

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Ambicat™ LE4472

Version 14.2

Revision Date: 06.03.2023

Former date: 01.11.2019

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : Ambicat LE4472

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture : Raw material for plastics industry

1.3 Details of the supplier of the safety data sheet

E-mail address : sds@borealisgroup.com

1.4 Emergency telephone number

+44 (0) 1235 239 670 (NCEC Carechem 24)

SECTION 2: Hazards identification


2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Reproductive toxicity, Category 2 H361d: Suspected of damaging the unborn child.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

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.

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



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Ambicat LE4472

Version 14.2

Revision Date: 06.03.2023

Former date: 01.11.2019

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.

Hazardous components which must be listed on the label:

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

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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.

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

3.2 Mixtures

Chemical nature : The product is a silane crosslinkable polyethylene polymer. It contains carbon black (EC No 215-609-9, CAS No 1333-86-4).

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Phenol, 4-methyl-, reaction products with dicyclopentadiene	68610-51-5 271-867-2	Repr. 2; H361d Aquatic Chronic 4;	>= 3 - < 10

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Ambicat LE4472

Version 14.2

Revision Date: 06.03.2023

Former date: 01.11.2019

and isobutylene	01-2119496062-39	H413	
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.	85536-14-7 287-494-3 01-2119490234-40	Acute Tox. 4; H302 Skin Corr. 1C; H314 Eye Dam. 1; H318 Aquatic Chronic 3; H412	>= 1 - < 2,5

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- If inhaled : Move to fresh air in case of accidental inhalation of vapours.
- 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.
- 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.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : 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

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : Treat symptomatically.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Ambicat LE4472

Version 14.2

Revision Date: 06.03.2023

Former date: 01.11.2019

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Water in spread jet, dry chemicals, foam or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Principal toxicant in the smoke is carbon monoxide.

5.3 Advice for firefighters

Special protective equipment for firefighters : Wear self-contained breathing apparatus and protective suit.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.
Use personal protective equipment.

6.2 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.

6.3 Methods and material 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.

6.4 Reference to other sections

For personal protection see section 8.
For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Avoid inhalation of dust and decomposition fumes.
Ensure adequate ventilation.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Ambicat LE4472

Version 14.2

Revision Date: 06.03.2023

Former date: 01.11.2019

Local exhaust ventilation may be necessary.
Avoid contact with skin and eyes.
Minimize dust generation and accumulation.

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.

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

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in a place accessible by authorized persons only.

Further information on storage stability : Keep in a dry place.

7.3 Specific end use(s)

Specific use(s) : Raw material for wire and cable applications.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

For national exposure limit (OEL) values, check country specific safety data sheets.

Occupational exposure limits of decomposition products

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
methanol	67-56-1	TWA	200 ppm 260 mg/m ³	2006/15/EC
Further information	Indicative, Identifies the possibility of significant uptake through the skin			

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.	Workers	Skin contact	Long-term systemic effects	170 mg/kg bw/d
	Workers	Inhalation	Long-term systemic effects, Long-term local effects	12 mg/m ³

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Ambicat LE4472

Version 14.2

Revision Date: 06.03.2023

Former date: 01.11.2019

Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene	Workers	Oral	Long-term exposure	0,8 mg/kg
Remarks:	Exposure time: 24 hrs			
	Workers	Dermal	Long-term exposure	4 mg/kg
Remarks:	Exposure time: 24 hrs			
	Workers	Inhalation	Long-term exposure	0,35 mg/m3
Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene	Workers	Oral	Long-term exposure	0,8 mg/kg
Remarks:	Exposure time: 24 hrs			
	Workers	Dermal	Long-term exposure	4 mg/kg
Remarks:	Exposure time: 24 hrs			
	Workers	Inhalation	Long-term exposure	0,35 mg/m3
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.	Workers	Skin contact	Long-term systemic effects	170 mg/kg bw/d
	Workers	Inhalation	Long-term systemic effects, Long-term local effects	12 mg/m3

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene	Sewage treatment plant	150,9 mg/l
	Sewage treatment plant	150,9 mg/l

8.2 Exposure controls

Engineering measures

Provide adequate ventilation.
Local exhaust ventilation may be necessary.

Personal protective equipment

Eye protection : Safety glasses

Use eye protection according to EN 166.

Hand protection

Material : Nitrile rubber

Remarks : Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Ambicat LE4472

Version 14.2

Revision Date: 06.03.2023

Former date: 01.11.2019

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. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Skin and body protection : Protective clothing

Respiratory protection : In case of insufficient ventilation: Respirator with ABEK-P3 filter or self-contained breathing apparatus.

Environmental exposure controls

General advice : 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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : pellets

Colour : black

Odour : odourless

Odour Threshold : Methanol:
Do NOT rely on the odour: olfactory level is above the exposure limit.

Melting point/range : 100 - 140 °C

Boiling range : Decomposes on heating.

Flammability : The product is not flammable.

Upper explosion limit / Upper flammability limit : Not applicable

Lower explosion limit / Lower flammability limit : Not applicable

Flash point : Not applicable, (solid)

Auto-ignition temperature : > 320 °C

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Ambicat LE4472

Version 14.2

Revision Date: 06.03.2023

Former date: 01.11.2019

pH	:	No data available
Viscosity		
Viscosity, kinematic	:	No data available
Solubility(ies)		
Water solubility	:	insoluble
Partition coefficient: n-octanol/water	:	Not applicable (solid)
Vapour pressure	:	Not applicable (solid)
Density	:	0,9 - 1,0 g/cm ³
Bulk density	:	600 - 700 kg/m ³ Method: ASTM D 1895
Particle size	:	3 - 10 mm Method: Image analysis (surface-based)

9.2 Other information

Explosives	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Evaporation rate	:	Not applicable (solid)

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under recommended storage conditions.

10.2 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.

10.3 Possibility of hazardous reactions

Hazardous reactions : In contact with water or moisture methanol will be released.

10.4 Conditions to avoid

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Ambicat LE4472

Version 14.2

Revision Date: 06.03.2023

Former date: 01.11.2019

Conditions to avoid : Exposure to moisture

10.5 Incompatible materials

Materials to avoid : None known.

10.6 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.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Not classified based on available information.

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

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

Product:

Acute oral 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

Not classified based on available information.

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

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

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Ambicat LE4472

Version 14.2

Revision Date: 06.03.2023

Former date: 01.11.2019

Serious eye damage/eye irritation

Not classified based on available information.

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

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

Product:

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

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Skin sensitisation

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

Skin sensitisation

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

Respiratory sensitisation

Not classified based on available information.

Respiratory sensitisation

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

Respiratory sensitisation

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

Germ cell mutagenicity

Not classified based on available information.

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

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

Carcinogenicity

Not classified based on available information.

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

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

Reproductive toxicity

Suspected of damaging the unborn child.

Suspected of damaging the unborn child.

Suspected of damaging the unborn child.

Components:

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

Effects on fertility : Test Type: Pre-/postnatal development

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Ambicat LE4472

Version 14.2

Revision Date: 06.03.2023

Former date: 01.11.2019

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

STOT - repeated exposure

Not classified based on available information.
Based on available data, the classification criteria are not met.
Based on available data, the classification criteria are not met.

Aspiration toxicity

Not classified based on available information.
Based on available data, the classification criteria are not met.
Based on available data, the classification criteria are not met.

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Further information

Product:

Remarks : However, during crosslinking reaction in combination with base resin: methanol may be released.
Methanol: Toxic by inhalation, in contact with skin and if swallowed.
Very serious irreversible effects through 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.
Carbon black has a workplace exposure limit in some European countries, but is not classified as hazardous.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Ambicat LE4472

Version 14.2

Revision Date: 06.03.2023

Former date: 01.11.2019

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.

SECTION 12: Ecological information

12.1 Toxicity

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 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.

12.2 Persistence and degradability

Product:

- Biodegradability : Remarks: Not readily biodegradable.

12.3 Bioaccumulative potential

Product:

- Bioaccumulation : Remarks: Does not accumulate in organisms.

12.4 Mobility in soil

Product:

- Mobility : Remarks: The product is insoluble and floats on water., Not expected to adsorb on soil.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Ambicat LE4472

Version 14.2

Revision Date: 06.03.2023

Former date: 01.11.2019

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Product:

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

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : 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.

SECTION 14: Transport information

14.1 UN number or ID number

Not regulated as a dangerous good

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Ambicat LE4472

Version 14.2

Revision Date: 06.03.2023

Former date: 01.11.2019

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

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

14.7 Maritime transport in bulk according to IMO instruments

Remarks : Not applicable

SECTION 15: Regulatory information

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59) : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast) : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.
Not applicable

Other regulations:

Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Ambicat LE4472

Version 14.2

Revision Date: 06.03.2023

Former date: 01.11.2019

15.2 Chemical safety assessment

no

SECTION 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.
H361d	:	Suspected of damaging 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
2006/15/EC	:	Europe. Indicative occupational exposure limit values
2006/15/EC / TWA	:	Limit Value - eight hours

Further information

Other information : Issued according to Regulation (EC) No 1907/2006, Annex II, and its amendments.
Changes since the last version are highlighted in the margin.
This version replaces all previous versions.

Issuer : Borealis, Group Product Stewardship / Robert Lucas

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

Classification of the mixture:

Repr. 2 H361d

Classification procedure:

Calculation method

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Ambicat LE4472

Version 14.2

Revision Date: 06.03.2023

Former date: 01.11.2019

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.