Visico™ I F4438

ersion 5.0	Revision Date 04/04/2024	Former date 11/22/202
ECTION 1. IDENTIFICATION		
Product name	: Visico LE4438	
Manufacturer or supplier	's details	
Supplier	: Borealis Compounds Inc 176 Thomas Road, NJ 07865 America (USA) Telephone: +1 908 850 6200	Port Murray, United States of
E-mail address	: <u>sds@borealisgroup.com</u>	
Emergency telephone number	+1 866 519 4752 (3E) Access Compounds Inc, Borealis Nort for Monday – Friday 8-4:30pm	th America HSE: 908-850-6200

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accore 1910.1200)	dan	ce with the OSHA Hazard Communication Standard (29 CFR
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
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.

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	P260 Do not breathe dust. P264 Wash skin thoroughly after h P270 Do not eat, drink or smoke w P272 Contaminated work clothing the workplace. P280 Wear protective gloves/ prote face protection.	hen using this product. must not be allowed out of	
	Response: P302 + P352 IF ON SKIN: Wash w P308 + P313 IF exposed or conce attention. P333 + P313 If skin irritation or ras attention. P363 Wash contaminated clothing	rned: Get medical advice/ sh occurs: Get medical advice/	
	Storage: P405 Store locked up.		
	Disposal:		
	P501 Dispose of contents/ contain disposal plant.	er to an approved waste	
Other hazards Warning! May form combustible dust concentrations in air (during processing). The product burns, but is not classified as flammable. 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.			

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture	: Mixture	
Chemical nature	•	duct is a polyethylene copolymer. ins stabilisers.

Components

Chemical name	CAS-No.	Concentration (% w/w)
dioctyltin dilaurate	3648-18-8	>= 1 - < 5
6,6'-di-tert-butyl-4,4'-thiodi-m-cresol	96-69-5	>= 1 - < 2.5
zinc dioctadecanoate	557-05-1	>= 1 - < 5

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.
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.

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	Obtain medical attention. Wash off with soap and plenty of wa Call a physician if irritation develops	
In case of eye contact	 Rinse thoroughly with plenty of wate Get medical attention if irritation de 	er, also under the eyelids.
If swallowed	: If swallowed, rinse mouth with wate conscious). Seek medical advice immediately.	
Most important symptoms and effects, both acute and delayed	 Inhalation of dust may irritate the reprolonged inhalation of high doses may give headache or irritation of the Symptoms of poisoning (methanol): Daze Dizziness Nausea Abdominal pain Respiratory disorders Symptoms of poisoning, prolonged Blindness May cause an allergic skin reaction May damage the unborn child. Causes damage to organs through exposure. May cause an allergic skin reaction May damage the unborn child. Causes damage to organs through exposure. 	of decomposition products ne respiratory tract. exposure (methanol): prolonged or repeated
Notes to physician	exposure. : Treat symptomatically. No specific instructions needed.	

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media Unsuitable extinguishing media	:	Water in spread jet, dry chemicals, foam or carbon dioxide. High volume water jet
Specific hazards during firefighting	:	Principal toxicant in the smoke is carbon monoxide.
		Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
Special protective equipment for firefighters	:	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.
Environmental precautions	:	It is recommended to implement systems and practices (such as Operation Clean Sweep®) to prevent accidental release of



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Methods and materials for containment and cleaning up	:	plastics in to the environment. Should not be released into the environ Dust deposits should not be allowed to surfaces, as these may form an explose released into the atmosphere in sufficien Non-sparking tools should be used. Vacuum or sweep up spill. All spill of material must be removed in slipping accidents. Recycle or dispose loose material prop Do not flush into surface water or sanit	o accumulate on sive mixture if they are ent concentration. nmediately to prevent perly.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Dust from the product gives a potential risk for dust explosion. Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. 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.
Conditions for safe storage Further information on storage stability	:	

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
dioctyltin dilaurate	3648-18-8	TWA	0.1 mg/m3 (Tin)	OSHA Z-1
		TWA	0.1 mg/m3 (Tin)	ACGIH
		STEL	0.2 mg/m3 (Tin)	ACGIH
		TWA	0.1 mg/m3 (Tin)	OSHA P0
		TWA	0.1 mg/m3 (Tin)	NIOSH REL
6,6'-di-tert-butyl-4,4'-thiodi-m-	96-69-5	TWA	5 mg/m3	NIOSH REL

Components with workplace control parameters

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1 .	I		1	I
cresol		(Respirable)		
		TWA (total)	10 mg/m3	NIOSH REL
		TWA (total	15 mg/m3	OSHA Z-1
		dust)		
		TWA	5 mg/m3	OSHA Z-1
		(respirable		
		fraction)		
		TWA	1 mg/m3	ACGIH
		(Inhalable		
		particulate		
		matter)		
		TWA (Total	10 mg/m3	OSHA P0
		dust)		
		TWÁ	5 mg/m3	OSHA P0
		(respirable	5	
		dust fraction)		
zinc dioctadecanoate	557-05-1	TWA	5 mg/m3	NIOSH REL
		(Respirable)		
		TWA (total)	10 mg/m3	NIOSH REL
		TWA (total	15 mg/m3	OSHA Z-1
		dust)	- 5	
		TWÁ	5 mg/m3	OSHA Z-1
		(respirable		
		fraction)		
		TWA (Total	10 mg/m3	OSHA P0
		dust)	,	
		TWA	5 mg/m3	OSHA P0
		(respirable		
		dust fraction)		
		TWA	10 mg/m3	ACGIH
		(Inhalable		
		particulate		
		matter)		
			3 mg/m3	ACGIH
		(Respirable		
		particulate		
		matter)		
		maner)		

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	ACGIH
		STEL	250 ppm	ACGIH
		TWA	200 ppm 260 mg/m3	NIOSH REL
		ST	250 ppm 325 mg/m3	NIOSH REL
		TWA	200 ppm 260 mg/m3	OSHA Z-1



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			TWA	200 ppm 260 mg/m3	OSHA P0
			STEL	250 ppm 325 mg/m3	OSHA P0
Engineering measures	:		iate ventilation. ventilation may	be necessary.	
		It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment.			
Personal protective equip	ment				
Respiratory protection	:	In the case of approved filter When workers limit they must The filter class maximum exp (gas/vapour/ac handling the p	are facing cond use appropriate for the respirat ected contamina erosol/particulat	n use a respirator with centrations above the e certified respirators or must be suitable for ant concentration es) that may arise who concentration is exceed	e exposure or the nen
Hand protection					
Material	:	butyl-rubber			
Break through time	:	>= 480 min			
Glove thickness	:	0.5 mm			
Material	:	Fluorinated ru	bber		
Break through time	:	>= 480 min			
Glove thickness	:	0.4 mm			
Remarks	:	breakthrough gloves. Also ta conditions und	time which are p ake into conside ler which the pro	is regarding permeat provided by the suppl ration the specific loc oduct is used, such a the contact time.	ier of the al
Eye protection	:	Safety glasses			
Skin and body protection	:	Protective clot			
Hygiene measures	:	When using de	o not eat, drink o		
		wash hands b	eiore preaks an	d at the end of work	Jay.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	pellets
Colour	:	natural colour
Odour	:	odourless



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Odour Threshold	:	Methanol: Do NOT rely on the odour the exposure limit.	: olfactory level is above
рН	:	Not applicable insoluble	
Melting range	:	212 - 284 °F / 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)	
Relative vapour density	:	Not applicable	
Density	:	0.9 - 1.0 g/cm³	
Bulk density	:	500 - 600 kg/m³	
Solubility(ies) Water solubility	:	insoluble	
Partition coefficient: n-	:	Not applicable insoluble	
octanol/water Auto-ignition temperature	:	> 608 °F / > 320 °C	
Viscosity Viscosity, kinematic	:	No data available	
Explosive properties	:	Not explosive	
Oxidizing properties	:	The substance or mixture is not clas	sified as oxidizing.
Particle size	:	3 - 10 mm Method: Image analysis (surface-ba	sed)

SECTION 10. STABILITY AND REACTIVITY

Reactivity Chemical stability	Stable under recommended storage conditions.The product is a stable thermoplastic, with no chemical
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		reactivity.	
		The intended crosslinking reaction the base resin and moisture: at an or hot water bath.	
Possibility of hazardous reactions	:	In contact with water or moisture r	nethanol will be released.
Conditions to avoid	:	Exposure to moisture	
		Extremes of temperature and dire	ct sunlight.
Incompatible materials	:	None known.	
Hazardous decomposition	:	Under fire conditions:	
products		Carbon monoxide	
		During processing and thermal tre amounts of volatile hydrocarbons During crosslinking reaction in cor methanol	may 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.

- **IARC** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- **OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
- **NTP** No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

May damage the unborn child.



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STOT - repeated expo Causes damage to orga Aspiration toxicity Based on available data	a, the classification criteria are not met.	peated exposure.
Further information		
<u>Product:</u> Remarks	 During crosslinking reaction in com methanol (Flam. Liq. 2; H225, Acut 3; H311, Acute Tox. 3; H331, STO Methanol: Toxic by inhalation, in co swallowed. Causes damage to organs. 	te Tox. 3; H301, Acute Tox. T SE 1; H370) is released.
Remarks	: Inhalation of dust may irritate the re Prolonged inhalation of high doses	of decomposition products

may give headache or irritation of the respiratory tract.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

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		
Persistence and degradability	у			
Product:				
Biodegradability	:	Remarks: Not readily biodegradable.		
Bioaccumulative potential				
Product:				
Bioaccumulation	:	Remarks: Does not accumulate in organisms.		
Mobility in soil				
Product:				



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Mobility	:	Remarks: Not expected to adsorb on soil.	
		Remarks: The product is insoluble and flo	oats on water.
Other adverse effects			
Product:			
Additional ecological	:	Should not be released into the environm	ient.
information			

SECTION 13. DISPOSAL CONSIDERATIONS

Waste from residues :	This substance, when discarded or disposed of is not specifically listed as a hazardous waste in Federal regulations. However, it could be hazardous if it is considered toxic, corrosive, ignitable or reactive according to Federal definitions (40 CFR 261). Additionally, it could be designated as hazardous waste if it is mixed with or comes in contact with a hazardous waste. If such contact or mixing may have occurred, check 40 CFR 261 to determine whether it is a hazardous waste. The transportation, storage, treatment and disposal of this waste material must be conducted in accord-ance with all applicable Federal, state and 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

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

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

49 CFR Not regulated as a dangerous good

Special precautions for user



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Remarks		Not dangerous goods in the meaning of ADR/RID, ADN, IMDG-Code, ICAO/IATA-DGR	
ECTION 15. REGULAT	ORY INFORMATION		
US State Regulatio	ns		
Massachusetts Rig	ht To Know		
-	-butyl-4,4'-thiodi-m-cresol adecanoate	96-69-5 557-05-1	
Pennsylvania Right	t To Know		
dioctyltin o 6,6'-di-tert	ne-co-(ethyl 2-propenoate)] dilaurate a-butyl-4,4'-thiodi-m-cresol adecanoate	9010-86-0 3648-18-8 96-69-5 557-05-1	
Maine Chemicals o	f High Concern		
Product de	oes not contain any listed chemicals		
Vermont Chemicals	s of High Concern		
Product d	oes not contain any listed chemicals		
Washington Chemi	cals of High Concern		
Product d	oes not contain any listed chemicals		
California Prop. 65			
This product does no defects, or any other	ot contain any chemicals known to State of C reproductive harm.	California to cause cancer, birth	

California List of Hazardous Substances

dioctyltin dilaurate 6,6'-di-tert-butyl-4,4'-thiodi-m-cresol zinc dioctadecanoate	3648-18-8 96-69-5 557-05-1
ornia Permissible Exposure Limits for Chemical Contaminants	
dioctyltin dilaurate	3648-18-8
6.6'-di-tert-butyl-4.4'-thiodi-m-cresol	96-69-5

Califo

dioctyltin dilaurate	3648-18-8
6,6'-di-tert-butyl-4,4'-thiodi-m-cresol	96-69-5
zinc dioctadecanoate	557-05-1

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

Borealis certifies that all chemical substances in this shipment comply with all applicable rules or orders under TSCA and that Borealis is not offering a chemical substance for entry in violation of TSCA or any applicable rule or order under TSCA.

Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling. The product is classified and labelled in accordance with Hazard Communication Standard 2012 (29 CFR 1910.1200)

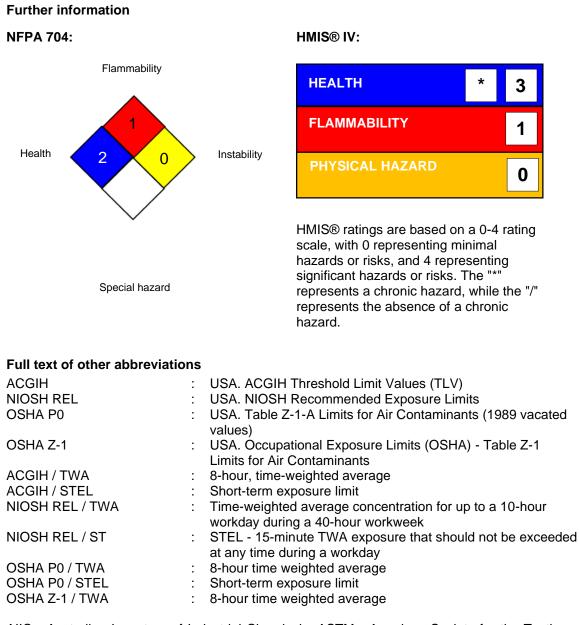
US. Drug Enforcement Administration (DEA) Listed Precursor and Essential Chemicals (21 CFR 1310)

: Not applicable



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SECTION 16. OTHER INFORMATION



AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL -



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Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS -Extremely Hazardous Substance; 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; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; 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; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA -National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; 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; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; 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

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

Sources of key data used to : Safety data sheets of raw material suppliers. compile the Safety Data Sheet Revision Date : 04/04/2024

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



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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.

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