according to Regulation (EC) No. 1907/2006

Visico™ LE4437

Version 5.0 Revision Date: 30.12.2021 Former date: 07.10.2016

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

1.1 Product identifier

Trade name : Visico LE4437

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

Use of the : Raw material for plastics industry 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)

Skin sensitisation, Category 1 H317: May cause an allergic skin reaction.

Reproductive toxicity, Category 1B H360D: May damage the unborn child.

Specific target organ toxicity - repeated

exposure, Category 2, Immune system

prolonged or repeated exposure.

Long-term (chronic) aquatic hazard,

Category 3

H412: Harmful to aquatic life with long lasting

H373: May cause damage to organs through

effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms





Signal word Danger

Hazard statements May cause an allergic skin reaction. H317

H360D May damage the unborn child.

Visico is a trademark of the Borealis group.

Borealis AG | Wagramer Strasse 17-19 | 1220 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



according to Regulation (EC) No. 1907/2006

Visico LE4437

Version 5.0 Revision Date: 30.12.2021 Former date: 07.10.2016

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

1h-benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-ar-methyl-

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 catalyst masterbatch: methanol (Flam. Liq. 2; H225, Acute Tox. 3; H301, Acute Tox. 3; H311, Acute Tox. 3; H331, STOT SE 1; H370 - see chapter 16) may be released.

In contact with water or moisture methanol will be released.



according to Regulation (EC) No. 1907/2006

Visico LE4437

Version 5.0 Revision Date: 30.12.2021 Former date: 07.10.2016

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : The product is a polyethylene copolymer.

It contains stabilisers.

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	Repr. 1B; H360D STOT RE 1; H372	>= 1 - < 2,5
1h-benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-ar-methyl-	94270-86-7 01-2119982395-25	Skin Irrit. 2; H315 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 2; H410	>= 1 - < 2,5
6,6'-di-tert-butyl-4,4'-thiodi-m- cresol	96-69-5 202-525-2 01-2119514452-49	Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 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.

Wash off with soap and plenty of water.

Call a physician if irritation develops or persists.



Visico LE4437

Version 5.0 Revision Date: 30.12.2021 Former date: 07.10.2016

Cool melted product on skin with plenty of water. Do not

remove solidified product.

In case of eye contact : If eye irritation persists, consult a specialist.

If swallowed : If swallowed, rinse mouth with water (only if the person is

conscious).

Seek medical advice immediately.

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

Inhalation may provoke the following symptoms:

Headache Irritation

Symptoms of poisoning, prolonged exposure (methanol):

Blindness

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.



according to Regulation (EC) No. 1907/2006

Visico LE4437

Version 5.0 Revision Date: 30.12.2021 Former date: 07.10.2016

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

No specific instructions needed.

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.

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.

Principal toxicant in the smoke is carbon monoxide.

5.3 Advice for firefighters

for firefighters

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

Wear self-contained breathing apparatus and protective suit.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment.

Ensure adequate ventilation.

Ensure adequate ventilation.

Use personal protective equipment.

6.2 Environmental precautions

Avoid release to 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.



according to Regulation (EC) No. 1907/2006

Visico LE4437

Version 5.0 Revision Date: 30.12.2021 Former date: 07.10.2016

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.

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.

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.

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.

When using do not eat, drink or smoke.

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.

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

All equipment shall be grounded.



according to Regulation (EC) No. 1907/2006

Visico LE4437

Version 5.0 Revision Date: 30.12.2021 Former date: 07.10.2016

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. Wash hands before breaks and immediately after

handling the product.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

: Store locked up.

Safety aspects do not require any special precautions in terms

of storage.

Further information on storage stability

Keep in a dry place.

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

Occupational exposure limits of decomposition products

Components	CAS-No.	Value type (Form	Control parameters	Basis
		of exposure)		
methanol	67-56-1	TWA	200 ppm	2006/15/EC
			260 mg/m3	
Further information	Indicative, Identifies the possibility of significant uptake through the skin			
methanol	67-56-1	TWA	200 ppm	2006/15/EC
			260 mg/m3	
Further information	ation 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



according to Regulation (EC) No. 1907/2006

Visico LE4437

Version 5.0 Revision Date: 30.12.2021 Former date: 07.10.2016

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-	Fresh water	0,00016 mg/l
cresol		_
	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.

Provide adequate ventilation.

Local exhaust ventilation may be necessary.

Personal protective equipment

Eye protection : Safety glasses

Tightly fitting safety goggles

Use eye protection according to EN 166.

Hand protection

Remarks : The selected protective gloves have to satisfy the

specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it. 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

Long sleeved clothing

Respiratory protection : In case of insufficient ventilation: Respirator with ABEK-P3

filter or self-contained breathing apparatus.

Protective measures : Appropriate personal protective equipment (PPE) shall be

worn in accordance with Regulation (EU) 2016/425.

Environmental exposure controls

General advice : Avoid release to the environment.



according to Regulation (EC) No. 1907/2006

Visico LE4437

Version 5.0 Revision Date: 30.12.2021 Former date: 07.10.2016

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.

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 : natural colour

Odour : odourless

Melting range : 100 - 140 °C

Boiling range : Decomposes on heating.

Not applicable

Flammability : The product is not flammable.

The product is not flammable.

Upper explosion limit / Upper

flammability limit

Not applicable

Not applicable

Lower explosion limit / Lower

flammability limit

Not applicable

Not applicable

Flash point : Not applicable, (solid)

Not applicable

Auto-ignition temperature : > 320 °C

pH : Not applicable insoluble

No data available



according to Regulation (EC) No. 1907/2006

Visico LE4437

Version 5.0 Revision Date: 30.12.2021 Former date: 07.10.2016

Viscosity

Viscosity, kinematic : No data available

Not applicable

Solubility(ies)

Water solubility : insoluble

insoluble

Partition coefficient: n-

octanol/water

Not applicable

insoluble

Not applicable

Vapour pressure : Not applicable

(solid)

Not applicable

Density : 0,9 - 1,0 g/cm³

Bulk density : 500 - 600 kg/m³

Relative vapour density : Not applicable

9.2 Other information

Explosives : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

The substance or mixture is not classified as oxidizing.

Evaporation rate : Not applicable

(solid)

Not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under recommended storage conditions.



according to Regulation (EC) No. 1907/2006

Visico LE4437

Version 5.0 Revision Date: 30.12.2021 Former date: 07.10.2016

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.

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.

None known.

10.4 Conditions to avoid

Conditions to avoid : Exposure to moisture

Extremes of temperature and direct sunlight.

Exposure to moisture

10.5 Incompatible materials

Materials to avoid : None known.

None known.

10.6 Hazardous decomposition products

Under fire conditions:

Carbon monoxide

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

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.



according to Regulation (EC) No. 1907/2006

Visico LE4437

Version 5.0 Revision Date: 30.12.2021 Former date: 07.10.2016

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.

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

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

Product:

Remarks : Personnel sensitised to this substance should not be allowed

to handle the product.

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



according to Regulation (EC) No. 1907/2006

Visico LE4437

Version 5.0 Revision Date: 30.12.2021 Former date: 07.10.2016

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.

Remarks : Repeated or prolonged skin contact may cause allergic

reactions with susceptible persons.

SECTION 12: Ecological information

12.1 Toxicity

Components:

1h-benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-ar-methyl-:

Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): 1,3 mg/l

Exposure time: 96 h Test Type: static test

Toxicity to daphnia and other

aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): 2,05 mg/l

Exposure time: 48 h Test Type: static test

Toxicity to algae/aquatic

plants

: EC50 (Desmodesmus subspicatus (green algae)): 0,976 mg/l

Exposure time: 72 h

Test Type: Growth inhibition

EC10 (Desmodesmus subspicatus (green algae)): 0,658 mg/l

Exposure time: 72 h

Test Type: Growth inhibition

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

aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): 0,16 mg/l

Exposure time: 48 h



according to Regulation (EC) No. 1907/2006

Visico LE4437

Version 5.0 Revision Date: 30.12.2021 Former date: 07.10.2016

12.2 Persistence and degradability

Product:

Biodegradability : Remarks: Not readily biodegradable.

Remarks: Not readily biodegradable.

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: Does not accumulate in organisms.

Remarks: No data available

12.4 Mobility in soil

Product:

Mobility : Remarks: Not expected to adsorb on soil.

Remarks: Not applicable

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.

The product is classified as dangerous for the environment:



according to Regulation (EC) No. 1907/2006

Visico LE4437

Version 5.0 Revision Date: 30.12.2021 Former date: 07.10.2016

However, as the chemicals are embedded in a solid polymer, exposure is unlikely, unless the polymer is processed in a way that makes such exposure possible.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Dispose of contents/ container to an approved waste disposal

plant.

Check with local regulations.

Dispose of as hazardous waste in compliance with local and

national regulations.

Contaminated packaging : Dispose of as unused product.

Empty containers should be taken to an approved waste

handling site for recycling or disposal.

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



according to Regulation (EC) No. 1907/2006

Visico LE4437

Version 5.0 Revision Date: 30.12.2021 Former date: 07.10.2016

SDS: The product is not regulated by ADR/RID, IMDG or IATA.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

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 : dioctyltin dilaurate the market and use of certain dangerous substances, mixtures and articles (Annex XVII)

Other regulations:

Chemical qualifying for PIC notification. (dioctyltin dilaurate)

15.2 Chemical safety assessment

no

SECTION 16: Other information

Full text of H-Statements

H315	: Causes skin irritation.
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.
H317	: May cause an allergic skin reaction.
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.
H400	: Very toxic to aquatic life.
H410	: Very toxic to aquatic life with long lasting effects.
H413	: May cause long lasting harmful effects to aquatic life.



according to Regulation (EC) No. 1907/2006

Visico LE4437

Version 5.0 Revision Date: 30.12.2021 Former date: 07.10.2016

Full text of other abbreviations

Aquatic Acute : Short-term (acute) aquatic hazard Aquatic Chronic : Long-term (chronic) aquatic hazard

Repr. : Reproductive toxicity
Skin Irrit. : Skin irritation
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

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 / Niina Kerttula

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: Classification procedure:

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



according to Regulation (EC) No. 1907/2006

Visico LE4437

Version 5.0 Revision Date: 30.12.2021 Former date: 07.10.2016

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.

