

# SAFETY DATA SHEET

## Ambicat™ LE4476

Version 18.0

Revision Date 07/29/2020

Former date 10/31/2018

### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Ambicat LE4476

#### 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, Borealis North America HSE: 908-850-6200 for Monday – Friday 8-4:30pm excluding holidays  
+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 in accordance with 29 CFR 1910.1200

Reproductive toxicity : Category 2

#### GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : H361d Suspected of damaging 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.

Ambicat is a trademark of the Borealis group.

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### Response:

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

### Storage:

P405 Store locked up.

### Disposal:

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

### Other hazards

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.

Warning!

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

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.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : The product is a silane crosslinkable polyethylene copolymer.

### Hazardous components

Chemical name	CAS-No.	Concentration (%)
Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene	68610-51-5	$\geq 3$ - $< 10$
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.	85536-14-7	$\geq 1$ - $< 2.5$

## 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.

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- In case of eye contact : Rinse cautiously with water for several minutes.
- 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.
- Symptoms of poisoning (methanol):  
Daze  
Dizziness  
Nausea  
Abdominal pain  
Respiratory disorders
- Symptoms of poisoning, prolonged exposure (methanol):  
Blindness
- Suspected of damaging the unborn child.
- Notes to physician : Treat symptomatically.

### 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.
- 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 : Ensure adequate ventilation.  
Use personal protective equipment.
- Environmental precautions : Prevent product from entering environment and drains.
- Methods and materials for : Dust deposits should not be allowed to accumulate on

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containment and cleaning up surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Non-sparking tools should be used. Vacuum or sweep up spill. All spill of material must be removed immediately to prevent slipping accidents.

### SECTION 7. HANDLING AND STORAGE

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

Advice on safe handling : Avoid inhalation of dust and decomposition fumes. Provide adequate ventilation. Local exhaust ventilation may be necessary.

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

Contains no substances with occupational exposure limit values.

#### Hazardous components without workplace control parameters

Components	CAS-No.
Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene	68610-51-5
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.	85536-14-7

#### Occupational exposure limits of decomposition products

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
methanol	67-56-1	TWA	200 ppm	ACGIH
		STEL	250 ppm	ACGIH
		TWA	200 ppm 260 mg/m <sup>3</sup>	NIOSH REL
		ST	250 ppm 325 mg/m <sup>3</sup>	NIOSH REL

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		TWA	200 ppm 260 mg/m <sup>3</sup>	OSHA Z-1
		TWA	200 ppm 260 mg/m <sup>3</sup>	OSHA P0
		STEL	250 ppm 325 mg/m <sup>3</sup>	OSHA P0
		C	1,000 ppm	CAL PEL
		PEL	200 ppm 260 mg/m <sup>3</sup>	CAL PEL
		STEL	250 ppm 325 mg/m <sup>3</sup>	CAL PEL

**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**  
**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.

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### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: pellets
Colour	: beige
Odour	: acrylic-like
Odour Threshold	: $\geq 0.00096$ ppm Butyl acrylate  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)
Density	: 0.9 - 1.0 g/cm <sup>3</sup>
Bulk density	: 500 - 600 kg/m <sup>3</sup> Method: ASTM D 1895
Solubility(ies) Water solubility	: insoluble
Partition coefficient: n-octanol/water	: Not applicable (solid)
Auto-ignition temperature	: > 320 °C
Viscosity Viscosity, kinematic	: Not applicable
Explosive properties	: Not explosive

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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 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:  
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

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### SECTION 11. TOXICOLOGICAL INFORMATION

#### 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.

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### **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.

#### **IARC**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

#### **OSHA**

No 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.

### **Reproductive toxicity**

Suspected of damaging 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.

## 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.

### Bioaccumulative potential

#### Product:

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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 : Prevent product from entering environment and drains.

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## 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 accordance with all applicable Federal, state and local regulations.

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**

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Not applicable for product as supplied.

### National Regulations

#### 49 CFR

Not regulated as a dangerous good

### 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

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.

The product is classified and labelled in accordance with Hazard Communication Standard 2012 (29 CFR 1910.1200)

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.

### California Prop. 65

WARNING: This product can expose you to chemicals including Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene, 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](http://www.P65Warnings.ca.gov).

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## SECTION 16. OTHER INFORMATION

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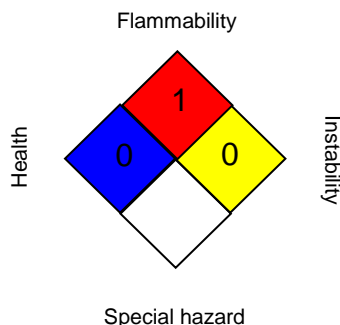
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### Further information

#### NFPA:



#### HMIS® IV:

HEALTH	*	0
FLAMMABILITY		1
PHYSICAL HAZARD		0

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.

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 : Information given is based on tests on the mixture itself., The classification information of components is based on raw material supplier data.

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#### Disclaimer

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