

SAFETY DATA SHEET

Borlink™ LE4244S

Version 6.0

Revision Date:
26.04.2024

Date of last issue: 02.01.2020
Date of first issue: 02.01.2020

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product name : Borlink LE4244S

Manufacturer or supplier's details

Supplier : Borealis AG

Address : Trabrennstrasse 6-8, 1020 Vienna, Austria

Telephone : +43 1 22400 0

Emergency telephone number : +1 760 476 3962 (3E), Access code: 336296+1 760 476 3962 (3E), Access code: 336296

E-mail address : sds@borealisgroup.com

Recommended use of the chemical and restrictions on use

Recommended use : Raw material for plastics industry

Restrictions on use : Use only according to our recommendations.

2. HAZARDS IDENTIFICATION


GHS Classification

Skin irritation : Category 3

Skin sensitisation : Category 1

Reproductive toxicity : Category 1B

GHS-Labeling

Hazard pictograms : 

Signal word : Danger

Hazard statements : H316 Causes mild skin irritation.
H317 May cause an allergic skin reaction.
H360 May damage fertility or the unborn child.

Precautionary statements : **Prevention:**

Borlink is a trademark of the Borealis group.

Borealis AG | Trabrennstrasse 6-8 | 1020 Vienna | Austria
Telephone +43 1 224 00 0 | Fax +43 1 22 400 333
FN 269858a | CCC Commercial Court of Vienna | Website www.borealisgroup.com



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P201 Obtain special instructions before use.
P261 Avoid breathing dust.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

Other hazards which do not result in classification

The product burns, but is not classified as flammable.
Dust from the product gives a potential risk for dust explosion.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture
Chemical nature : The product is a polyethylene polymer.

Components

| Chemical name | CAS-No. | Classification | MAC value mg/m3 / TSEL value | Concentration (% w/w) |
|--|---------|---|------------------------------------|--------------------------|
| bis(α,α -dimethylbenzyl) peroxide | 80-43-3 | Org. Perox.F; H242 Skin Irrit.2; H315 Eye Irrit.2A; H319 Repr.1B; H360 Aquatic Chronic2; H411 | No data available | $\geq 1 - < 2,5$ |
| 6,6'-di-tert-butyl-4,4'-thiodi-m-cresol | 96-69-5 | Skin Sens.1; H317 Aquatic Acute1; H400 Aquatic Chronic1; H410 | No data available | $\geq 0,1 - < 0,25$ |

For explanation of abbreviations see section 16.

4. FIRST AID MEASURES

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| | | |
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| If inhaled | : | Move to fresh air in case of accidental inhalation of vapours or decomposition products. Seek medical advice immediately. |
| In case of skin contact | : | Wash off with soap and plenty of water. Call a physician if irritation develops or persists. If molten material comes in contact with the skin, cool with plenty of water. DO NOT remove solidified product, as removal could result in severe tissue damage. Obtain medical attention. |
| In case of eye contact | : | Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if irritation develops and persists. |
| If swallowed | : | If swallowed, rinse mouth with water (only if the person is conscious). Seek medical advice immediately. |
| Most important symptoms and effects, both acute and delayed | : | Inhalation of dust may irritate the respiratory tract. Prolonged inhalation of high doses of decomposition products may give headache or irritation of the respiratory tract. Prolonged skin contact may give skin irritation caused by the peroxide content present on the surface of the granules. May cause an allergic skin reaction. Causes mild skin irritation. May cause an allergic skin reaction. May damage fertility or the unborn child. Causes mild skin irritation. May cause an allergic skin reaction. May damage fertility or the unborn child. |
| Notes to physician | : | Treat symptomatically. No specific instructions needed. |

5. FIREFIGHTING MEASURES

Flammable properties

Flash point : Not applicable (solid)
Ignition temperature : > 320 °C

Upper explosion limit / Upper flammability limit : Not applicable

Lower explosion limit / Lower flammability limit : Not applicable

Flammability (solid, gas) : The product is not flammable.

Suitable extinguishing media : Water in spread jet, dry chemicals, foam or carbon dioxide.

Unsuitable extinguishing media : High volume water jet

Specific hazards during : Principal toxicant in the smoke is carbon monoxide.

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firefighting

Special protective equipment for firefighters : Wear self-contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Ensure adequate ventilation.

Environmental precautions : Should not be released into the environment.

It is recommended to implement systems and practices (such as Operation Clean Sweep®) to prevent accidental release of plastics in to the environment.

Methods and materials for containment and cleaning up : Vacuum or sweep up spill.
All spill of material must be removed immediately to prevent slipping accidents.
Recycle or dispose loose material properly.
Do not flush into surface water or sanitary sewer system.

7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Dust from the product gives a potential risk for dust explosion.
All equipment shall be grounded.
Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.

Advice on safe handling : During processing and thermal treatment of the product, small amounts of volatile hydrocarbons may be released.
Provide adequate ventilation.
Local exhaust ventilation may be necessary.
Avoid inhalation of dust and decomposition fumes.
Avoid contact with skin and eyes.

Conditions for safe storage : Store locked up.
Further information on storage stability : Keep in a dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures : Provide adequate ventilation.
Local exhaust ventilation may be necessary.

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Personal protective equipment

| | | |
|--------------------------|---|--|
| Respiratory protection | : | In case of dust development use dust mask. In the case of vapour formation use a respirator with an approved filter. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used. |
| Hand protection | : | |
| Material | : | Neoprene |
| Material | : | Nitrile rubber |
| Remarks | : | Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. |
| Eye protection | : | Safety glasses |
| Skin and body protection | : | Protective clothing |
| Hygiene measures | : | When using do not eat, drink or smoke. Wash hands before breaks and at the end of workday. Take off contaminated clothing and wash before reuse. |

9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|-------------------------------|---|-------------------------------|
| Appearance | : | pellets |
| Colour | : | natural colour |
| Odour | : | odourless |
| pH | : | Not applicable insoluble |
| Melting point/range | : | 100 - 140 °C |
| Boiling range | : | Decomposes on heating. |
| Flash point | : | Not applicable (solid) |
| Evaporation rate | : | Not applicable (solid) |
| Flammability (solid, gas) | : | The product is not flammable. |
| Upper explosion limit / Upper | : | Not applicable |

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flammability limit

Lower explosion limit / Lower
flammability limit : Not applicable

Vapour pressure : Not applicable (solid)

Density : 0,9 - 1,0 g/cm³

Solubility(ies)

Water solubility : insoluble

Partition coefficient: n-
octanol/water : Not applicable insoluble

Auto-ignition temperature : > 320 °C

Viscosity

Viscosity, kinematic : No data available

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Particle size : 3 - 6 mm

10. STABILITY AND REACTIVITY

Reactivity : Stable under recommended storage conditions.

Chemical stability : The product is a stable thermoplastic with no chemical reactivity below 140°C. Above 140°C the intended crosslinking reaction occurs.

Possibility of hazardous
reactions : None known.

Conditions to avoid : Extremes of temperature and direct sunlight.

Incompatible materials : Strong oxidizing agents
Reducing agents
Strong acids and strong bases

Hazardous decomposition
products : Under fire conditions:
Carbon monoxide
During processing and thermal treatment of the product, small amounts of volatile hydrocarbons may be released.

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11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified due to lack of data.

Skin corrosion/irritation

Causes mild skin irritation.

Serious eye damage/eye irritation

Not classified due to lack of data.

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified due to lack of data.

Germ cell mutagenicity

Not classified due to lack of data.

Carcinogenicity

Not classified due to lack of data.

Reproductive toxicity

May damage fertility or the unborn child.

STOT - single exposure

Not classified due to lack of data.

STOT - repeated exposure

Not classified due to lack of data.

Aspiration toxicity

Not classified due to lack of data.

Further information

Product:

Remarks

: Inhalation of dust may irritate the respiratory tract.
Prolonged inhalation of high doses of decomposition products may give headache or irritation of the respiratory tract.

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12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to daphnia and other aquatic invertebrates : NOEC (Daphnia magna (Water flea));
Exposure time: 48 h
Test Type: Immobilization
Method: OECD Test Guideline 202
GLP: yes
Remarks: No effect up to the limit of solubility.
Read-across (Analogy)

Toxicity to algae/aquatic plants : NOEC (Pseudokirchneriella subcapitata (green algae));
End point: Growth rate
Exposure time: 72 h
Test Type: Growth inhibition
Method: OECD Test Guideline 201
GLP: yes
Remarks: No effect up to the limit of solubility.
Read-across (Analogy)

Components:

6,6'-di-tert-butyl-4,4'-thiodi-m-cresol:

Toxicity to fish : LC50 (fathead minnow (Pimephales promelas)); 0,36 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)); 0,16 mg/l
Exposure time: 48 h

M-Factor (Acute aquatic toxicity) : 1

M-Factor (Chronic aquatic toxicity) : 1

Persistence and degradability

Product:

Biodegradability : Remarks: Not readily biodegradable.

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: Does not accumulate in organisms.

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Components:

bis(α,α -dimethylbenzyl) peroxide:

Bioaccumulation : Bioconcentration factor (BCF): 137 - 1.470
Exposure time: 56 d
Temperature: 25 °C
Concentration: 0,01 mg/l

Mobility in soil

Product:

Mobility : Remarks: Not expected to adsorb on soil.

Remarks: The product is insoluble and floats on water.

Other adverse effects

Product:

Additional ecological information : Should not be released into the environment.

The product is not classified as hazardous for the environment.
Information given is based on tests on mixtures with similar compositions.

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of contents/ container to an approved waste disposal plant.
Check with local regulations.
Contaminated packaging : Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

ADR

Not regulated as a dangerous good

UNRTDG

Not regulated as a dangerous good

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IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Special precautions for user

Remarks : Not dangerous goods in the meaning of ADR/RID, ADN, IMDG-Code, ICAO/IATA-DGR

15. REGULATORY INFORMATION

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

No data available

16. OTHER INFORMATION

Full text of H-Statements

| | |
|------|---|
| H242 | Heating may cause a fire. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H360 | May damage fertility or the unborn child. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H411 | Toxic to aquatic life with long lasting effects. |

Full text of other abbreviations

| | |
|-----------------|--------------------------------------|
| Aquatic Acute | : Short-term (acute) aquatic hazard |
| Aquatic Chronic | : Long-term (chronic) aquatic hazard |
| Eye Irrit. | : Eye irritation |
| Org. Perox. | : Organic peroxides |
| Repr. | : Reproductive toxicity |
| Skin Irrit. | : Skin irritation |
| Skin Sens. | : Skin sensitisation |

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List

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(Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECl - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECl - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Further information

Other information : SDS According to GOST 30333-2007
Issuer :

Borealis, Group Product Stewardship

Sources of key data used to compile the Safety Data Sheet : The classification information of components is based on raw material supplier data.

Information given is based on tests on mixtures with similar compositions., Information given is based on data of the components.

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Disclaimer

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It is the customer's responsibility to inspect and test our products in order to satisfy itself as to the suitability of the products for the customer's particular purpose. The customer is responsible for the appropriate, safe and legal use, processing and handling of our products.

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