

SAFETY DATA SHEET

Ambicat™ LE4472

Version 4.0

Revision Date 07/29/2020

Former date 10/31/2018

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

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 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	>= 3 - < 10
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.	85536-14-7	>= 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.

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	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. 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.
Unsuitable extinguishing media	: High volume water jet
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,	: Ensure adequate ventilation.
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- protective equipment and emergency procedures : Use personal protective equipment.
- Environmental precautions : Prevent product from entering environment and drains.
- 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. 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 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.
- 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	TWA	3.5 mg/m ³	NIOSH REL
		TWA	3.5 mg/m ³	OSHA Z-1
		TWA	3.5 mg/m ³	OSHA P0
		TWA	0.1 mg/m ³ (PAHs)	NIOSH REL
		TWA (Inhalable particulate)	3 mg/m ³	ACGIH

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		matter)		
		PEL	3.5 mg/m3	CAL PEL

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/m3	NIOSH REL
		ST	250 ppm 325 mg/m3	NIOSH REL
		TWA	200 ppm 260 mg/m3	OSHA Z-1
		TWA	200 ppm 260 mg/m3	OSHA P0
		STEL	250 ppm 325 mg/m3	OSHA P0
		C	1,000 ppm	CAL PEL
		PEL	200 ppm 260 mg/m3	CAL PEL
		STEL	250 ppm 325 mg/m3	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

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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.

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

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Vapour pressure	: Not applicable (solid)
Density	: 0.9 - 1.0 g/cm ³
Bulk density	: 600 - 700 kg/m ³ Method: ASTM D 1895
Solubility(ies) Water solubility	: insoluble
Partition coefficient: n-octanol/water	: Not applicable insoluble
Auto-ignition temperature	: > 320 °C
Viscosity 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. 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

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.

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 Group 2B: Possibly carcinogenic to humans

carbon black 1333-86-4

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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

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.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

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

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- 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 aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 0.2 mg/l
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:

- 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.

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

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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.

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

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

SECTION 15. REGULATORY INFORMATION

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

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.

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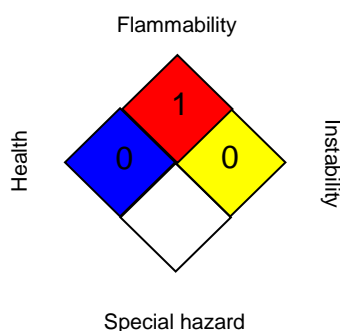
California Prop. 65

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.

SECTION 16. OTHER INFORMATION

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

To the best of our knowledge, the information contained herein is accurate and reliable as of the date of publication; however we do not assume any liability whatsoever for the accuracy and completeness of such information.

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