

# SAFETY DATA SHEET

## Ambicat™ LE4472

Version 1.0

Revision Date 02/18/2020

Former date -

### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Ambicat LE4472

#### 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](mailto:sds@borealisgroup.com)

Emergency telephone number : Borealis Compounds Inc, William E Wallace: +1 908 850 6243  
+1 215 207 0061 (regional number, NCEC Carechem 24)

#### 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

Reproductive toxicity : Category 2

#### GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : H361 Suspected of damaging fertility or the unborn child.

Precautionary statements : **Prevention:**  
P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
**Response:**  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.

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Borealis AG | Wagramer Strasse 17-19 | 1220 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](http://www.borealisgroup.com)



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### Storage:

P405 Store locked up.

### Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

### Other hazards which do not result in classification

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) is released.

In contact with water or moisture methanol will be released.

The product burns, but is not classified as flammable.

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

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : The product is a silane crosslinkable polyethylene polymer. It contains carbon black.

### Hazardous components

| Chemical name   | CAS-No.    | Concentration (%) |
|---|------------|-------------------|
| carbon black  | 1333-86-4  | >= 30 - < 50      |
| Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene | 68610-51-5 | >= 1 - < 5        |
| Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.                            | 85536-14-7 | >= 1 - < 3        |

## SECTION 4. FIRST AID MEASURES

If inhaled : Move to fresh air in case of accidental inhalation of vapours. Seek medical advice immediately.

In case of skin contact : Wash off with soap and plenty of water.

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 cautiously with water for several minutes. 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.

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Symptoms of poisoning (methanol):

Daze  
Dizziness  
Nausea  
Abdominal pain  
Respiratory disorders

Symptoms of poisoning, prolonged exposure (methanol):

Blindness

Suspected of damaging fertility or the unborn child.

Notes to physician : Treat symptomatically.

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### SECTION 5. FIREFIGHTING MEASURES

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.

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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 : Prevent product from entering environment and drains.

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.

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### SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Dust from the product represents a risk for dust explosions when dispersed with air in a sufficient concentration and with the presence of an ignition source. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. All equipment shall be grounded.

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- Advice on safe handling : Do not breathe vapours/dust.  
Ensure adequate ventilation.  
Local exhaust ventilation may be necessary.  
Avoid contact with skin and eyes.  
Minimize dust generation and accumulation.
- Conditions for safe storage : Store in a place accessible by authorized persons only.
- 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 | VLE-PPT (Inhalable)                | 3 mg/m <sup>3</sup>                            | NOM-010-STPS-2014 |
|              |           | TWA (Inhalable particulate matter) | 3 mg/m <sup>3</sup>                            | ACGIH             |

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.

#### Occupational exposure limits of decomposition products

| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis             |
|------------|---------|-------------------------------|--|-------------------|
| methanol   | 67-56-1 | VLE-PPT                       | 200 ppm  | NOM-010-STPS-2014 |
|            |         | VLE-CT                        | 250 ppm  | NOM-010-STPS-2014 |
|            |         | TWA                           | 200 ppm  | ACGIH             |
|            |         | STEL                          | 250 ppm  | ACGIH             |

- 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.

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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

: 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

Protective measures

: Wash hands before breaks and immediately after handling the product.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

: pellets

Colour

: black

Odour

: odourless

Odour Threshold

: Methanol: Do NOT rely on the odour: olfactory level is above the exposure limit.

pH

: No data available

Melting 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

: Not applicable

Lower explosion limit

: Not applicable

Vapour pressure

: Not applicable (solid)

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|  |  |
|--|--|
| Density                                | : 0.9 - 1.0 g/cm <sup>3</sup>                              |
| Bulk density                           | : 600 - 700 kg/m <sup>3</sup> Method: ASTM D 1895          |
| Solubility(ies)<br>Water solubility    | : insoluble  |
| Partition coefficient: n-octanol/water | : Not applicable insoluble                                 |
| Auto-ignition temperature              | : > 320 °C   |
| Viscosity<br>Viscosity, kinematic      | : No data available  |
| Explosive properties                   | : Not explosive  |
| Oxidizing properties                   | : The substance or mixture is not classified as oxidizing. |

### SECTION 10. STABILITY AND REACTIVITY

|                                    |  |
|------------------------------------|--|
| Reactivity                         | : Stable under recommended storage conditions.   |
| Chemical stability                 | : The product is a stable thermoplastic.<br>The intended crosslinking reaction occurs in combination with the base resin and moisture: at ambient conditions, in sauna or hot water bath.  |
| Possibility of hazardous reactions | : In contact with water or moisture methanol will be released.   |
| Conditions to avoid                | : Exposure to moisture   |
| Incompatible materials             | : None known.  |
| Hazardous decomposition products   | : Under fire conditions:<br>Carbon monoxide<br><br>During processing and thermal treatment of the product, small amounts of volatile hydrocarbons may be released.<br><br>During crosslinking reaction in combination with base resin:<br>methanol |

### SECTION 11. TOXICOLOGICAL INFORMATION

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### Acute toxicity

Not classified based on available information.

### Components:

#### **Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.:**

Acute oral toxicity : LD50 (Rat): 1,470 mg/kg  
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
Remarks: Read-across (Analogy)

### Skin corrosion/irritation

Not classified based on available information.

### Product:

Species: reconstructed human epidermis (RhE)

Method: OECD Test Guideline 439

Result: No skin irritation

### Serious eye damage/eye irritation

Not classified based on available information.

### Product:

Species: Bovine cornea

Result: No eye irritation

Method: OECD Test Guideline 437

### Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

### Germ cell mutagenicity

Not classified based on available information.

### Carcinogenicity

Not classified based on available information.

### Reproductive toxicity

Suspected of damaging fertility or the unborn child.

### Components:

#### **Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene:**

Effects on fertility : Test Type: Pre-/postnatal development  
Species: Rabbit, female  
Application Route: Oral  
Dose: 50 mg/kg  
Method: OECD Test Guideline 414  
Result: Some evidence of adverse effects on development,  
based on animal experiments.  
GLP: yes

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### STOT - single exposure

Not classified based on available information.

### STOT - repeated exposure

Not classified based on available information.

### Aspiration toxicity

Not classified based on available information.

### 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.

Methanol: Toxic by inhalation, in contact with skin and if swallowed.

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

Inhalation of dust may irritate the respiratory tract.

Contains substances with occupational exposure limit values.

However, as the chemicals are 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-methyl-, reaction products with dicyclopentadiene and isobutylene:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 0.2 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203  
Remarks: No effect up to the limit of solubility.

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): > 0.2 mg/l  
aquatic invertebrates : Exposure time: 48 h  
Method: OECD Test Guideline 202  
Remarks: No effect up to the limit of solubility.

Toxicity to algae : EC50 (Selenastrum capricornutum (fresh water algae)): > 0.2 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
Remarks: No effect up to the limit of solubility.

### Persistence and degradability

#### Product:

Biodegradability : Remarks: Not readily biodegradable.



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### Bioaccumulative potential

#### Product:

Bioaccumulation : Remarks: Does not accumulate in organisms.

### Mobility in soil

#### Product:

Mobility : Remarks: The product is insoluble and floats on water.  
Not expected to adsorb on soil.

### Other adverse effects

#### Product:

Additional ecological information : The product is not classified as hazardous for the environment.

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## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Waste from residues : Check with local regulations.  
Dispose of contents/ container to an approved waste disposal plant.

Contaminated packaging : Dispose of as unused product.  
Empty containers should be taken to an approved waste handling site for recycling or disposal.

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## SECTION 14. TRANSPORT INFORMATION

### International Regulations

#### **UNRTDG**

Not regulated as a dangerous good

#### **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.

### National Regulations

#### **NOM-002-SCT**

Not regulated as a dangerous good

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### Special precautions for user

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

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## SECTION 15. REGULATORY INFORMATION

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

No data available

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## SECTION 16. OTHER INFORMATION

### Further information

Contact Point : Borealis, Group Product Stewardship / Maarit Vakkala

Sources of key data used to compile the Safety Data Sheet : Information given is based on tests on the mixture itself., The classification information of components is based on raw material supplier data.

### Full text of other abbreviations

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