

# SAFETY DATA SHEET

**LE4432**

Version 1

Revision Date 08/13/2015

Print Date 08/14/2015

## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : LE4432

### Manufacturer or supplier's details

Supplier : Borealis Compounds Inc  
176 Thomas Road, NJ 07865 Port Murray, United States of America  
Telephone: +1 908 850 6200E-mail address : [sds@borealisgroup.com](mailto:sds@borealisgroup.com)

Emergency telephone number : Borealis Compounds Inc, William E Wallace: +1 908 850 6243

## SECTION 2. HAZARDS IDENTIFICATION

### Emergency Overview

Appearance	pellets
Colour	black
Odour	odourless
Hazard Summary	During crosslinking reaction in combination with base resin: methanol (Flam. Liq. 2; H225, Acute Tox. 3; H301, Acute Tox. 3; H311, Acute Tox. 3; H331, STOT SE 1; H370 - see chapter 16) is released. In contact with water or moisture methanol will be released. 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. The product burns, but is not classified as flammable.

### GHS-Classification

Specific target organ toxicity - repeated exposure : Category 2

### GHS-Labeling

Hazard pictograms :



Signal word : Warning

Hazard statements : H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements : **Prevention:**

# SAFETY DATA SHEET

**LE4432**

Version 1

Revision Date 08/13/2015

Print Date 08/14/2015

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

**Response:**

P314 Get medical advice/ attention if you feel unwell.

**Disposal:**

P501 Dispose of contents/ container to an approved incineration plant.

## Potential Health Effects

Aggravated Medical Condition : None known.

Symptoms of Overexposure : Inhalation may provoke the following symptoms:  
Headache  
Irritation

Symptoms of poisoning (methanol):

Daze  
Dizziness  
Nausea  
Abdominal pain  
Respiratory disorders

Symptoms of poisoning, prolonged exposure (methanol):  
Blindness

## Carcinogenicity:

**IARC**

Group 2B: Possibly carcinogenic to humans

**ACGIH**

Carbon black

1333-86-4

**OSHA**

None known.

**NTP**

None known.

None known.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : The product is a polyethylene copolymer.  
It contains carbon black (EC No 215-609-9, CAS No 1333-86-4).  
It contains stabilisers.

## Hazardous components

Chemical Name	CAS-No.	Concentration [%]
Stannane, dioctylbis[(1-oxododecyl)oxy]-	3648-18-8	< 3
Phenol, 4,4'-thiobis[2-(1,1-dimethylethyl)-5-methyl-	96-69-5	< 1

# SAFETY DATA SHEET

**LE4432**

Version 1

Revision Date 08/13/2015

Print Date 08/14/2015

---

## SECTION 4. FIRST AID MEASURES

- If inhaled : Move to fresh air in case of accidental inhalation of vapours.
- In case of skin contact : Cool melted product on skin with plenty of water. Do not remove solidified product.
- If swallowed : Get medical advice/ attention if you feel unwell.
- Most important symptoms and effects, both acute and delayed : Inhalation may provoke the following symptoms:  
Headache  
Irritation
- Symptoms of poisoning (methanol):  
Daze  
Dizziness  
Nausea  
Abdominal pain  
Respiratory disorders
- Symptoms of poisoning, prolonged exposure (methanol):  
Blindness
- Notes to physician : No specific instructions needed.

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## SECTION 5. FIREFIGHTING MEASURES

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

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## SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Ensure adequate ventilation.  
Use personal protective equipment.
- Environmental precautions : Avoid release 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.

# SAFETY DATA SHEET

**LE4432**

Version 1

Revision Date 08/13/2015

Print Date 08/14/2015

---

## SECTION 7. HANDLING AND STORAGE

- 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.  
When using do not eat, drink or smoke.
- Conditions for safe storage : Safety aspects do not require any special precautions in terms of storage.
- Materials to avoid : None known.
- Storage temperature : 10 - 30 °C
- Storage period : 15 Months

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## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

### Personal protective equipment

- Respiratory protection : In case of insufficient ventilation: Respirator with ABEK-P3 filter or self-contained breathing apparatus.
- Hand protection
- Material : butyl-rubber
- Break through time : >= 480 min
- Glove thickness : 0.5 mm
- Fluorinated rubber  
>= 480 min  
0.4 mm
- Remarks : The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. 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
- Hygiene measures : Provide adequate ventilation.

# SAFETY DATA SHEET

**LE4432**

Version 1

Revision Date 08/13/2015

Print Date 08/14/2015

Local exhaust ventilation may be necessary.  
Wash hands before breaks and at the end of workday.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: pellets
Colour	: black
Odour	: odourless
pH	: no data available
Melting range	: 100 - 140 °C
Boiling range	: Not relevant
Flash point	: Not applicable
Evaporation rate	: Not applicable
Flammability (solid, gas)	: The product is not flammable.
Upper explosion limit	: Not applicable
Lower explosion limit	: Not applicable
Vapour pressure	: Not applicable
Relative vapour density	: Not applicable
Density	: 1.1 - 1.2 g/cm <sup>3</sup>
Bulk density	: 600 - 700 kg/m <sup>3</sup>
Solubility(ies)	
Water solubility	: insoluble
Partition coefficient: n-octanol/water	: Not applicable
Auto-ignition temperature	: > 320 °C
Viscosity	
Viscosity, kinematic	: Not applicable
Oxidizing properties	: The substance or mixture is not classified as oxidizing.

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## SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Stable under recommended storage conditions.
Chemical stability	: The product is a stable thermoplastic. The intended crosslinking reaction occurs in combination with the base resin

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# SAFETY DATA SHEET

**LE4432**

Version 1

Revision Date 08/13/2015

Print Date 08/14/2015

and moisture: at ambient conditions, in sauna or hot water bath.

- Possibility of hazardous reactions : None known.
- Conditions to avoid : Exposure to moisture
- Incompatible materials : None known.
- Hazardous decomposition products : Under fire conditions:  
Carbon monoxide  
During processing and thermal treatment of the product, small amounts of volatile hydrocarbons may be released.  
During crosslinking reaction in combination with base resin: methanol  
In contact with water or moisture methanol will be released.

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## SECTION 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

**Product:**

Acute oral toxicity : Remarks: Harmful: danger of serious damage to health by prolonged exposure if swallowed.

Acute inhalation toxicity : Remarks: No known effect.

Acute dermal toxicity : Remarks: No known effect.

### **Components:**

**Stannane, dioctylbis[(1-oxododecyl)oxy]-:**

Acute oral toxicity : LD50 (Rat): 6,450 mg/kg

### Skin corrosion/irritation

**Product:**

Remarks: No known effect.

### Serious eye damage/eye irritation

**Product:**

Remarks: No known effect.

### Respiratory or skin sensitisation

**Product:**

Remarks: No known effect.

# SAFETY DATA SHEET

**LE4432**

Version 1

Revision Date 08/13/2015

Print Date 08/14/2015

## Germ cell mutagenicity

### Product:

Genotoxicity in vitro : Remarks: no data available

Genotoxicity in vivo : Remarks: no data available

## Carcinogenicity

### Product:

Remarks: Not classified based on available information.

## Reproductive toxicity

### Product:

Effects on fertility :  
Remarks: No known effect.

## STOT - single exposure

### Product:

Remarks: no data available

## STOT - repeated exposure

### Product:

Remarks: no data available

## Repeated dose toxicity

### Components:

#### **Stannane, dioctylbis[(1-oxododecyl)oxy]-:**

Application Route: Oral

Target Organs: thymus

Assessment: May cause damage to organs through prolonged or repeated exposure.

## Aspiration toxicity

### Product:

Not applicable

## Further information

### Product:

Remarks: During crosslinking reaction in combination with base resin: methanol (Flam. Liq. 2; H225, Acute Tox. 3; H301, Acute Tox. 3; H311, Acute Tox. 3; H331, STOT SE 1; H370 - see chapter 16) is released., 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., Carbon black has a workplace exposure limit in some European countries, but is not classified

# SAFETY DATA SHEET

**LE4432**

Version 1

Revision Date 08/13/2015

Print Date 08/14/2015

as hazardous., 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.

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## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Components:

##### **Phenol, 4,4'-thiobis[2-(1,1-dimethylethyl)-5-methyl-:**

Toxicity to fish : LC50 (fathead minnow (*Pimephales promelas*)): 0.36 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (*Daphnia magna* (Water flea)): 0.16 mg/l  
aquatic invertebrates Exposure time: 48 h

### Persistence and degradability

#### Product:

Biodegradability : Remarks: Not readily biodegradable.

### Bioaccumulative potential

#### Product:

Bioaccumulation : Remarks: no data available

### Mobility in soil

#### Product:

Mobility : Remarks: Not expected to adsorb on soil.

### Other adverse effects

#### Product:

Results of PBT and vPvB : Not applicable  
assessment

Additional ecological : No ecotoxicological data is available on the product itself., The  
information product is classified as dangerous for the environment.,  
However, as the chemicals are embedded in a solid polymer,  
exposure to nature is unlikely.

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## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

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# SAFETY DATA SHEET

**LE4432**

Version 1

Revision Date 08/13/2015

Print Date 08/14/2015

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 accordance with all applicable Federal, state and local regulations.

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## SECTION 14. TRANSPORT INFORMATION

### International Regulation

#### 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 : The product is not regulated by ADR/RID, IMDG or IATA.

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## SECTION 15. REGULATORY INFORMATION

All ingredients within this product meet TSCA regulations., In accordance with Hazard Communication Standard 2012 (29 CFR 1910.1200), the product does not need to be classified nor labelled.

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## SECTION 16. OTHER INFORMATION

# SAFETY DATA SHEET

**LE4432**

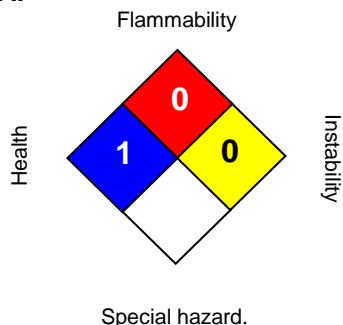
Version 1

Revision Date 08/13/2015

Print Date 08/14/2015

## Further information

### NFPA:



### HMIS III:

<b>HEALTH</b>	<b>1</b>
<b>FLAMMABILITY</b>	<b>0</b>
<b>PHYSICAL HAZARD</b>	<b>0</b>

0 = not significant, 1 = Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

Issued according to Regulation (EC) No 1907/2006, Annex II, and its amendments. Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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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