephthalate would not be classified for “Specific Target Organ Toxicity – Repeated Exposure” according to Regulation (EC) no. 1272/2008.

| <i>Bis(2-ethylhexyl) terephthalate (CAS-No. 6422-86-2)</i> | |
|--|---|
| NOAEL, subchronic, oral, rat, male | 277 mg/kg/day (EPA guideline 799.9310 TSCA) |
| NOAEL, subchronic, oral, rat, female | 309 mg/kg/day (EPA guideline 799.9310 TSCA) |
| NOEL (systemic), subchronic, inhalation, rat, male | 0.0718 mg/L |

Aspiration hazard Not available

SECTION 12. ECOLOGICAL INFORMATION

12.1. Toxicity

Not expected to be toxic to aquatic life.
 Based on available data, the classification criteria are not met.

| <i>Bis(2-ethylhexyl) terephthalate (CAS-No. 6422-86-2)</i> | |
|--|--|
| Fish (Short-term toxicity) | |
| LC50 (96h) | > 984 mg/L - <i>Pimephales promelas</i> (freshwater)(OECD Guideline 203) |
| LC50 (7d) | >0.25 mg/L - <i>Salmo gairdneri</i> (freshwater) (EPA Committee on Methods for Toxicity Tests with Aquatic Organisms (1975) Acute Toxicity Tests with Fish, Macroinvertebrates and Amphibians) |

| | | |
|--|---|---|
| Fish (Long-term toxicity) | | |
| NOEC (60 d) | ≥ 0.28 mg/L - <i>Oncorhynchus mykiss</i> (freshwater) (ASTM. 1983. Proposed New Standard Practice for Conducting Fish Early Life Stages Toxicity Tests. Draft No. 7) | |
| Aquatic invertebrates (Short-term toxicity) | | |
| EC50 (48 h) | > 1.4 µg/L - <i>Daphnia magna</i> (freshwater) (OECD Guideline 202) | |
| EC50 (96 h) | > 624 µg/L - <i>Crassostrea virginica</i> (saltwater)(EPA OTS 797.1800) | |
| Aquatic invertebrates (Long-term toxicity) | | |
| NOEC (21 d) | ≥ 0.76 µg/L - <i>Daphnia magna</i> (freshwater) (OECD Guideline 211) | |
| Algae and aquatic plants | | |
| EC50 (72 h) | > 0.86 mg/L - <i>Pseudokirchneriella subcapitata</i> (freshwater) (OECD Guideline 201) | |
| NOEC (72 h) | ≥ 0.86 mg/L - <i>Pseudokirchneriella subcapitata</i> (freshwater) (OECD Guideline 201) | |
| Toxicity to aquatic micro-organisms | | |
| EC50 (3 h) | > 10 mg/L. (<i>Activated sludge</i> , OECD Guideline 209) | |
| 12.2. Persistence and degradability | | |
| Abiotic degradation: | Hydrolysis Transformation products: no The mass balance data indicate that even at 50 deg C, little, if any, hydrolysis occurs in the pH range of 4 to 9 (OECD Guideline 111). SPARC calculations indicate that hydrolysis is unlikely to occur (QSAR) | |
| Biodegradation | Readily biodegradable 73,5% after 28 d (OECD Guideline 301B) | |
| Persistence and degradability | Readily biodegradable | |
| | Degradation rates | |
| | Degradation rate in water: | First Order Rate Constant, 4.7 x 10 ⁻² days ⁻¹ ; Half-Life 15 days |
| | Degradation rate in sediment: | First Order Rate Constant, 2.3 x 10 ⁻⁷ days ⁻¹ |
| | Degradation rate in soil: | First Order Rate Constant, 2.3 x 10 ⁻⁶ days ⁻¹ |
| | Degradation rate in air: | No information identified |
| 12.3. Bioaccumulative potential | | |
| Aquatic bioaccumulation: | Moderate potential BCF 393 L/kg - <i>Crassostrea virginica</i> (saltwater) (EPA OPPTS 850.1710) | |
| Secondary poisoning: | No information available | |
| 12.4. Mobility in soil | | |
| Biodegradation in soil: | Readily biodegradable | |
| 12.5. Results of PBT and vPvB assessment | | |
| Regarding all available data on biotic and abiotic degradation, bioaccumulation and toxicity it can be stated that the substance does not fulfill the PBT criteria (not PBT) and not the vPvB criteria (not vPvB). | | |
| 12.6. Other adverse effects | | |
| Not available. | | |

SECTION 13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

| | |
|-----------------------------------|--|
| Waste disposal recommendations | Place in non-leaking container. Seal tightly for proper disposal. Do not dispose of the packaging without first carrying out the necessary cleaning. Residual vapors may explode on ignition; do not cut, drill, grind, or weld on or near this container. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container in accordance with licensed collector's sorting instructions. Recycling is preferred to disposal or incineration. |
| European List of Waste (LoW) code | Non-hazardous waste. |

SECTION 14. TRANSPORT INFORMATION

14.1. Land transport (ADR/ RID).

Not regulated

14.2. Inland waterway transport (ADN).

Not regulated

14.3. Sea transport (IMDG)

Not regulated

14.4. Air transport (IATA/ICAO)

Not regulated

14.5. Special precautions for user

Always transport in closed containers. Ensure that persons transporting the product know what to do in the event of an accident or spillage. For information regarding Exposure Controls/Personal Protection see Section 8 of the SDS

14.6. 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

Authorisations and/or restrictions on use (Annex XVII): Not applicable.

Bis(2-ethylhexyl) terephthalate (CAS-No. 6422-86-2) is not on the REACH Candidate List.

Bis(2-ethylhexyl) terephthalate (CAS-No. 6422-86-2) is not on the REACH Annex XIV List.

Other information, restriction and prohibition regulations Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer. Annex II - Not listed. Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances- (SEVESO III): Not listed. Directive 2013/39/EU priority substances in the field of water policy (amending Directive 2006/60/EC – Water Framework Directive and Directive 2008/105/EC on environmental quality standards in the field of water policy): Not listed. Regulation (EC) No 850/2004 on persistent organic pollutants:

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Annex III – Not listed.

Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals: Not listed.

15.1.2. National regulations

| | |
|-------------|--|
| EU | Plastics in contact with food Regulation. Listed Annex 1, Use as additive or polymer production aid. |
| Germany | AwSV (Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen): Kennnummer: 6531, Water hazard class(WGK): awg BfR – recommendations on Food Contact Materils. XXI. Commodities based on Natural and Synthetic Rubber. |
| Switzerland | Packaging inks Annex 10 (Part A: evaluated substances. List IV. Specific migration limit = 60 mg/kg) |

15.2. Chemical safety assessment

Chemical Safety Report has been performed for Bis(2-ethylhexyl) terephthalate (CAS-No. 6422-86-2).

SECTION 16. OTHER INFORMATION**16.1. Indication of changes**

| Version | Date of change | Section | Description of changes |
|---------|----------------|---------|--|
| 1.0 | 25/01/2019 | All | Initial compilation of the Safety Data Sheet |

16.2. Abbreviations and acronyms

| | |
|-----------------|---|
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| BCF | Bioconcentration factor |
| DFG | Germany Research Foundation |
| DNEL | Derived No Effect Level |
| IMDG | International Maritime Dangerous Goods |
| ICAO-TI | Technical Instructions for the Safe Transport of Dangerous Goods by Air |
| K _{oc} | Adsorption coefficient |
| K _{ow} | octanol-water partition coefficient |
| LC50 | Lethal Concentration to 50 % of a test population |
| LD50 | Lethal Dose to 50% of a test population (Median Lethal Dose) |
| LOAEC | Lowest Observable Adverse Effect Concentration |
| LTEL | Long Term Exposure Limit |
| NIOSH | National Institute for Occupational Safety and Health (<i>USA CDC</i>) |
| NOEC | No Observed Effect Concentration |
| NOAEL | No Observed Adverse Effect Level |
| OECD | Organization for Economic Co-operation and Development |
| PNEC | Predicted No Effect Concentration |
| PBT | Persistent, bioaccumulative, toxic chemical |
| vPvB | Very Persistent, Very Bioaccumulative |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| STEL | Short Term Exposure Limit |
| STP | sewage treatment plant |

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| STOT | Specific Target Organ Toxicity |
| (STOT) RE | Repeated Exposure |
| (STOT) SE | Single Exposure |
| WGK | Wassergefährdungsklasse (<i>German: Water Hazard Class</i>) |

16.3. Full text of H- and EUH-statements:

Not applicable

16.4. List of ES (exposure scenario) given in Appendix I to the extended SDS

Not applicable

16.5. Key literature references and sources

DOCUMENTS, PROVIDED BY CONSORTIUM:

CHEMICAL SAFETY REPORT to Bis(2-ethylhexyl) terephthalate (CAS-No. 6422-86-2).

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 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH).

Training advice

Personnel handling the product has to be acquainted demonstrably with its hazardous properties, with health and environmental protection principles related to the product and first aid principles.

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.

| ANNEX. RELEVANT IDENTIFIED USES OF THE SUBSTANCE | |
|---|--|
| Uses by workers in industrial settings | |
| Identifiers | Use descriptors |
| Formulation | <p>Process category (PROC): PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 14: Tableting, compression, extrusion, pelletisation, granulation PROC 15: Use as laboratory reagent</p> <p>Sector of end use: SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys)</p> <p>Environmental release category (ERC): ERC 2: Formulation of preparations ERC 3: Formulation into solid matrix</p> |
| Distribution & storage | <p>Process category (PROC): PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 15: Use as laboratory reagent</p> <p>Sector of end use: SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys)</p> |

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| | <p>Environmental release category (ERC): ERC 2: Formulation into mixture</p> |
| <p>Adhesives and Sealants</p> | <p>Process category (PROC): PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 7: Industrial spraying PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 10: Roller application or brushing PROC 13: Treatment of articles by dipping and pour-ing Sector of end use: SU 3: Industrial uses</p> <p>Environmental release category (ERC): ERC 5: Use at industrial site leading to inclusion into/onto article</p> |
| <p>Coatings & Inks</p> | <p>Process category (PROC): PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 7: Industrial spraying PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 10: Roller application or brushing Sector of end use: SU 3: Industrial Uses SU 7: Printing and reproduction of recorded media</p> <p>Environmental release category (ERC): ERC 5: Use at industrial site leading to inclusion into/onto article</p> |

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| <p>Plasticizer (plastisol)</p> | <p>Process category (PROC): PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 10: Roller application or brushing PROC 13: Treatment of articles by dipping and pour-ing</p> <p>Sector of end use: SU 3: Industrial uses</p> <p>Environmental release category (ERC): ERC 4: Use of non-reactive processing aid at industrial site (no inclusion into or onto article) ERC 5: Use at industrial site leading to inclusion into/onto article</p> |
| <p>Uses by professional workers</p> | |
| <p>Coatings & Inks</p> | <p>Process category (PROC): PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 10: Roller application or brushing PROC 11: Non industrial spraying PROC 19: Hand-mixing with intimate contact and only PPE available</p> <p>Environmental release category (ERC): ERC 8c: Widespread use leading to inclusion into/onto article (indoor) ERC 8f: Widespread use leading to inclusion into/onto article (outdoor)</p> |
| <p>Construction formulation additives</p> | <p>Process category (PROC): PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 10: Roller application or brushing</p> |

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| | <p>Environmental release category (ERC): ERC 8c: Widespread use leading to inclusion into/onto article (indoor) ERC 9f: Widespread use of functional fluid</p> <p>Sector of end use: SU 19: Building and construction work SU 22: Professional uses</p> |
| <p>Plasticizer (plastisol)</p> | <p>Process category (PROC): PROC 3: Use in closed batch process (synthesis or formulation) PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 10: Roller application or brushing PROC 19: Hand-mixing with intimate contact and only PPE available.</p> <p>Environmental release category (ERC): ERC 8c: Widespread use leading to inclusion into/onto article (indoor) ERC 9f: Widespread use of functional fluid</p> <p>Sector of end use: SU 19: Building and construction work SU 22: Professional uses</p> |
| <p>Laboratory use</p> | <p>Process category (PROC): PROC 15: Use as laboratory reagent</p> <p>Environmental release category (ERC): ERC 8a: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC 9a: Widespread use of functional fluid (indoor)</p> <p>Sector of end use: SU 22: Professional uses</p> |
| <p>Uses by consumers</p> | |
| <p>Coatings & Inks</p> | <p>Product Category used: PC 9a: Coatings and Paints, Thinners, paint removers</p> <p>Environmental release category (ERC) ERC 8c: Widespread use leading to inclusion into/onto article (indoor) ERC 8f: Widespread use leading to inclusion into/onto article (outdoor)</p> |
| <p>Construction formulation additives</p> | <p>Product Category used: PC 1: Adhesives, Sealants</p> <p>Environmental release category (ERC): ERC 8c: Widespread use leading to inclusion into/onto article (indoor) ERC 8f: Widespread use leading to inclusion into/onto article (outdoor) ERC 10a: Wide dispersive outdoor use of long-life articles and materials</p> |

BIS(2-ETHYLHEXYL) TEREPHTHALATE

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| | <p>with low release ERC 11a: Widespread use of articles with low release (indoor)</p> <p>Sector use: SU 21: Consumer uses</p> |
| <p>Plasticizer (plastisol)</p> | <p>Product Category (PC) Used: PC 32: Polymer preparations and compounds</p> <p>Environmental release category (ERC): ERC 10a: Widespread use of articles with low release (outdoor) ERC 11a: Widespread use of articles with low release (indoor)</p> <p>Sector use: SU 21: Consumer uses</p> <p>Article Category (PC) Code AC 5-2: Fabrics, textiles and apparel: curtains, upholstery, carpeting/flooring, rugs AC 10: Rubber products AC 13-2: Plastic products: Flooring AC 13-3: Plastic products: Toys</p> |
| <p>Plasticizer (pvc articles)</p> | <p>Process category (PROC): PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelleting PROC 21: Low energy manipulation of substances in form of massive metal or bound in other materials and/or articles PROC 24: High (mechanical) energy work-up of massive metals or substances bound in materials and/or articles</p> <p>Product Category (PC) Used: PC 32: Polymer Preparations and Compounds</p> <p>Environmental release category (ERC): ERC 10a: Widespread use of articles with low release (outdoor) ERC 11a: Widespread use of articles with low release (indoor)</p> |

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| | <p>Sector use: SU 21: Consumer uses</p> <p>Article Category (PC) Code AC 5-2: Fabrics, textiles and apparel: curtains, upholstery, carpeting/flooring, rugs AC 10: Rubber products AC 13: Plastic products</p> |
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END OF SAFETY DATA SHEET