

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Visico™ LE4431M

Version 19.1

Revision Date: 06.03.2023

Former date: 22.11.2021

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

1.1 Product identifier

Trade name : Visico LE4431M

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

Supplier : Borealis AG
Trabrennstrasse 6-8, 1020 Vienna, Austria
Telephone: +43 1 22400 0

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)

| | |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| Long-term (chronic) aquatic hazard, Category 3 | H412: Harmful to aquatic life with long lasting effects. |
| Specific target organ toxicity - repeated exposure, Category 2, Immune system | H373: May cause damage to organs through prolonged or repeated exposure. |
| Reproductive toxicity, Category 1B | H360D: May damage the unborn child. |
| Skin sensitisation, Category 1 | H317: May cause an allergic skin reaction. |

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Visico 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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Hazard pictograms

:



Signal word

:

Danger

Hazard statements

:

H317 May cause an allergic skin reaction.
H360D May damage the unborn child.
H373 May cause damage to organs () through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

:

Prevention:

P201 Obtain special instructions before use.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

Response:

P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

Hazardous components which must be listed on the label:

dioctyltin dilaurate
6,6'-di-tert-butyl-4,4'-thiodi-m-cresol

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.

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.

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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) |
|-----------------------------------------|-------------------------------------------------------------------|------------------------------------------------------------------------------|--------------------------|
| dioctyltin dilaurate | 3648-18-8 222-883-3 050-031-00-9 UK-20-7333232785-4-0000 | STOT RE 1; H372 Repr. 1B; H360D | $\geq 1 - < 10$ |
| 6,6'-di-tert-butyl-4,4'-thiodi-m-cresol | 96-69-5 202-525-2 01-2119514452-49 | Aquatic Acute 1; H400 Aquatic Chronic 1; H410 Skin Sens. 1; H317 | $\geq 1 - < 2,5$ |

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 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.

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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

Risks : May cause an allergic skin reaction.
May damage the unborn child.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.
No specific instructions needed.

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.

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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment.
Ensure adequate ventilation.

6.2 Environmental precautions

It is recommended to implement systems and practices (such as Operation Clean Sweep®) to prevent accidental release of plastics in to the environment.

Should not be released into 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 : 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.

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.

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

Handle in accordance with good industrial hygiene and safety practice.

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7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store locked up.

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 |
|-----------------------------------------|---------|-----------------|----------------------------|----------------|
| 6,6'-di-tert-butyl-4,4'-thiodi-m-cresol | Workers | Skin contact | Long-term systemic effects | 4,2 mg/kg bw/d |

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

| Substance name | Environmental Compartment | Value |
|-----------------------------------------|---------------------------|---------------|
| 6,6'-di-tert-butyl-4,4'-thiodi-m-cresol | Fresh water | 0,00016 mg/l |
| | Marine water | 0,000016 mg/l |
| | Intermittent use/release | 0,0016 mg/l |
| | Fresh water sediment | 6,52 mg/kg |
| | Marine sediment | 0,652 mg/kg |
| | Soil | 1,3 mg/kg |

8.2 Exposure controls

Engineering measures

Provide adequate ventilation.
Local exhaust ventilation may be necessary.

Personal protective equipment

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- Eye protection : Safety glasses
Use eye protection according to EN 166.
- Hand protection
Material : butyl-rubber
Break through time : >= 480 min
Glove thickness : 0,5 mm
Material : Fluorinated rubber
Break through time : >= 480 min
Glove thickness : 0,4 mm
- 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. Protective gloves complying with EN 374.
- Skin and body protection : Protective clothing
- Respiratory protection : In case of insufficient ventilation: Respirator with ABEK-P3 filter or self-contained breathing apparatus.
In case of dust development use dust mask.
- Protective measures : Appropriate personal protective equipment (PPE) shall be worn in accordance with Regulation (EU) 2016/425.
- Environmental exposure controls**
General advice : It is recommended to implement systems and practices (such as Operation Clean Sweep®) to prevent accidental release of plastics in to the environment.
Should not be released into the environment.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Physical state : pellets
- Colour : natural colour
- Odour : odourless
- Odour Threshold : Methanol:
Do NOT rely on the odour: olfactory level is above the
-

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| | |
|--------------------------------------------------|-----------------------------------------------------|
| | 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 |
| pH | : Not applicable insoluble |
| Viscosity | |
| Viscosity, kinematic | : No data available |
| Solubility(ies) | |
| Water solubility | : insoluble |
| Partition coefficient: n-octanol/water | : Not applicable insoluble |
| Vapour pressure | : Not applicable (solid) |
| Density | : 0,9 - 1,0 g/cm ³ |
| Bulk density | : 500 - 600 kg/m ³ |
| 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 |

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(solid)

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under recommended storage conditions.

10.2 Chemical stability

The product is a stable thermoplastic, with no chemical reactivity.

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
Extremes of temperature and direct sunlight.

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

SECTION 11: Toxicological information

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

Acute toxicity

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

Skin corrosion/irritation

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

Serious eye damage/eye irritation

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

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Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

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

Germ cell mutagenicity

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

Carcinogenicity

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

Reproductive toxicity

May damage the unborn child.

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.

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 : Information given is based on data of the components.

SECTION 12: Ecological information

12.1 Toxicity

Components:

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6,6'-di-tert-butyl-4,4'-thiodi-m-cresol:

Toxicity to fish : LC50 (fathead minnow (*Pimephales promelas*)): 0,36 mg/l
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (*Daphnia magna* (Water flea)): 0,16 mg/l
aquatic invertebrates Exposure time: 48 h

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: Not expected to adsorb on soil.

Remarks: The product is insoluble and floats on water.

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 : Should not be released into the environment.

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information

SECTION 13: Disposal considerations

13.1 Waste treatment methods

- Product : 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.

SECTION 14: Transport information

14.1 UN number or ID 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 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

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SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : dioctyltin dilaurate

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:

Chemical qualifying for PIC notification.
(dioctyltin dilaurate)

15.2 Chemical safety assessment

no

SECTION 16: Other information

Full text of H-Statements

H317 : May cause an allergic skin reaction.
H360D : May damage the unborn child.
H372 : Causes damage to organs through prolonged or repeated exposure.
H400 : Very toxic to aquatic life.
H410 : Very toxic to aquatic life with long lasting effects.
H331 : Toxic if inhaled.
H311 : Toxic in contact with skin.
H301 : Toxic if swallowed.
H370 : Causes damage to organs.
H225 : Highly flammable liquid and vapour.

Full text of other abbreviations

Aquatic Acute : Short-term (acute) aquatic hazard
Aquatic Chronic : Long-term (chronic) aquatic hazard
Repr. : Reproductive toxicity
Skin Sens. : Skin sensitisation
STOT RE : Specific target organ toxicity - repeated exposure
2006/15/EC : Europe. Indicative occupational exposure limit values
2006/15/EC / TWA : Limit Value - eight hours

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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 / Sandra Kaufmann

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

Classification of the mixture:

| | |
|-------------------|-------|
| Aquatic Chronic 3 | H412 |
| STOT RE 2 | H373 |
| Repr. 1B | H360D |
| Skin Sens. 1 | H317 |

Classification procedure:

| |
|--------------------|
| Calculation method |
| Calculation method |
| Calculation method |
| Calculation method |

Disclaimer

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