

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758

Ambicat™ LE4476

Version 18.0

Revision Date: 28.11.2022

Date of last issue: 12.04.2019

Date of first issue: 22.06.2011

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

1.1 Product identifier

Trade name : Ambicat LE4476

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

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

Recommended restrictions on use : Use only according to our recommendations.

1.3 Details of the supplier of the safety data sheet

||| : Borealis UK Ltd
One St Peters Square, M2 3DE Manchester, United Kingdom

E-mail address : sds@borealisgroup.com

1.4 Emergency telephone number

In an emergency, call NHS 111 or contact a doctor.
+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) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

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

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

Ambicat is a trademark of the Borealis group.

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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/ hearing protection.

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.

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. 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.

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SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : The product is a silane crosslinkable polyethylene copolymer.

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene	68610-51-5 271-867-2 01-2119496062-39	Repr. 2; H361d Aquatic Chronic 4; H413	>= 3 - < 10
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.
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.
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).

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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

Risks : Suspected of damaging the unborn child.
Suspected of damaging the unborn child.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

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

Unsuitable extinguishing media : High volume water jet

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.

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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.

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.
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. |

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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

Contains no substances with occupational exposure limit values.

Occupational exposure limits of decomposition products

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
methanol	67-56-1	TWA	200 ppm 266 mg/m3	GB EH40
	Further information: Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
		STEL	250 ppm 333 mg/m3	GB EH40
	Further information: Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
methanol	67-56-1	TWA	200 ppm 260 mg/m3	2006/15/EC
	Further information: Indicative, Identifies the possibility of significant uptake through the skin			

Derived No Effect Level (DNEL):

Substance name	End Use	Exposure routes	Potential health effects	Value
Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene	Workers	Oral	Long-term exposure	0,8 mg/kg
	Exposure time: 24 hrs			

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	Workers	Dermal	Long-term exposure	4 mg/kg
	Exposure time: 24 hrs			
	Workers	Inhalation	Long-term exposure	0,35 mg/m ³
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

Predicted No Effect Concentration (PNEC):

Substance name	Environmental Compartment	Value
Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene	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
- 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.
- Skin and body protection : Protective clothing
- Respiratory protection : In case of dust development use dust mask.
In the case of vapour formation use a respirator with an approved filter.

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

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plastics in to the environment.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	pellets
Colour	:	beige
Odour	:	acrylic-like
Odour Threshold	:	>= 0,00096 ppm Butyl acrylate Methanol: Do NOT rely on the odour: olfactory level is above the exposure limit.
pH	:	No data available
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 flammability limit	:	Not applicable
Vapour pressure	:	Not applicable (solid)
Density	:	0,9 - 1,0 g/cm ³

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Bulk density	:	500 - 600 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	:	Not applicable
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

9.2 Other information

Particle size	:	3 - 10 mm Method: Image analysis (surface-based)
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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

Conditions to avoid : Exposure to moisture

10.5 Incompatible materials

Materials to avoid : None known.

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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 toxicological effects

Acute toxicity

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

Product:

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

Serious eye damage/eye irritation

Product:

Species : Bovine cornea
Method : OECD Test Guideline 437

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Result : No eye irritation

Reproductive toxicity

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

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.

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.

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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.

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 Other adverse effects

Product:

Endocrine disrupting potential : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation

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(EU) 2017/2100 or Commission Regulation (EU) 2018/605 at
levels of 0.1% or higher.

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

Not regulated as a dangerous good

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 Transport in bulk according to Annex II of Marpol and the IBC Code

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Remarks : Not applicable

SECTION 15: Regulatory information

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

Relevant EU provisions transposed through retained EU law

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
GB EH40 : UK. EH40 WEL - Workplace Exposure Limits
2006/15/EC / TWA : Limit Value - eight hours
GB EH40 / TWA : Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL : Short-term exposure limit (15-minute reference period)

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; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated

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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; SVHC - Substance of very high concern; 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

Classification of the mixture:

Repr. 2

H361d

Classification procedure:

Calculation method

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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.

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.