Borlink™ LE0511

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SECTION 1. IDENTIFICATION

Product name : Borlink LE0511

Manufacturer or supplier's details

Supplier : Borealis Compounds Inc

176 Thomas Road, NJ 07865 Port Murray, United States of

America (USA)

Telephone: +1 908 850 6200

E-mail address : sds@borealisgroup.com

Emergency telephone +1 866 519 4752 (3E) Access code: 336296Borealis

number Compounds Inc, Borealis North America HSE: 908-850-6200

for Monday - Friday 8-4:30pm excluding holidays

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.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Not a hazardous substance or mixture.

GHS label elements

No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required

Additional Labelling

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity: 47.3121 %

Other hazards

Warning!

May form combustible dust concentrations in air (during processing).

The product burns, but is not classified as flammable.

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The product burns, but is not classified as flammable.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : The product is an elastomer modified polyethylene copolymer.

It contains carbon black.

Components

Chemical name	CAS-No.	Concentration (% w/w)
carbon black	1333-86-4	>= 30 - < 50

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paraffin waxes and hydrocarbon 8002-74-2 >= 1 - < 5 waxes

Actual concentration is withheld as a trade secret

SECTION 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

Protection of first-aiders Notes to physician

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.

No special precautions are necessary for first aid responders. Treat symptomatically.

No specific instructions needed.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media

Unsuitable extinguishing

media

Specific hazards during

firefighting

Water in spread jet, dry chemicals, foam or carbon dioxide.

High volume water jet

Principal toxicant in the smoke is carbon monoxide.

Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a

potential dust explosion hazard.

Special protective equipment:

for firefighters

Wear self-contained breathing apparatus and protective suit.

SECTION 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 Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration.



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Non-sparking tools should be used.

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.

SECTION 7. HANDLING AND STORAGE

Advice on protection against

fire and explosion

Dust from the product gives a potential risk for dust explosion.

Minimize dust generation and accumulation.

Routine housekeeping should be instituted to ensure that

dusts do not accumulate on surfaces. All equipment shall be grounded.

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.

Further information on storage conditions

Keep in a dry place.

Further information on

storage stability

Keep in a dry place.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
carbon black	1333-86-4	TWA	3.5 mg/m3	NIOSH REL
		TWA	3.5 mg/m3	OSHA Z-1
		TWA	3.5 mg/m3	OSHA P0
		TWA	0.1 mg/m3 (PAHs)	NIOSH REL
		TWA (Inhalable particulate matter)	3 mg/m3	ACGIH
paraffin waxes and hydrocarbon waxes	8002-74-2	TWA (Fumes)	2 mg/m3	ACGIH
		TWA (Fumes)	2 mg/m3	NIOSH REL



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Engineering measures : Provide adequate ventilation.

Local exhaust ventilation may be necessary.

It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen

deficient environment.

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.

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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : pellets

Colour : black

Odour : odourless

Odour Threshold : Not applicable

pH : Not applicable insoluble

Melting point/range : 212 - 284 °F / 100 - 140 °C

Boiling range : Decomposes on heating.

Flash point : Not applicable (solid)

Evaporation rate : Not applicable (solid)



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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)

Relative density : No data available

Density : 1.1 - 1.2 g/cm³

Solubility(ies)

Water solubility : insoluble

Partition coefficient: n-

octanol/water

Not applicable insoluble

Auto-ignition temperature : > 608 °F / > 320 °C

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : No data available

Explosive properties : Not explosive

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

Particle size : 3 - 10 mm

Method: Image analysis (surface-based)

SECTION 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 : None known.

Hazardous decomposition : Under fire conditions: products : Carbon monoxide

During processing and thermal treatment of the product, small

amounts of volatile hydrocarbons may be released.



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SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

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

Based on available data, the classification criteria are not met.

Product:

Remarks : Contact with eyes may cause irritation.

Respiratory or skin sensitisation

Skin sensitisation

Based on available data, the classification criteria are not met.

Respiratory sensitisation

Based on available data, the classification criteria are not met.

Product:

Exposure routes : Skin contact

Remarks : The product contains small amounts of a substance classified

as sensitising, which may produce an allergic reaction to

susceptible personnel.

Personnel sensitised to this substance should not be allowed

to handle the product.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

Based on available data, the classification criteria are not met.

IARC Group 2B: Possibly carcinogenic to humans

carbon black 1333-86-4

OSHANo component of this product present at levels greater than or equal to 0.1% is

on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is

identified as a known or anticipated carcinogen by NTP.



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Reproductive toxicity

Based on available data, the classification criteria are not met.

STOT - single exposure

Based on available data, the classification criteria are not met.

STOT - repeated exposure

Based on available data, the classification criteria are not met.

Product:

Remarks : Health injuries are not known or expected under normal use.

Aspiration toxicity

Based on available data, the classification criteria are not met.

Product:

Not applicable

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.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

No data available

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:



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Additional ecological

information

: Should not be released into the environment.

The product is not considered hazardous for the environment.

Not readily biodegradable.

Does not accumulate in organisms.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : This substance, when discarded or disposed of is not

specifically listed as a hazardous waste in Federal regulations.

However, it could be hazardous if it is considered toxic,

corrosive, ignitable or reactive according to Federal definitions (40 CFR 261). Additionally, it could be designated as

hazardous waste if it is mixed with or comes in contact with a hazardous waste. If such contact or mixing may have occurred, check 40 CFR 261 to determine whether it is a

hazardous waste.

The transportation, storage, treatment and disposal of this waste material must be conducted in accord-ance with all

applicable Federal, state and local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste

handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulations

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

Not applicable for product as supplied.

National Regulations

Special precautions for user

Remarks : Not dangerous goods in the meaning of ADR/RID, ADN,

IMDG-Code, ICAO/IATA-DGR

SECTION 15. REGULATORY INFORMATION

California Prop. 65

WARNING: This product can expose you to chemicals including 2-phenylpropene, 1,3-butadiene, acrylonitrile, 4-vinylcyclohexene, which is/are known to the State of California to cause cancer, and

1,3-butadiene, 4-vinylcyclohexene, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.



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

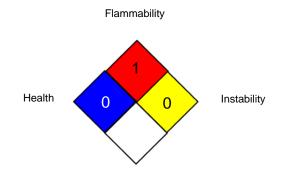
Borealis certifies that all chemical substances in this shipment comply with all applicable rules or orders under TSCA and that Borealis is not offering a chemical substance for entry in violation of TSCA or any applicable rule or order under TSCA.

Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling. The product is classified and labelled in accordance with Hazard Communication Standard 2012 (29 CFR 1910.1200)

SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



Special hazard

HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL : USA. NIOSH Recommended Exposure Limits

OSHA PO : USA. Table Z-1-A Limits for Air Contaminants (1989 vacated

values)

OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1

Limits for Air Contaminants

ACGIH / TWA : 8-hour, time-weighted average

NIOSH REL / TWA : Time-weighted average concentration for up to a 10-hour

workday during a 40-hour workweek

OSHA P0 / TWA : 8-hour time weighted average OSHA Z-1 / TWA : 8-hour time weighted average



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AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN -Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL -Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS -Extremely Hazardous Substance; 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; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; 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; 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; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA -National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; 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; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - 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

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

Safety data sheets of raw material suppliers.

Sources of key data used to

compile the Safety Data

Sheet

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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.

No liability can be accepted in respect of the use of Borealis' products in conjunction with other materials. The information contained herein relates exclusively to our products when not used in conjunction with any third party materials.

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