Visico™ LE4437

Version 6.0 Revision Date 12/30/2021 Former date 08/21/2019

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Visico LE4437

Manufacturer or supplier's details

: Borealis Compounds Inc

176 Thomas Road, NJ 07865 Port Murray, United States of

America (USA)

Telephone: +1 908 850 6200

E-mail address : sds@borealisgroup.com

Emergency telephone

number

Borealis Compounds Inc, Borealis North America HSE: 908-850-6200 for Monday – Friday 8-4:30pm excluding holidays +1 215 207 0061 (regional number, NCEC Carechem 24)

Recommended use of the chemical and restrictions on use

Recommended use : Raw material for plastics industry

Raw material for plastics industry

Restrictions on use : Use only according to our recommendations.

Use only according to our recommendations.

Prepared by

Borealis, Group Product Stewardship / Niina Kerttula

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the Hazardous Products Regulations

Skin sensitisation : Category 1

Reproductive toxicity : Category 1B

Specific target organ toxicity

- repeated exposure

: Category 1 (Immune system)

GHS label elements

Hazard pictograms





Signal word : Danger

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Hazard statements : H317 May cause an allergic skin reaction.

H360D May damage the unborn child.

H372 Causes damage to organs (Immune system) through

prolonged or repeated exposure.

Precautionary statements : Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read

and understood.

P260 Do not breathe dust.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product. P272 Contaminated work clothing should not be allowed out of

the workplace.

P280 Wear protective gloves/ protective clothing/ eye protection/

face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of water.

P308 + P313 IF exposed or concerned: Get medical advice/

attention.

P333 + P313 If skin irritation or rash occurs: Get medical advice/

attention.

P362 + P364 Take off contaminated clothing and wash it before

reuse.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste

disposal plant.

Other hazards

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.

In contact with water or moisture methanol will be released.

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.

The product burns, but is not classified as flammable.

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.



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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Mixture

Chemical nature : The product is a polyethylene copolymer.

It contains stabilisers.

Hazardous components

Chemical name	CAS-No.	Concentration (%)
dioctyltin dilaurate	3648-18-8	>= 1 - < 5
1h-benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-ar-methyl-	94270-86-7	>= 1 - < 5
6,6'-di-tert-butyl-4,4'-thiodi-m-cresol	96-69-5	>= 1 - < 5
zinc dioctadecanoate	557-05-1	>= 1 - < 5

Actual concentration or concentration range is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

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

decomposition products.

Seek medical advice immediately.

Move to fresh air.

If symptoms persist, call a physician.

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.

Wash off with soap and plenty of water.

Call a physician if irritation develops or persists.

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

remove solidified product.

In case of eye contact : Rinse thoroughly with plenty of water, also under the eyelids.

Get medical attention if irritation develops and persists.

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



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conscious).

Seek medical advice immediately.

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

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

May cause an allergic skin reaction. May damage fertility or the unborn child.

Causes damage to organs through prolonged or repeated

exposure.

Protection of first-aiders : No special precautions are necessary for first aid responders.

Notes to physician : Treat symptomatically.

No specific instructions needed.

No specific instructions needed.

SECTION 5. FIREFIGHTING MEASURES



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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

High volume water jet

Specific hazards during

firefighting

Principal toxicant in the smoke is carbon monoxide.

Principal toxicant in the smoke is carbon monoxide.

Special protective equipment :

for firefighters

Wear self-contained breathing apparatus and protective suit.

Wear self-contained breathing apparatus and protective suit.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.

Ensure adequate ventilation. Ensure adequate ventilation.

Use personal protective equipment.

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.

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.

Vacuum or sweep up spill.

All spill of material must be removed immediately to prevent

slipping accidents.



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SECTION 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.

Dust from the product gives a potential risk for dust explosion. All equipment shall be grounded.

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.

Conditions for safe storage

: 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.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
dioctyltin dilaurate	3648-18-8	TWA	0.1 mg/m3 (Tin)	CA AB OEL
		STEL	0.2 mg/m3 (Tin)	CA AB OEL
		TWAEV	0.1 mg/m3 (Tin)	CA QC OEL
		STEV	0.2 mg/m3	CA QC OEL



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	1		(Tin)	
		TWA	0.1 mg/m3 (Tin)	CA BC OEL
		STEL	0.2 mg/m3 (Tin)	CA BC OEL
		TWA	0.1 mg/m3 (Tin)	CA ON OEL
		TWA	0.1 mg/m3 (Tin)	ACGIH
		STEL	0.2 mg/m3 (Tin)	ACGIH
6,6'-di-tert-butyl-4,4'-thiodi-m-cresol	96-69-5	TWA	10 mg/m3	CA AB OEL
		TWA (Inhalable)	1 mg/m3	CA BC OEL
		TWAEV (inhalable dust)	1 mg/m3	CA QC OEL
		TWA (Inhalable particulate matter)	1 mg/m3	ACGIH
zinc dioctadecanoate	557-05-1	TWA	10 mg/m3	CA AB OEL
		TWA (Total dust)	10 mg/m3	CA BC OEL
		TWA (respirable dust fraction)	3 mg/m3	CA BC OEL
		STEL (Total dust)	20 mg/m3	CA BC OEL
		TWÁEV	10 mg/m3	CA QC OEL
		TWA (Inhalable particulate matter)	10 mg/m3	ACGIH
		TWA (Respirable particulate matter)	3 mg/m3	ACGIH

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.

Occupational exposure limits of decomposition products

	•	•		
Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
methanol	67-56-1	TWA	200 ppm 262 mg/m3	CA AB OEL
		STEL	250 ppm 328 mg/m3	CA AB OEL

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		TWA	200 ppm	CA BC OEL
		STEL	250 ppm	CA BC OEL
		TWAEV	200 ppm	CA QC OEL
			262 mg/m3	
		STEV	250 ppm	CA QC OEL
			328 mg/m3	
		TWA	200 ppm	ACGIH
		STEL	250 ppm	ACGIH
methanol	67-56-1	TWA	200 ppm	CA AB OEL
			262 mg/m3	
		STEL	250 ppm	CA AB OEL
			328 mg/m3	
		TWA	200 ppm	CA BC OEL
		STEL	250 ppm	CA BC OEL
		TWAEV	200 ppm	CA QC OEL
			262 mg/m3	
		STEV	250 ppm	CA QC OEL
			328 mg/m3	
		TWA	200 ppm	ACGIH
		STEL	250 ppm	ACGIH

Engineering measures

: Provide adequate ventilation.

Local exhaust ventilation may be necessary.

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.

In case of insufficient ventilation:

Effective dust mask

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.



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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

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.

Eye protection : Safety glasses

Tightly fitting safety goggles

Skin and body protection : Protective clothing

Long sleeved clothing

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

oractice.

Wash hands before breaks and immediately after handling

the product.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : pellets

Colour : natural colour

Odour : odourless

pH : Not applicable insoluble



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No data available

Melting range : 100 - 140 °C

Boiling range : Decomposes on heating.

Not applicable

Flash point : Not applicable (solid)

Not applicable

Evaporation rate : Not applicable (solid)

Not applicable

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

The product is not flammable.

Upper explosion limit : Not applicable

Not applicable

Lower explosion limit : Not applicable

Not applicable

Vapour pressure : Not applicable (solid)

Not applicable

Relative vapour density : Not applicable

Density : 0.9 - 1.0 g/cm³

Bulk density : 500 - 600 kg/m³

Solubility(ies)

Water solubility : insoluble

insoluble

Partition coefficient: n-

octanol/water

: Not applicable insoluble

Not applicable

Auto-ignition temperature : > 320 °C

Viscosity



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Viscosity, kinematic : No data available

Not applicable

Explosive properties : Not explosive

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

The substance or mixture is not classified as oxidizing.

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Stable under recommended storage conditions.

Stable under recommended storage conditions.

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.

Possibility of hazardous

reactions

In contact with water or moisture methanol will be released.

None known.

Conditions to avoid : Exposure to moisture

Extremes of temperature and direct sunlight.

Exposure to moisture

Incompatible materials : None known.

None known.

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



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> 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

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.

Germ cell mutagenicity

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

Carcinogenicity

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

ACGIH No component of this product present at levels greater than or

equal to 0.1% is identified as a carcinogen or potential

carcinogen by ACGIH.

Reproductive toxicity

May damage fertility or the unborn child.

STOT - single exposure

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

STOT - repeated exposure

Causes damage to organs (Immune system) through prolonged or repeated exposure.

Aspiration toxicity

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



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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.

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. Causes damage to organs.

Remarks: 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.

Remarks: 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.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

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 : 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



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Persistence and degradability

Product:

Biodegradability : Remarks: Not readily biodegradable.

Remarks: Not readily biodegradable.

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: Does not accumulate in organisms.

Remarks: No data available

Mobility in soil

Product:

Mobility : Remarks: Not expected to adsorb on soil.

Remarks: Not applicable

Other adverse effects

Product:

Additional ecological

information

: Should not be released into the environment.

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.

Should not be released into the environment.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : 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



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handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

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.

National Regulations

TDG

Not regulated as a dangerous good

TDG

Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

This product has been classified according to the hazard criteria of the HPR and the SDS contains all of the information required by the HPR.

Canadian PBT Chemicals : This product does not contain any components on the DSL

that are classified as Persistent, Bioaccumulative and Toxic

(PBT) under CEPA.

NPRI

NPRI Components : zinc compounds

SECTION 16. OTHER INFORMATION

Changes since the last version are highlighted in the margin. This version replaces all previous versions.



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Sources of key data used to compile the Safety Data

Sheet

The classification information of components is based on raw

material supplier data.

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