

SAFETY DATA SHEET

Ambicat™ LE4472

Version 14.0

Revision Date 08/30/2019

Former date 02/28/2018

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, 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.

Prepared by : Borealis, Group Product Stewardship / Maarit Vakkala

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the Hazardous Products Regulations

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.

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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.

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.

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 (EC No 215-609-9, CAS No 1333-86-4).

Hazardous components

Chemical name	CAS-No.	Concentration (%)
carbon black	1333-86-4	>= 30 - < 60
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 - < 5

Actual concentration or concentration range is withheld as a trade secret

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. Seek medical advice immediately.

Cool melted product on skin with plenty of water. Do not

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- remove solidified product.
- 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 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
- Suspected of damaging fertility or the unborn child.
- Notes to physician : Treat symptomatically.
No specific instructions needed.

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.

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.

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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.

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 contact with skin and eyes.
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. 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	CA AB OEL
		TWAEV	3.5 mg/m ³	CA QC OEL
		TWA (Inhalable)	3 mg/m ³	CA BC OEL
		TWA (Inhalable fraction)	3 mg/m ³	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	TWA	200 ppm 262 mg/m ³	CA AB OEL

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		STEL	250 ppm 328 mg/m ³	CA AB OEL
		TWA	200 ppm	CA BC OEL
		STEL	250 ppm	CA BC OEL
		TWAEV	200 ppm 262 mg/m ³	CA QC OEL
		STEV	250 ppm 328 mg/m ³	CA QC OEL
		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.

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

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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 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.

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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

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

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

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

Product:

Species: reconstructed human epidermis (RhE)
Method: OECD Test Guideline 439
Result: No skin irritation

Serious eye damage/eye irritation

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

Product:

Species: Bovine cornea
Result: No eye irritation
Method: OECD Test Guideline 437

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.

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Germ cell mutagenicity

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

Carcinogenicity

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

ACGIH Confirmed animal carcinogen with unknown relevance to humans

carbon black 1333-86-4

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

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.

Aspiration toxicity

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

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:

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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 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 considered hazardous for the environment.

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

TDG

Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

This product has been classified according to the hazard criteria of the HPR and the SDS contains all of the information required by the HPR.

Canadian PBT Chemicals : This product does not contain any components on the DSL that are classified as Persistent, Bioaccumulative and Toxic (PBT) under CEPA.

NPRI : Canadian National Pollutant Release Inventory (NPRI): No component is listed on NPRI.

SECTION 16. OTHER INFORMATION

Issued according to HPR (WHMIS 2015).

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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