

SAFETY DATA SHEET

Borlink™ LE0516

Version 4.0

Revision Date:
12.04.2024

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 LE0516

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

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

Not a hazardous substance or mixture.

GHS-Labeling

Not a hazardous substance or mixture.

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
Mixture

Chemical nature : It contains carbon black.
The product is a polyethylene copolymer.

Components

Chemical name	CAS-No.	Classification	MAC value mg/m3 / TSEL value	Concentration (% w/w)

Borlink is a trademark of the Borealis group.

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poly(2,2,4-trimethyl-1,2-dihydroquinoline)	26780-96-1	Aquatic Chronic3; H412	No data available	$\geq 1 - < 2,5$
vinyl acetate	108-05-4	Flam. Liq.2; H225 Acute Tox.4; H332 Carc.2; H351 STOT SE3; H335 (Respiratory system)	MPC-TWA: 10 mg/m ³ Class 3 - Moderately dangerous Data Source: RU OEL MPC-STEL: 30 mg/m ³ Class 3 - Moderately dangerous Data Source: RU OEL	$\geq 0,1 - < 1$

For explanation of abbreviations see section 16.

4. FIRST AID MEASURES

If inhaled	: Move to fresh air.
In case of skin contact	: 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	: Flush eyes with water as a precaution. Get medical attention if irritation develops and persists.
If swallowed	: Rinse mouth with water. Consult a physician if necessary.
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.
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 : Not applicable

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flammability limit

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 firefighting : Principal toxicant in the smoke is carbon monoxide.

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 : Safety aspects do not require any special precautions in terms of storage.

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Further information on storage stability : Keep in a dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Data Source
vinyl acetate	108-05-4	TWA	5 ppm 17,6 mg/m ³	2009/161/EU
		STEL	10 ppm 35,2 mg/m ³	2009/161/EU
		MPC-TWA (vapour and/or gas)	10 mg/m ³	RU OEL
Further information: Class 3 - Moderately dangerous				
		MPC-STEL (vapour and/or gas)	30 mg/m ³	RU OEL
Further information: Class 3 - Moderately dangerous				

However, as the chemical is embedded in a solid polymer, exposure is unlikely, unless the polymer is processed in a way that makes such exposure possible.

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

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

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.
For prolonged or repeated contact use protective gloves.
PVC or other plastic material gloves

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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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	pellets
Colour	:	black
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 flammability limit	:	Not applicable
Lower explosion limit / Lower flammability limit	:	Not applicable
Vapour pressure	:	Not applicable (solid)
Density	:	1,1 - 1,2 g/cm ³
Solubility(ies) Water solubility	:	insoluble
Partition coefficient: n-octanol/water	:	Not applicable insoluble
Auto-ignition temperature	:	> 320 °C
Viscosity Viscosity, kinematic	:	Not applicable (solid)
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

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Particle size : 3 - 10 mm
Method: Image analysis (surface-based)

10. STABILITY AND REACTIVITY

Reactivity : Stable under recommended storage conditions.
Chemical stability : The product is a stable thermoplastic, with no chemical reactivity.
Possibility of hazardous reactions : None known.
Conditions to avoid : Extremes of temperature and direct sunlight.
Incompatible materials : Strong oxidizing agents
Strong 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.

11. TOXICOLOGICAL INFORMATION

Skin corrosion/irritation

Product:

Remarks : Prolonged skin contact may give skin irritation caused by the peroxide content present on the surface of the granules.

Serious eye damage/eye irritation

Product:

Remarks : Contact with eyes may cause irritation.

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

Components:

poly(2,2,4-trimethyl-1,2-dihydroquinoline):

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 56 mg/l
Exposure time: 48 h

Persistence and degradability

Product:

Biodegradability : Remarks: Not readily biodegradable.

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: Does not accumulate in organisms.

Mobility in soil

Product:

Mobility : Remarks: Not expected to adsorb on soil.

Other adverse effects

Product:

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

Hygienic standards:

(Allowable concentration in air, water, including fishery waters, soil)

Components	Air	Water	Soil	Data Source
vinyl acetate 108-05-4	Concentration that prevents irritation, reflex reactions, odors when exposed to 20-30 minutes - maximum one-time: 0,15 mg/m ³ Limiting health hazard indicator:	Maximum Permissible Concentration: 0,01 Milligrams per cubed decimeter Limiting health hazard indicator: toxic Hazard class: 4	No data available	List 1 List 4 List 5

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	reflectory Hazard class: Class 3 - moderately dangerous	Maximum Allowable Concentration: 0,2 mg/l Limiting health hazard indicator: sanitary- toxicological Hazard class: Class 2 - highly dangerous		
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For explanation of abbreviations see section 16.

13. DISPOSAL CONSIDERATIONS

Disposal methods

- Waste from residues : Dispose of contents/ container to an approved waste disposal plant.
Reuse or recycle if not contaminated.
Check with local regulations.
Reuse or recycle if not contaminated.
The product may be safely used as fuel.
Proper combustion does not require any special flue gas control.
- Contaminated packaging : 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

ADR

Not regulated as a dangerous good

UNRTDG

Not regulated as a dangerous good

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

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IMDG-Code

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

H225	Highly flammable liquid and vapour.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H412	Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	: Acute toxicity
Aquatic Chronic	: Long-term (chronic) aquatic hazard
Carc.	: Carcinogenicity
Flam. Liq.	: Flammable liquids
STOT SE	: Specific target organ toxicity - single exposure

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - 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 (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

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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; KECI - 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.

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Borealis makes no warranties which extend beyond the description contained herein. Nothing herein shall constitute any warranty of merchantability or fitness for a particular purpose.

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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