

Safety Data Sheet

A Meridian Adhesives Group Company

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Issue date: 4/21/2022 Version: 1.0

SECTION 1: Identification 1.1. Identification Product form Mixture Product name EPO-TEK® H72 PART A · 1.2. Recommended use and restrictions on use Use of the substance/mixture : adhesives Recommended use adhesives Restrictions on use Not to be used for any purpose other than the one the product was designed for 1.3. Supplier Epoxy Technology, Inc. 14 Fortune Drive Billerica, MA, 01821 USA T 978-667-3805 www.epotek.com 1.4. Emergency telephone number : ChemTel: +1 (800) 255-3924, +1 (813) 248-0585 Emergency number SECTION 2: Hazard(s) identification 2.1. Classification of the substance or mixture **GHS US classification** Acute toxicity (dermal) Category 4 H312 Harmful in contact with skin Skin corrosion/irritation Category 2 H315 Causes skin irritation Serious eye damage/eye irritation Category 2 H319 Causes serious eye irritation H317 Skin sensitization, Category 1 May cause an allergic skin reaction Germ cell mutagenicity Category 2 H341 Suspected of causing genetic defects Carcinogenicity Category 1B H350 May cause cancer Hazardous to the aquatic environment - Acute Hazard Category 3 H402 Harmful to aquatic life Hazardous to the aquatic environment - Chronic Hazard Category 3 H412 Harmful to aquatic life with long lasting effects Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US)

Signal word (GHS US) Hazard statements (GHS US)



- Danger
 - H312 Harmful in contact with skin
 - H315 Causes skin irritation
 - H317 May cause an allergic skin reaction
 - H319 Causes serious eye irritation
 - H341 Suspected of causing genetic defects
 - H350 May cause cancer
 - H402 Harmful to aquatic life

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Precautionary statements (GHS US)	 H412 - Harmful to aquatic life with long lasting effects P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P261 - Avoid breathing dust/fume/gas/mist/vapors/spray. P264 - Wash hands, forearms and face thoroughly after handling. P272 - Contaminated work clothing must not be allowed out of the workplace. P273 - Avoid release to the environment. P280 - Wear protective gloves/protective clothing/eye protection/face protection. P302+P352 - If on skin: Wash with plenty of water. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313 - If exposed or concerned: Get medical advice/attention. P312 - Call a poison center or doctor if you feel unwell. P321 - Specific treatment (see supplemental first aid instruction on this label). P322 - Specific treatment (see supplemental first aid instruction on this label). P333+P313 - If skin irritation occurs: Get medical advice/attention. P333+P313 - If skin irritation or rash occurs: Get medical advice/attention. P337+P313 - I f eye irritation persists: Get medical advice/attention. P337+P313 - I f eye irritation persists: Get medical advice/attention. P337+P313 - I f eye irritation persists: Get medical advice/attention. P362+P364 - Take off contaminated clothing and wash it before reuse. P363 - Wash contaminated clothing before reuse. P405 - Store locked up. P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
2.3. Other hazards which do not result in	classification

Other hazards which do not result in classification : Harmful dust may be released during cutting, milling or grinding process.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Resorcinal diglycidyl ether	CAS-No.: 101-90-6	10 – 30	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Muta. 2, H341 Carc. 1B, H350 Aquatic Chronic 3, H412
Bisphenol A diglycidyl ether resin*	CAS-No.: Trade Secret	1 – 10	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1, H317 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
Epoxy resin*	CAS-No.: Trade Secret	1 – 5	Eye Irrit. 2, H319 Skin Sens. 1, H317

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

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Comments

: Components not listed are either non-hazardous or are below reportable limits.

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures			
4.1. Description of first aid measures			
First-aid measures general	: IF exposed or concerned: Get medical advice/attention. Call a poison center/doctor/physician if you feel unwell.		
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.		
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.		
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.		
First-aid measures after ingestion	: Call a poison center/doctor/physician if you feel unwell.		
4.2. Most important symptoms and effects (acute and delayed)			
Symptoms/effects after skin contact Symptoms/effects after eye contact	Irritation. May cause an allergic skin reaction.Eye irritation.		
4.3. Immediate medical attention and special treatment, if necessary			

Treat symptomatically.

SECTION 5: Fire-fighting measures			
5.1. Suitable (and unsuitable) extinguishing media			
Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.		
5.2. Specific hazards arising from the chemical			
Hazardous decomposition products in case of fire	: Toxic fumes may be released.		
5.3. Special protective equipment and precautions for fire-fighters			
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.		

SECTION 6: Accidental release measures			
6.1. Personal precautions, protective equipment and emergency procedures			
6.1.1. For non-emergency personnel			
Emergency procedures	: Only qualified personnel equipped with suitable protective equipment may intervene. Avoid breathing dust/fume/gas/mist/vapors/spray.		
6.1.2. For emergency responders			
Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".		
6.2. Environmental precautions			
6.2. Environmental precautions			

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material f	or containment and cleaning up
For containment	: Collect spillage.

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Methods for cleaning up	: Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
Other information	: Dispose of materials or solid residues at an authorized site.
6.4. Reference to other sections	

For further information refer to section 13.

SECTION 7: Handling and storage		
7.1. Precautions for safe handling		
Precautions for safe handling Hygiene measures	 Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Wear personal protective equipment. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Do not get in eyes, on skin, or on clothing. Avoid breathing dust/fume/gas/mist/vapors/spray. Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. 	

7.2. Conditions for safe storage, including any incompatibilities

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Storage conditions
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: Store locked up. Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

81	Control	parameters
0.1.	CONTROL	parameters

EPO-TEK® H72 PART A		
No additional information available		
Epoxy resin		
USA - ACGIH - Occupational Exposure Limits		
ACGIH OEL TWA	3 mg/m³ (Respirable fraction)	
Bisphenol A diglycidyl ether resin		
No additional information available		
Resorcinal diglycidyl ether (101-90-6)		
No additional information available		
8.2. Appropriate engineering controls		

Appropriate engineering controls Environmental exposure controls

Ensure good ventilation of the work station.Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Wear suitable gloves resistant to chemical penetration. Neoprene or nitrile rubber gloves. Butyl-rubber protective gloves. Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. Refer to manufacturer's information. Gloves must be replaced after each use and whenever signs of wear or perforation appear

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Eye protection:	
Safety glasses	
Skin and body protection:	
Wear suitable protective clothing	
Respiratory protection:	
Wear respiratory protection.	

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Gray
Odor	: Mild odor
Odor threshold	: No data available
рН	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

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10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information	
11.1. Information on toxicological effects	
Acute toxicity (oral) Acute toxicity (dermal) Acute toxicity (inhalation)	 Not classified Harmful in contact with skin. Not classified
EPO-TEK® H72 PART A	
ATE US (dermal)	1367.413 mg/kg body weight
Bisphenol A diglycidyl ether resin	
LD50 dermal rat	> 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EU Method B.3 (Acute Toxicity (Dermal))
Resorcinal diglycidyl ether (101-90-6)	
LD50 oral rat	2570 mg/kg Source: HSDB
ATE US (oral)	500 mg/kg body weight
ATE US (dermal)	300 mg/kg body weight
Skin corrosion/irritation Serious eye damage/irritation Respiratory or skin sensitization Germ cell mutagenicity Carcinogenicity	 Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction. Suspected of causing genetic defects. May cause cancer.
Bisphenol A diglycidyl ether resin	
NOAEL (chronic,oral,animal/male,2 years)	15 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies), Guideline: EPA OPPTS 870.4300 (Combined Chronic Toxicity / Carcinogenicity), Guideline: other:MITI, Japanese ministry of international trade and industry, February 1998, Remarks on results: other:Effect type: toxicity (migrated information)
NOAEL (chronic,oral,animal/female,2 years)	100 mg/kg body weight Animal: rat, Animal sex: female, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies), Guideline: EPA OPPTS 870.4300 (Combined Chronic Toxicity / Carcinogenicity), Guideline: other:MITI, Japanese ministry of international trade and industry, February 1998, Remarks on results: other:Effect type: toxicity (migrated information)
Resorcinal diglycidyl ether (101-90-6)	
IARC group	2B - Possibly carcinogenic to humans

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Resorcinal diglycidyl ether (101-90-6)				
National Toxicity Program (NTP) Status	Il Toxicity Program (NTP) Status Reasonably anticipated to be Human Carcinogen			
Reproductive toxicity	Not classified			
STOT-single exposure	: Not classified			
STOT-repeated exposure	: Not classified			
Bisphenol A diglycidyl ether resin				
NOAEL (oral,rat,90 days)	50 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents), Guideline: EPA OPPTS 870.3100 (90-Day Oral Toxicity in Rodents), Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents), Guideline: other:japanese MITI guidelines for toxicity testing of chemicals			
Aspiration hazard	: Not classified			
Viscosity, kinematic	: No data available			
Symptoms/effects after skin contact	: Irritation. May cause an allergic skin reaction.			
Symptoms/effects after eye contact	: Eye irritation.			

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Harmful to aquatic life. Harmful to aquatic life with long lasting effects.			
Bisphenol A diglycidyl ether resin			
LOEC (chronic) 1 mg/l Test organisms (species): Daphnia magna Duration: '21 d'			
NOEC (chronic) 0.3 mg/l Test organisms (species): Daphnia magna Duration: '21 d'			

12.2. Persistence and degradability

Epoxy resin			
Persistence and degradability Biodegradability in water: no data available.			
Bisphenol A diglycidyl ether resin			
Persistence and degradability	Not readily biodegradable in water.		
Resorcinal diglycidyl ether (101-90-6)			
Persistence and degradability Not readily biodegradable in water.			
12.3. Bioaccumulative potential			
Epoxy resin			
Bioaccumulative potential No bioaccumulation data available.			
Bisphenol A diglycidyl ether resin			
BCF - Other aquatic organisms [1]	31 (Estimated value, Fresh weight)		
Partition coefficient n-octanol/water (Log Pow) 3 (Estimated value, 25 °C)			
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).		
Resorcinal diglycidyl ether (101-90-6)			
Partition coefficient n-octanol/water (Log Pow) 1.15 Source: chemicalbook			
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).		

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12.4. Mobility in soil			
Bisphenol A diglycidyl ether resin			
Surface tension 59 mN/m (20 °C, 0.09 g/l)			
Organic Carbon Normalized Adsorption Coefficient 2.65 (log Koc, SRC PCKOCWIN v2.0, QSAR) (Log Koc)			
Ecology - soil Low potential for adsorption in soil.			
Resorcinal diglycidyl ether (101-90-6)			
Surface tension	63.9 mN/m (20 °C, 0.1 %, EU Method A.5: Surface tension)		
Organic Carbon Normalized Adsorption Coefficient (Log Koc, EU Method C.19, Experimental value)			
Ecology - soil Highly mobile in soil.			

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods

: Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information In accordance with DOT / TDG / IMDG / IATA 14.1. UN number

Not regulated for transport

14.2. UN proper shipping name	
Proper Shipping Name (DOT) Proper Shipping Name (TDG) Proper Shipping Name (IMDG) Proper Shipping Name (IATA)	 Not applicable Not applicable Not applicable Not applicable
14.3. Transport hazard class(es)	
DOT Transport hazard class(es) (DOT)	: Not applicable
TDG Transport hazard class(es) (TDG)	: Not applicable
IMDG Transport hazard class(es) (IMDG)	: Not applicable
IATA Transport hazard class(es) (IATA)	: Not applicable

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14.4. Packing group				
Packing group (TDG) : Packing group (IMDG) :	 Not applicable Not applicable Not applicable Not applicable 			
14.5. Environmental hazards				
Other information :	No supplementary information available	Э.		
14.6. Special precautions for user				
DOT No data available				
TDG Emergency Response Guide (ERG) Number :	171			
IMDG No data available				
IATA No data available				
14.7. Transport in bulk according to Annex II	of MARPOL 73/78 and the IBC Co	de		
Not applicable				
SECTION 15: Regulatory information				
15.1. US Federal regulations				
	is Active on the United States Environme	ntal Protection Agency Toxic Substances Control Act		
15.1. US Federal regulations All components of this product are present and listed a				
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15.1. US Federal regulations All components of this product are present and listed at (TSCA) inventory Chemical(s) subject to the reporting requirements of S and 40 CFR Part 372. Resorcinal diglycidyl ether	ection 313 or Title III of the Superfund Ar	nendments and Reauthorization Act (SARA) of 1986		
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National regulations

Resorcinal diglycidyl ether (101-90-6)

Listed on IARC (International Agency for Research on Cancer) Listed as carcinogen on NTP (National Toxicology Program) Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. US State regulations

This product can expose you to Resorcinal diglycidyl ether, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Component	State or local regulations
	U.S Massachusetts - Right To Know List; U.S New Jersey - Right to Know Hazardous Substance List; U.S New York City - Right to Know Hazardous Substances List

SECTION 16: Other information

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Full text of H	Full text of H-phrases		
H302	Harmful if swallowed		
H311	Toxic in contact with skin		
H312	Harmful in contact with skin		
H315	Causes skin irritation		
H317	May cause an allergic skin reaction		
H319	Causes serious eye irritation		
H341	Suspected of causing genetic defects		
H350	May cause cancer		
H401	Toxic to aquatic life		
H402	Harmful to aquatic life		
H411	Toxic to aquatic life with long lasting effects		
H412	Harmful to aquatic life with long lasting effects		

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.



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SECTION 1: Identification 1.1. Identification Product form Mixture Product name EPO-TEK® H72 PART B · 1.2. Recommended use and restrictions on use Use of the substance/mixture : adhesives Recommended use adhesives Restrictions on use Not to be used for any purpose other than the one the product was designed for 1.3. Supplier Epoxy Technology, Inc. 14 Fortune Drive Billerica, MA, 01821 USA T 978-667-3805 www.epotek.com 1.4. Emergency telephone number : ChemTel: +1 (800) 255-3924, +1 (813) 248-0585 Emergency number SECTION 2: Hazard(s) identification 2.1. Classification of the substance or mixture **GHS US classification** Acute toxicity (oral) Category 4 H302 Harmful if swallowed Skin corrosion/irritation Category 1B H314 Causes severe skin burns and eye damage Serious eye damage/eye irritation Category 1 H318 Causes serious eye damage Skin sensitization, Category 1 H317 May cause an allergic skin reaction Carcinogenicity Category 2 H351 Suspected of causing cancer Reproductive toxicity Category 1B H360 May damage fertility or the unborn child Full text of H statements : see section 16 2.2. GHS Label elements, including precautionary statements **GHS US labeling**

Hazard pictograms (GHS US)

Signal word (GHS US) Hazard statements (GHS US)

Precautionary statements (GHS US)



- H302 Harmful if swallowed
- H314 Causes severe skin burns and eye damage
- H317 May cause an allergic skin reaction
- H318 Causes serious eye damage
- H351 Suspected of causing cancer
- H360 May damage fertility or the unborn child
- : P201 Obtain special instructions before use.
 - P202 Do not handle until all safety precautions have been read and understood.
 - P260 Do not breathe dust/fume/gas/mist/vapors/spray.

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P261 - Avoid breathing dust/fume/gas/mist/vapors/spray. P264 - Wash hands, forearms and face thoroughly after handling. P270 - Do not eat, drink or smoke when using this product.		P264 - Wash hands, forearms and face thoroughly after handling.
-		
P280 - Wear protective gloves/protective clothing/eye protection/face protection.		
P280 - Wear protective gloves/protective clothing/eye protection/face protection. P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell.		5
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 P280 - Wear protective gloves/protective clothing/eye protection/face protection. P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell. P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting. P302+P352 - If on skin: Wash with plenty of water. P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. 		
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 P280 - Wear protective gloves/protective clothing/eye protection/face protection. P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell. P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting. P302+P352 - If on skin: Wash with plenty of water. P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313 - If exposed or concerned: Get medical advice/attention. 		
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 P280 - Wear protective gloves/protective clothing/eye protection/face protection. P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell. P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting. P302+P352 - If on skin: Wash with plenty of water. P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313 - If exposed or concerned: Get medical advice/attention. P310 - Immediately call a poison center or doctor. P321 - Specific treatment (see supplemental first aid instruction on this label). P330 - Rinse mouth. 		
 P280 - Wear protective gloves/protective clothing/eye protection/face protection. P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell. P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting. P302+P352 - If on skin: Wash with plenty of water. P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313 - If exposed or concerned: Get medical advice/attention. P310 - Immediately call a poison center or doctor. P321 - Specific treatment (see supplemental first aid instruction on this label). P333+P313 - If skin irritation or rash occurs: Get medical advice/attention. 		-
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 P280 - Wear protective gloves/protective clothing/eye protection/face protection. P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell. P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting. P302+P352 - If on skin: Wash with plenty of water. P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313 - If exposed or concerned: Get medical advice/attention. P310 - Immediately call a poison center or doctor. P321 - Specific treatment (see supplemental first aid instruction on this label). P333 - Rinse mouth. P333+P313 - If skin irritation or rash occurs: Get medical advice/attention. P363 - Wash contaminated clothing before reuse. 		
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 P280 - Wear protective gloves/protective clothing/eye protection/face protection. P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell. P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting. P302+P352 - If on skin: Wash with plenty of water. P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313 - If exposed or concerned: Get medical advice/attention. P310 - Immediately call a poison center or doctor. P321 - Specific treatment (see supplemental first aid instruction on this label). P333+P313 - If skin irritation or rash occurs: Get medical advice/attention. P363 - Wash contaminated clothing before reuse. P405 - Store locked up. P501 - Dispose of contents/container to hazardous or special waste collection point, in 	It in clas	alfiantian

2.3. Other hazards which do not result in classification

Other hazards which do not result in classification

: Harmful dust may be released during cutting, milling or grinding process.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Substituted imidazole*	CAS-No.: Trade Secret	30 – 60	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1B, H317
Imidazole	CAS-No.: 288-32-4	≥ 30	Acute Tox. 4 (Oral), H302 Skin Corr. 1C, H314 Eye Dam. 1, H318 Repr. 1B, H360
Substituted imidazole*	CAS-No.: Trade Secret	5 – 10	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Skin Corr. 1B, H314 Eye Dam. 1, H318 Carc. 2, H351

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Name	Product identifier	%	GHS US classification
Substituted imidazole*	CAS-No.: Trade Secret	< 5	Acute Tox. 3 (Oral), H301 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335
Substituted anhydride*	CAS-No.: Trade Secret	< 5	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Corr. 1B, H314

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

Comments : Components not listed are either non-hazardous or are below reportable limits. Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures 4.1. Description of first aid measures : Call a physician immediately. First-aid measures general First-aid measures after inhalation Remove person to fresh air and keep comfortable for breathing. · First-aid measures after skin contact Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Call a · physician immediately. First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately. First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Call a physician immediately. 4.2. Most important symptoms and effects (acute and delayed) : Burns. May cause an allergic skin reaction. Symptoms/effects after skin contact Symptoms/effects after eye contact : Serious damage to eyes. Symptoms/effects after ingestion Burns. :

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media		
Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.	
5.2. Specific hazards arising from the chemical		
Hazardous decomposition products in case of fire	: Toxic fumes may be released.	
5.3. Special protective equipment and precautions for fire-fighters		
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.	

SECTION 6: Accidental release measures
6.1. Personal precautions, protective equipment and emergency procedures
6.1.1. For non-emergency personnel

Emergency procedures

: Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe dust/fume/gas/mist/vapors/spray.

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6.1.2. For emergency responders

Protective equipment

: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up	
Methods for cleaning up	: Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
Other information	: Dispose of materials or solid residues at an authorized site.
6.4. Reference to other sections	

For further information refer to section 13.

SECTION 7: Handling and storage	
7.1. Precautions for safe handling	
Precautions for safe handling	: Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapors/spray.
Hygiene measures	: Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions

: Store locked up. Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

EPO-TEK® H72 PART B
No additional information available
Substituted anhydride
No additional information available
Substituted imidazole
No additional information available
Substituted imidazole
No additional information available
Substituted imidazole
No additional information available
Imidazole (288-32-4)
No additional information available

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8.2. Appropriate engineering controls

Appropriate engineering controls

Environmental exposure controls

: Ensure good ventilation of the work station.: Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Wear suitable gloves resistant to chemical penetration. Neoprene or nitrile rubber gloves. Butyl-rubber protective gloves. Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. Refer to manufacturer's information. Gloves must be replaced after each use and whenever signs of wear or perforation appear

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Wear respiratory protection.

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liguid
Color	: Gray
Odor	: Mild odor
Odor threshold	: No data available
рН	: No data available
Melting point	: Not applicable
Freezing point	No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

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9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information		
11.1. Information on toxicological effects	11.1. Information on toxicological effects	
Acute toxicity (dermal)	Harmful if swallowed. Not classified Not classified	
EPO-TEK® H72 PART B		
ATE US (oral)	490.339 mg/kg body weight	
Substituted anhydride		
LD50 oral rat	≈ 1144 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Remarks on results: other:	
LD50 dermal rabbit	400 – 640 mg/kg body weight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)	
ATE US (oral)	500 mg/kg body weight	
ATE US (dermal)	400 mg/kg body weight	
Substituted imidazole		
LD50 oral rat	350 mg/kg Source: IUCLID	
LD50 dermal rabbit	440 mg/kg Source: IUCLID	
ATE US (oral)	173 mg/kg body weight	
ATE US (dermal)	440 mg/kg body weight	

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Substituted imidazole	
LD50 oral rat	731 mg/kg (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral
LD50 dermal rabbit	> 400 mg/kg (Equivalent or similar to OECD 402, 24 h, Rabbit, Male / female, Experimental value, Dermal)
LC50 Inhalation - Rat	> 0.03 mg/l (Equivalent or similar to OECD 403, 8 h, Rat, Male / female, Experimental value, (maximum achievable concentration), Inhalation (vapours))
ATE US (oral)	731 mg/kg body weight
Substituted imidazole	
ATE US (oral)	100 mg/kg body weight
Imidazole (288-32-4)	
LD50 oral rat	970 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Experimental value, Oral, 7 day(s))
ATE US (oral)	960 mg/kg body weight
Skin corrosion/irritation	: Causes severe skin burns.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitization	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Suspected of causing cancer.
Substituted imidazole	
IARC group	2B - Possibly carcinogenic to humans
Reproductive toxicity	: May damage fertility or the unborn child.
STOT-single exposure	: Not classified
Substituted imidazole	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	: Not classified
Substituted anhydride	
NOAEL (oral,rat,90 days)	90 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents), Guideline: EPA OPPTS 870.3100 (90-Day Oral Toxicity in Rodents)
Substituted imidazole	
NOAEL (oral,rat,90 days)	150 mg/kg body weight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test), Guideline: other:EPA OPPTS 870.3650 (Combined Repeated Dose Toxicity Study with the Reproduction/Developmental Toxicity Screening Test)
Imidazole (288-32-4)	
NOAEL (oral,rat,90 days)	60 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Aspiration hazard	: Not classified
	: No data available
Viscosity, kinematic	
Viscosity, kinematic Symptoms/effects after skin contact Symptoms/effects after eye contact	 Burns. May cause an allergic skin reaction. Serious damage to eyes.

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SECTION 12: Ecological information

12.1. Toxicity	
Ecology - general :	Before neutralisation, the product may represent a danger to aquatic organisms.
Substituted anhydride	
LC50 - Fish [1]	100 – 215 mg/l Test organisms (species): Leuciscus idus
EC50 - Crustacea [1]	267.94 mg/l Test organisms (species): Daphnia magna
Substituted imidazole	
LC50 - Fish [1]	0.34 mg/l Source: IUCLID
EC50 - Crustacea [1]	180 mg/l Source: IUCLID
Substituted imidazole	
LC50 - Fish [1]	68.1 mg/l (DIN 38412-15, 96 h, Leuciscus idus, Static system, Fresh water, Experimental value)
EC50 - Crustacea [1]	297.3 mg/l (EU Method C.2, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)
Imidazole (288-32-4)	
LC50 - Fish [1]	283.6 mg/l (48 h, Leuciscus idus, Static system, Fresh water, Experimental value, Nominal concentration)
EC50 - Crustacea [1]	341.5 mg/l (EU Method C.2, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
ErC50 algae	133 mg/l (DIN 38412: German standard methods for the examination of water, waste water and sludge, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, Nominal concentration)
NOEC chronic algae	25 mg/l

12.2. Persistence and degradability

Substituted anhydride		
Persistence and degradability	Not readily biodegradable in water.	
Substituted imidazole		
Persistence and degradability	Inherently biodegradable.	
Biochemical oxygen demand (BOD)	0.000002 g O /g substance	
Chemical oxygen demand (COD)	0.0015 g O /g substance	
Substituted imidazole		
Persistence and degradability	Readily biodegradable in water.	
Imidazole (288-32-4)		
Persistence and degradability	Readily biodegradable in the soil. Readily biodegradable in water.	
12.3. Bioaccumulative potential		
Substituted anhydride		
Partition coefficient n-octanol/water (Log Pow)	-0.06 Source: ChemIDplus	

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Substituted imidazole		
Partition coefficient n-octanol/water (Log Pow)	0.35 (Experimental value)	
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).	
Substituted imidazole		
Partition coefficient n-octanol/water (Log Pow)	1.13 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 25 °C)	
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).	
Imidazole (288-32-4)		
Partition coefficient n-octanol/water (Log Pow)	-0.02 (Weight of evidence approach, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 25 $^\circ C$)	
Bioaccumulative potential	Not bioaccumulative.	
12.4. Mobility in soil		
Substituted anhydride		
Mobility in soil	15.75 Source: Quantitative Structure Activity Relation	
Substituted imidazole		
Mobility in soil	28.23 Source: EPI SUITE	
Ecology - soil	No (test)data on mobility of the substance available.	
Substituted imidazole		
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.71 (log Koc, Calculated value, pH = 7)	
Ecology - soil	Low potential for mobility in soil.	
Imidazole (288-32-4)		
Surface tension	No data available in the literature	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.36 – 2.32 (log Koc, Calculated value)	
Ecology - soil	Low potential for adsorption in soil.	
12.5. Other adverse effects		

No additional information available

SECTION 13: Disposal considerations	
13.1. Disposal methods	
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
SECTION 14: Transport information	
In accordance with DOT / TDG / IMDG / IATA	

ordance with DOT / TI

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UN-No. (TDG)	: UN3267
UN-No. (IMDG) UN-No. (IATA)	: 3267 : 3267
	. 5201
14.2. UN proper shipping name	
Proper Shipping Name (DOT) Proper Shipping Name (TDG)	: Corrosive liquid, basic, organic, n.o.s. (Imidazole) : CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (Imidazole)
Proper Shipping Name (IMDG)	: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (Imidazole)
Proper Shipping Name (IATA)	: Corrosive liquid, basic, organic, n.o.s. (Imidazole)
14.3. Transport hazard class(es)	
DOT	
Transport hazard class(es) (DOT)	: 8
Hazard labels (DOT)	: 8
	CORROSIVE
	8
	· ·
TDG	
Transport hazard class(es) (TDG)	: 8
Hazard labels (TDG)	: 8
	8
IMDG Transport hazard class(es) (IMDG)	: 8
Hazard labels (IMDG)	: 8
	8
	\mathbf{V}
ΙΑΤΑ	
Transport hazard class(es) (IATA)	: 8
Hazard labels (IATA)	: 8
	8
	▼
14.4. Packing group	
Packing group (DOT)	
Packing group (TDG)	: III - III

14.5. Environmental hazards

Other information

Packing group (IMDG)

Packing group (IATA)

: No supplementary information available.

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: 111

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14.6. Special precautions for user

14.0. Opecial precations for aser	
DOT	
UN-No.(DOT) DOT Special Provisions (49 CFR 172.102)	 UN3267 IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HD2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672). T7 - 4 178.274(d)(2) Normal
DOT Dealersing Exceptions (40 CED 472 year)	MAWP.
DOT Packaging Exceptions (49 CFR 173.xxx) DOT Packaging Non Bulk (49 CFR 173.xxx) DOT Packaging Bulk (49 CFR 173.xxx) DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 154 : 203 : 241 : 5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 60 L
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other	: 40 - Stow "clear of living quarters",52 - Stow "separated from" acids
TDG UN-No. (TDG)	: UN3267
TDG Special Provisions	 16 - (1) The technical name of at least one of the most dangerous substances that predominantly contributes to the hazard or hazards posed by the dangerous goods must be shown, in parentheses, on the shipping document following the shipping name in accordance with clause 3.5(1)(c)(ii)(A) of Part 3 (Documentation). The technical name must also be shown, in parentheses, on a small means of containment or on a tag following the shipping name in accordance with subsections 4.11(2) and (3) of Part 4 (Dangerous Goods Safety Marks). (2) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a shipping document or on a small means of containment when Canadian law for domestic transport or an international convention for international transport prohibits the disclosure of the technical name: (a) UN1544, ALKALOID SALTS, SOLID, N.O.S. or ALKALOIDS, SOLID, N.O.S; (b) UN1851, MEDICINE, LIQUID, TOXIC, N.O.S; (c) UN3140, ALKALOID SALTS, LIQUID, N.O.S. or ALKALOIDS, LIQUID, N.O.S; (d) UN3248, MEDICINE, LIQUID, FLAMMABLE, TOXIC, N.O.S; or (e) UN3249, MEDICINE, SOLID, TOXIC, N.O.S. (3) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a small means of containment: (a) UN244, MEDICINE, SOLID, TOXIC, N.O.S. (b) UN3248, MEDICINE, SOLID, TOXIC, N.O.S. (c) UN3249, MEDICINE, SOLID, TOXIC, N.O.S. (d) UN3249, MEDICINE, SOLID, TOXIC, N.O.S. (e) UN3249, MEDICINE, SOLID, TOXIC, N.O.S. (f) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a small means of containment: (a) UN2814, INFECTIOUS SUBSTANCE, AFFECTING HUMANS; or
Explosive Limit and Limited Quantity Index Excepted quantities (TDG) Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index	 (b) UN2900, INFECTIOUS SUBSTANCE, AFFECTING ANIMALS. 5 L E1 5 L
Emergency Response Guide (ERG) Number	: 153
IMDG Special provision (IMDG) Limited quantities (IMDG) Excepted quantities (IMDG)	: 223, 274 : 5 L : E1

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	B004 B04
Packing instructions (IMDG)	: P001, LP01
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T7
Tank special provisions (IMDG)	: TP1, TP28
EmS-No. (Fire)	: F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	: S-B - SPILLAGE SCHEDULE Bravo - CORROSIVE SUBSTANCES
Stowage category (IMDG)	: A
Properties and observations (IMDG)	: Reacts violently with acids. Causes burns to skin, eyes and mucous membranes.
ΙΑΤΑ	
PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y841
PCA limited quantity max net quantity (IATA)	: 1L
PCA packing instructions (IATA)	: 852
PCA max net quantity (IATA)	: 5L
CAO packing instructions (IATA)	: 856
CAO max net quantity (IATA)	: 60L
Special provision (IATA)	: A3, A803
ERG code (IATA)	: 8L

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

15.2. International regulations

CANADA

Substituted anhydride

Listed on the Canadian DSL (Domestic Substances List)

Substituted imidazole

Listed on the Canadian NDSL (Non-Domestic Substances List)

Substituted imidazole

Listed on the Canadian DSL (Domestic Substances List)

Substituted imidazole

Listed on the Canadian DSL (Domestic Substances List)

Imidazole (288-32-4)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

National regulations

Substituted anhydride

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Substituted imidazole

Listed on IARC (International Agency for Research on Cancer)

Imidazole (288-32-4)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. US State regulations

WARNING:

This product can expose you to Substituted imidazole, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Full text of H-phrases	
H301	Toxic if swallowed
H302	Harmful if swallowed
H311	Toxic in contact with skin
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H335	May cause respiratory irritation
H351	Suspected of causing cancer
H360	May damage fertility or the unborn child

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.