

# SAFETY DATA SHEET

## Ambicat™ LE4472

Version 15.0

Revision Date 04/03/2024

Former date 08/30/2019

### SECTION 1. IDENTIFICATION

Product name : Ambicat LE4472  
Other means of identification : No data available

#### 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 : +1 866 519 4752 (3E) Access code: 336296Borealis Compounds Inc, Borealis North America HSE: 908-850-6200 for Monday – Friday 8-4:30pm excluding holidays

#### 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 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/ hearing protection.  
**Response:**  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.

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# SAFETY DATA SHEET

## Ambicat LE4472

Version 15.0

Revision Date 04/03/2024

Former date 08/30/2019

### Storage:

P405 Store locked up.

### Disposal:

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

### Other hazards

The product burns, but is not classified as flammable.

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

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.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

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

### Components

Chemical name	Common Name/Synonym	CAS-No.	Concentration (% w/w)
polyethene	polyethene	9002-88-4	$\geq 30 - < 60$ *
carbon black	carbon black	1333-86-4	$\geq 30 - < 60$ *
Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene	Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene	68610-51-5	$\geq 1 - < 5$ *
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.	Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.	85536-14-7	$\geq 1 - < 5$ *

\* 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 or decomposition products.  
Seek medical advice immediately.

In case of skin contact : 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.  
Wash off with soap and plenty of water.  
Call a physician if irritation develops or persists.

In case of eye contact : Rinse thoroughly with plenty of water, also under the eyelids.  
Get medical attention if irritation develops and persists.

# SAFETY DATA SHEET

## Ambicat LE4472

Version 15.0

Revision Date 04/03/2024

Former date 08/30/2019

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 fertility or 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.
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	:	Should not be released into the environment.  It is recommended to implement systems and practices (such as Operation Clean Sweep®) to prevent accidental release of plastics in 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. Recycle or dispose loose material properly. Do not flush into surface water or sanitary sewer system.

### SECTION 7. HANDLING AND STORAGE

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

## Ambicat LE4472

Version 15.0

Revision Date 04/03/2024

Former date 08/30/2019

- 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.  
Avoid contact with skin and eyes.
- Conditions for safe storage : Store locked up.
- 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
polyethene	9002-88-4	TWAEV (total dust)	10 mg/m <sup>3</sup>	CA QC OEL
carbon black	1333-86-4	TWA	3.5 mg/m <sup>3</sup>	CA AB OEL
		TWA (Inhalable)	3 mg/m <sup>3</sup>	CA BC OEL
		TWAEV (inhalable dust)	3 mg/m <sup>3</sup>	CA QC OEL
		TWA (Inhalable particulate matter)	3 mg/m <sup>3</sup>	ACGIH

#### 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 <sup>3</sup>	CA AB OEL
		STEL	250 ppm 328 mg/m <sup>3</sup>	CA AB OEL
		TWA	200 ppm	CA BC OEL
		STEL	250 ppm	CA BC OEL
		TWAEV	200 ppm 262 mg/m <sup>3</sup>	CA QC OEL
		STEV	250 ppm 328 mg/m <sup>3</sup>	CA QC OEL
		TWA	200 ppm	ACGIH
		STEL	250 ppm	ACGIH

- Engineering measures : Provide adequate ventilation.  
Local exhaust ventilation may be necessary.

# SAFETY DATA SHEET

## Ambicat LE4472

Version 15.0

Revision Date 04/03/2024

Former date 08/30/2019

### 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  
Hygiene measures : When using do not eat, drink or smoke.  
Wash hands before breaks and at the end of workday.

### 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 : Not applicable insoluble
- Melting point/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 / Upper flammability limit : Not applicable
- Lower explosion limit / Lower : Not applicable

# SAFETY DATA SHEET

## Ambicat LE4472

Version 15.0

Revision Date 04/03/2024

Former date 08/30/2019

flammability limit	
Vapour pressure	: Not applicable (solid)
Density	: 1.1 - 1.2 g/cm <sup>3</sup>
Bulk density	: 600 - 700 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	: No data available
Explosive properties	: Not explosive
Oxidizing properties	: The substance or mixture is not classified as oxidizing.
Particle size	: 3 - 10 mm Method: Image analysis (surface-based)

### 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 In contact with water or moisture methanol will be released.

# SAFETY DATA SHEET

## Ambicat LE4472

Version 15.0

Revision Date 04/03/2024

Former date 08/30/2019

### SECTION 11. TOXICOLOGICAL INFORMATION

#### Acute toxicity

Not classified due to lack of data.

#### Product:

Acute oral toxicity : Acute toxicity estimate: > 2,000 mg/kg  
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 2,000 mg/kg  
Method: Calculation method

#### 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**

Not classified due to lack of data.

##### **Respiratory sensitisation**

Not classified due to lack of data.

##### **Germ cell mutagenicity**

Not classified due to lack of data.

# SAFETY DATA SHEET

## Ambicat LE4472

Version 15.0

Revision Date 04/03/2024

Former date 08/30/2019

### **Carcinogenicity**

Not classified due to lack of data.

### **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**

Not classified due to lack of data.

### **STOT - repeated exposure**

Not classified due to lack of data.

### **Aspiration toxicity**

Not classified due to lack of data.

### **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) is released. Methanol: Toxic by inhalation, in contact with skin and if swallowed. 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.

Remarks : Information given is based on tests on the mixture itself. Information given is based on data of the components.

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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

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# SAFETY DATA SHEET

## Ambicat LE4472

Version 15.0

Revision Date 04/03/2024

Former date 08/30/2019

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/aquatic plants : 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: Not expected to adsorb on soil.

Remarks: The product is insoluble and sinks in water.

### Other adverse effects

#### Product:

Additional ecological information : Should not be released into the environment.

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## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

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

Check with local regulations.

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

# SAFETY DATA SHEET

## Ambicat LE4472

Version 15.0

Revision Date 04/03/2024

Former date 08/30/2019

### 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

#### Special precautions for user

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

### SECTION 15. REGULATORY INFORMATION

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

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.

### SECTION 16. OTHER INFORMATION

#### Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
CA AB OEL	:	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
CA BC OEL	:	Canada. British Columbia OEL
CA QC OEL	:	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / STEL	:	Short-term exposure limit
CA AB OEL / TWA	:	8-hour Occupational exposure limit
CA AB OEL / STEL	:	15-minute occupational exposure limit
CA BC OEL / TWA	:	8-hour time weighted average

# SAFETY DATA SHEET

## Ambicat LE4472

Version 15.0

Revision Date 04/03/2024

Former date 08/30/2019

CA BC OEL / STEL : short-term exposure limit  
CA QC OEL / TWAEV : Time-weighted average exposure value  
CA QC OEL / STEV : Short-term exposure value

AIIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECl - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Issued according to HPR (WHMIS 2015).

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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# SAFETY DATA SHEET

## Ambicat LE4472

Version 15.0

Revision Date 04/03/2024

Former date 08/30/2019

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**Borealis makes no warranties which extend beyond the description contained herein. Nothing herein shall constitute any warranty of merchantability or fitness for a particular purpose.**

**It is the customer's responsibility to inspect and test our products in order to satisfy itself as to the suitability of the products for the customer's particular purpose. The customer is responsible for the appropriate, safe and legal use, processing and handling of our products.**

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