

SAFETY DATA SHEET

Ambicat™ LE4472

Version 16.0

Revision Date:
26.04.2024

Date of last issue: 02.01.2020
Date of first issue: 02.01.2020

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product name : Ambicat LE4472

Manufacturer or supplier's details

Supplier : Borealis AG

Address : Trabrennstrasse 6-8, 1020 Vienna, Austria

Telephone : +43 1 22400 0

Emergency telephone number : +1 760 476 3962 (3E), Access code: 336296

E-mail address : sds@borealisgroup.com

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.

2. HAZARDS IDENTIFICATION

GHS Classification

Reproductive toxicity : Category 2

GHS-Labeling

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:

Ambicat is a trademark of the Borealis group.

Borealis AG | Trabrennstrasse 6-8 | 1020 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



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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 which do not result in classification

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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

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

Components

Chemical name	CAS-No.	Classification	MAC value mg/m3 / TSEL value	Concentration (% w/w)
Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene	68610-51-5	Repr.2; H361 Aquatic Chronic4; H413	No data available	>= 2,5 - < 10
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.	85536-14-7	Acute Tox.4; H302 Skin Corr.1C; H314 Eye Dam.1; H318 Aquatic Chronic3; H412	No data available	>= 1 - < 2,5

For explanation of abbreviations see section 16.

4. FIRST AID MEASURES

If inhaled : Move to fresh air in case of accidental inhalation of vapours or decomposition products.

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In case of skin contact	: Seek medical advice immediately. 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.
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.

5. FIREFIGHTING MEASURES

Flammable properties

Flash point : Not applicable (solid)
Ignition temperature : > 320 °C

Upper explosion limit / Upper flammability limit : Not applicable

Lower explosion limit / Lower flammability limit : Not applicable

Flammability (solid, gas) : The product is not flammable.

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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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.

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.
- 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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Occupational exposure limits of decomposition products

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Data Source
methanol	67-56-1	TWA	200 ppm	2006/15/EC

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			260 mg/m ³	
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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.
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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : pellets
Colour : black
Odour : acrylic-like
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)

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Flammability (solid, gas)	:	The product is not flammable.
Upper explosion limit / Upper flammability limit	:	Not applicable
Lower explosion limit / Lower flammability limit	:	Not applicable
Vapour pressure	:	Not applicable (solid)
Density	:	1,1 - 1,2 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 (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)

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

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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.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

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

Product:

Acute oral toxicity : Acute toxicity estimate: > 5.000 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.

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Respiratory sensitisation

Not classified due to lack of data.

Germ cell mutagenicity

Not classified due to lack of data.

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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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/aquatic : EC50 (Selenastrum capricornutum (fresh water algae)): > 0,2
plants : 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 : Should not be released into the environment.
information

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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.
-

14. TRANSPORT INFORMATION

ADR

Not regulated as a dangerous good

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.

Special precautions for user

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

15. REGULATORY INFORMATION

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

No data available

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16. OTHER INFORMATION

Full text of H-Statements

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H361	Suspected of damaging fertility or the unborn child.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

Full text of other abbreviations

Acute Tox.	: Acute toxicity
Aquatic Chronic	: Long-term (chronic) aquatic hazard
Eye Dam.	: Serious eye damage
Repr.	: Reproductive toxicity
Skin Corr.	: Skin corrosion

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - Australian Inventory of Industrial Chemicals; 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; 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; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - 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

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Further information

Other information : SDS According to GOST 30333-2007
Issuer :

Borealis, Group Product Stewardship

Sources of key data used to compile the Safety Data Sheet : The classification information of components is based on raw material supplier data.

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

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.

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.

No liability can be accepted in respect of the use of Borealis' products in conjunction with other materials. The information contained herein relates exclusively to our products when not used in conjunction with any third party materials.