Magnolia 91-A

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Date of issue: 9/24/1985 Revision date: 8/5/2022 Supersedes: 8/5/2022 Version: 14.2

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Name : Magnolia 91-A
Product code : 91-A

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Adhesives, sealants
Industrial use
Epoxy resin
Recommended use : Adhesives, sealants

1.3. Supplier

Manufacturer
Magnolia Advanced Materials, Inc.
4360 Northeast Expressway
Atlanta, GA , 30340
USA
T 770-451-2777 [8:00 am - 4:30 pm US eastern time zone]
SDS@magnolia-adv-mat.com - www.magnolia-adv-mat.com

1.4. Emergency telephone number

Emergency number : INFOTRAC 1-352-323-3500 (International) | 1-800-535-5053 (North America) | Account 79439

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Skin corrosion/irritation Category 2	H315	Causes skin irritation
Serious eye damage/eye irritation Category 2	H319	Causes serious eye irritation
Skin sensitization, Category 1	H317	May cause an allergic skin reaction.

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) : Warning
Hazard statements (GHS US) : H315 - Causes skin irritation
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation
Precautionary statements (GHS US) : P261 - Avoid breathing fume.
P264 - Wash hands, forearms and face thoroughly after handling.
P272 - Contaminated work clothing must not be allowed out of the workplace.
P280 - Wear protective gloves.
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
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P363 - Wash contaminated clothing before reuse.
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

No additional information available

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
Epoxy phenol novolac resin	CAS-No.: 28064-14-4	25-35	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317
Reactive Diluent	CAS-No.: 17557-23-2	15-25	Skin Irrit. 2, H315 Skin Sens. 1, H317
Dodecachlorododecahydrodimethanodibenzocyclooctene	CAS-No.: 13560-89-9	5-15	Not classified

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 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 : Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact : 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 : Ventilate spillage area. Avoid contact with skin and eyes. 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

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.
Methods for cleaning up : Take up liquid spill into absorbent material.
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. Avoid contact with skin and eyes. Wear personal protective equipment. Avoid breathing dust/fume/gas/mist/vapors/spray.
Hygiene measures : 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 in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:
Protective gloves

Eye protection:
Safety glasses

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Paste. gel.
Color	:	white
Odor	:	slightly ethereal
Odor threshold	:	No data available
pH	:	No data available
Melting point	:	Not applicable
Freezing point	:	No data available
Boiling point	:	> 107.3 °C
Flash point	:	> 93.4 °C
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	:	≈ 0.58
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

VOC content : Negligible

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

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Reactive Diluent (17557-23-2)	
LD50 oral rat	4500 mg/kg (Rat, Literature study, Oral)
LD50 dermal rat	> 2100 mg/kg body weight (Rat, Literature study, Dermal)

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitization : May cause an allergic skin reaction.
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
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 : Toxic to aquatic life with long lasting effects.

Reactive Diluent (17557-23-2)	
LC50 - Fish [1]	100 mg/l (96 h, Pisces, QSAR)
EC50 - Crustacea [1]	39 – 57 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)

12.2. Persistence and degradability

Epoxy phenol novolac resin (28064-14-4)	
Persistence and degradability	Biodegradability in soil: no data available.

Reactive Diluent (17557-23-2)	
Persistence and degradability	Readily biodegradable in water.

Dodecachlorododecahydrodimethanodibenzocyclooctene (13560-89-9)	
Persistence and degradability	Not readily biodegradable in water.

12.3. Bioaccumulative potential

Epoxy phenol novolac resin (28064-14-4)	
Bioaccumulative potential	No bioaccumulation data available.

Reactive Diluent (17557-23-2)	
Partition coefficient n-octanol/water (Log Pow)	0.47 (QSAR, KOWWIN, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

Dodecachlorododecahydrodimethanodibenzocyclooctene (13560-89-9)	
BCF - Fish [1]	7.02 (Lepomis macrochirus, Static system, Fresh water, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	10.33 – 12.21 (QSAR)
Bioaccumulative potential	High potential for bioaccumulation (Log Kow > 5).

12.4. Mobility in soil

Reactive Diluent (17557-23-2)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.22 (log Koc, QSAR)
Ecology - soil	Highly mobile in soil.

Dodecachlorododecahydrodimethanodibenzocyclooctene (13560-89-9)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	8 (log Koc)
Ecology - soil	Adsorbs into the 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

DOT NA No : UN3082
UN-No. (TDG) : Not applicable
UN-No. (IMDG) : 3082
UN-No. (IATA) : 3082

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Environmentally hazardous substances, liquid, n.o.s. (Epoxy resin)
Proper Shipping Name (TDG) : Not applicable
Proper Shipping Name (IMDG) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin)
Proper Shipping Name (IATA) : Environmentally hazardous substance, liquid, n.o.s. (Epoxy resin)
Transport document description (DOT) : UN3082 Environmentally hazardous substances, liquid, n.o.s. (Epoxy resin), 9, III
Transport document description (IMDG) : UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin), 9, III
Transport document description (IATA) : UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Epoxy resin), 9, III

14.3. Transport hazard class(es)

DOT
Transport hazard class(es) (DOT) : 9
Hazard labels (DOT) : 9

TDG
Transport hazard class(es) (TDG) : Not applicable

IMDG
Transport hazard class(es) (IMDG) : 9
Hazard labels (IMDG) : 9

IATA

Transport hazard class(es) (IATA) : 9
Hazard labels (IATA) : 9

14.4. Packing group

Packing group (DOT) : III
Packing group (TDG) : Not applicable
Packing group (IMDG) : III
Packing group (IATA) : III

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

DOT

UN-No.(DOT)	:	UN3082
DOT Special Provisions (49 CFR 172.102)	:	8 - A hazardous substance that is not a hazardous waste may be shipped under the shipping description “Other regulated substances, liquid or solid, n.o.s.”, as appropriate. In addition, for solid materials, special provision B54 applies. 146 - This description may be used for a material that poses a hazard to the environment but does not meet the definition for a hazardous waste or a hazardous substance, as defined in 171.8 of this subchapter, or any hazard class as defined in Part 173 of this subchapter, if it is designated as environmentally hazardous by the Competent Authority of the country of origin, transit or destination. 173 - An appropriate generic entry may be used for this material. 335 - Mixtures of solids that are not subject to this subchapter and environmentally hazardous liquids or solids may be classified as “Environmentally hazardous substances, solid, n.o.s,” UN3077 and may be transported under this entry, provided there is no free liquid visible at the time the material is loaded or at the time the packaging or transport unit is closed. Each transport unit must be leak-proof when used as bulk packaging. IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 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). T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / 1 + a (tr - tf) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling. TP29 - A portable tank having a minimum test pressure of 1.5 bar (150.0 kPa) may be used provided the calculated test pressure is 1.5 bar or less based on the MAWP of the hazardous materials, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.
DOT Packaging Exceptions (49 CFR 173.xxx)	:	155
DOT Packaging Non Bulk (49 CFR 173.xxx)	:	203
DOT Packaging Bulk (49 CFR 173.xxx)	:	241
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	No limit
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	No limit
DOT Vessel Stowage Location	:	A - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel.

TDG

Emergency Response Guide (ERG) Number	:	171

IMDG

Special provision (IMDG)	:	274, 335, 969
Limited quantities (IMDG)	:	5 L
Excepted quantities (IMDG)	:	E1
Packing instructions (IMDG)	:	LP01, P001
Packing provisions (IMDG)	:	PP1
IBC packing instructions (IMDG)	:	IBC03
Tank instructions (IMDG)	:	T4
Tank special provisions (IMDG)	:	TP1, TP29
EmS-No. (Fire)	:	F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	:	S-F - SPILLAGE SCHEDULE Foxtrot - WATER-SOLUBLE MARINE POLLUTANTS
Stowage category (IMDG)	:	A

IATA

PCA Excepted quantities (IATA)	:	E1

PCA Limited quantities (IATA)	:	Y964
PCA limited quantity max net quantity (IATA)	:	30kgG
PCA packing instructions (IATA)	:	964
PCA max net quantity (IATA)	:	450L
CAO packing instructions (IATA)	:	964
CAO max net quantity (IATA)	:	450L
Special provision (IATA)	:	A97, A158, A197, A215
ERG code (IATA)	:	9L

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

Epoxy phenol novolac resin (28064-14-4)

Listed on the Canadian DSL (Domestic Substances List)

Reactive Diluent (17557-23-2)

Listed on the Canadian DSL (Domestic Substances List)

Dodecachlorododecahydrodimethanodibenzocyclooctene (13560-89-9)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

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

Revision date	:	08/05/2022
Other information	:	

Full text of H-phrases	
H315	Causes skin irritation
H317	May cause an allergic skin reaction.

Full text of H-phrases	
H319	Causes serious eye irritation

Abbreviations and acronyms	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified

Abbreviations and acronyms	
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Safety Data Sheet (SDS), USA

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Magnolia 91-B

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Date of issue: 9/24/1985 Revision date: 8/16/2022 Supersedes: 3/21/2022 Version: 14.1

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Name : Magnolia 91-B
Product code : 91-B

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Adhesives, sealants
Industrial use
Epoxy resin: hardener
Recommended use : Adhesives, sealants

1.3. Supplier

Manufacturer
Magnolia Advanced Materials, Inc.
4360 Northeast Expressway
Atlanta, GA , 30340
USA
T 770-451-2777 [8:00 am - 4:30 pm US eastern time zone]
SDS@magnolia-adv-mat.com - www.magnolia-adv-mat.com

1.4. Emergency telephone number

Emergency number : INFOTRAC 1-352-323-3500 (International) | 1-800-535-5053 (North America) | Account 79439

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.
Specific target organ toxicity (repeated exposure) Category 2	H373	May cause damage to organs through prolonged or repeated exposure

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) : Danger
Hazard 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

Precautionary statements (GHS US)	:	H351 - Suspected of causing cancer. H360 - May damage fertility or the unborn child. H373 - May cause damage to organs through prolonged or repeated exposure P260 - Do not breathe fume. P264 - Wash hands, forearms and face thoroughly after handling. P280 - Wear protective gloves. 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. 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 accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

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
Aliphatic amine	CAS-No.: 2855-13-2	15-25	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Chronic 3, H412
	CAS-No.: 1309-64-4	15-25	Carc. 2, H351
Diethylmethylbenzene diamine	CAS-No.: 68479-98-1	10-20	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 STOT RE 2, H373
	CAS-No.: 111-40-0	5-15	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 2 (Inhalation), H330 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT SE 3, H335

Name	Product identifier	%	GHS US classification
	CAS-No.: 112-24-3	1-10	Acute Tox. 4 (Dermal), H312 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412
	CAS-No.: 80-05-7	1-5	Eye Dam. 1, H318 Skin Sens. 1, H317 Repr. 1B, H360 STOT SE 3, H335
	CAS-No.: 2426-08-6	<1.0	Flam. Liq. 3, H226 Acute Tox. 3 (Dermal), H311 Acute Tox. 4 (Inhalation), H332 Skin Sens. 1, H317 Muta. 2, H341 Carc. 2, H351 STOT SE 3, H335

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 : Call a physician immediately.

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)

Symptoms/effects after skin contact : Burns. May cause an allergic skin reaction.

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.

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

For containment : Collect spillage.

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. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.

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

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:
Protective gloves

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
Appearance	:	Paste. gel.
Color	:	White to off-white
Odor	:	Amine-like
Odor threshold	:	No data available
pH	:	No data available
Melting point	:	Not applicable
Freezing point	:	No data available
Boiling point	:	> 107.3 °C
Flash point	:	> 93.4 °C
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	:	≈ 1.22
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

VOC content	:	Negligible

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

Acute toxicity (oral) : Harmful if swallowed.
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Magnolia 91-B	
ATE US (oral)	1213.91 mg/kg body weight

Aliphatic amine (2855-13-2)	
LD50 oral rat	1030 mg/kg (Equivalent or similar to OECD 401, Rat, Male, Experimental value, Oral, 14 day(s))
LD50 dermal rat	> 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 5.01 mg/l (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (aerosol), 14 day(s))

(1309-64-4)	
LD50 oral rat	> 20000 mg/kg (Rat, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 8300 mg/kg body weight (Rabbit, Experimental value, Dermal)
LC50 Inhalation - Rat	> 5.2 mg/l/4h (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male/female, Experimental value)

Diethylmethylbenzene diamine (68479-98-1)	
LD50 oral rat	738 mg/kg body weight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rat	> 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 2.45 mg/l (1 h, Rat, Male / female, Experimental value, Inhalation (aerosol))

(111-40-0)	
LD50 oral rat	1080 mg/kg body weight (Rat, Male, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	1090 mg/kg body weight (Rabbit, Experimental value, Dermal)

(111-40-0)	
LC50 Inhalation - Rat	92.1 mg/m³

(112-24-3)	
LD50 oral rat	1716 mg/kg body weight (BASF test, Rat, Experimental value, Oral)
LD50 dermal rabbit	1465 mg/kg body weight (BASF test, Rabbit, Experimental value, Dermal)

(2426-08-6)	
LD50 dermal rabbit	778 mg/kg body weight (24 h, Rabbit, Male / female, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat [ppm]	1030 ppm (8 h, Rat, Male, Experimental value, Inhalation (vapours))

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.

(1309-64-4)	
IARC group	2B - Possibly carcinogenic to humans

(2426-08-6)	
IARC group	2B - Possibly carcinogenic to humans

Reproductive toxicity : May damage fertility or the unborn child.
STOT-single exposure : Not classified

(111-40-0)	
STOT-single exposure	May cause respiratory irritation.

(80-05-7)	
STOT-single exposure	May cause respiratory irritation.

(2426-08-6)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.

Diethylmethylbenzene diamine (68479-98-1)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified
Viscosity, kinematic : No data available
Symptoms/effects after skin contact : Burns. May cause an allergic skin reaction.
Symptoms/effects after eye contact : Serious damage to eyes.
Symptoms/effects after ingestion : Burns.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Toxic to aquatic life with long lasting effects.

Aliphatic amine (2855-13-2)	
LC50 - Fish [1]	110 mg/l (EU Method C.1, 96 h, Leuciscus idus, Semi-static system, Fresh water, Experimental value, Lethal)

Aliphatic amine (2855-13-2)	
EC50 - Crustacea [1]	23 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
NOEC chronic crustacea	3 mg/l

(1309-64-4)	
LC50 - Fish [1]	14.4 mg/l (96 h, Pimephales promelas, Static system, Fresh water, Experimental value, Lethal)
LC50 - Other aquatic organisms [1]	1.77 mg/l (96 h, Hydrozoa, Static system, Fresh water, Experimental value, Antimony)
EC50 - Crustacea [1]	506 mg/l
ErC50 algae	> 36.6 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Antimony)

Diethylmethylbenzene diamine (68479-98-1)	
LC50 - Fish [1]	200 mg/l (DIN 38412-15, 48 h, Leuciscus idus, Static system, Fresh water, Experimental value, Nominal concentration)
EC50 - Crustacea [1]	0.5 mg/l (EU Method C.2, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Nominal concentration)
ErC50 algae	104 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, GLP)

(111-40-0)	
LC50 - Fish [1]	248 mg/l
EC50 - Crustacea [1]	16 mg/l
ErC50 algae	1164 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Selenastrum capricornutum, Static system, Fresh water, Experimental value, GLP)
NOEC chronic crustacea	5.6 mg/l

(112-24-3)	
LC50 - Fish [1]	495 mg/l (96 h, Pimephales promelas, Fresh water, Literature study)
EC50 - Crustacea [1]	31.1 mg/l (Equivalent or similar to OECD 202, 48 h, Daphnia magna, Literature study)
ErC50 algae	100 mg/l (DIN 38412-9, 72 h, Scenedesmus subspicatus, Literature study)

(80-05-7)	
EC50 - Crustacea [1]	1.1 mg/l
NOEC chronic fish	0.16 mg/l

(2426-08-6)	
LC50 - Fish [1]	65 mg/l (96 h, Oncorhynchus mykiss, Semi-static system, Fresh water, Experimental value, Nominal concentration)
EC50 - Crustacea [1]	2 mg/l
ErC50 algae	35 mg/l (96 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Nominal concentration)

12.2. Persistence and degradability

Aliphatic amine (2855-13-2)	
Persistence and degradability	Not readily biodegradable in water.

(1309-64-4)	
Persistence and degradability	Biodegradability in soil: not applicable. Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

Diethylmethylbenzene diamine (68479-98-1)	
Persistence and degradability	Not readily biodegradable in water.
Chemical oxygen demand (COD)	2.37 g O_2/g substance

(111-40-0)	
Persistence and degradability	Readily biodegradable in the soil. Readily biodegradable in water.

(112-24-3)	
Persistence and degradability	Not readily biodegradable in water.

(2426-08-6)	
Persistence and degradability	Not readily biodegradable in water.

12.3. Bioaccumulative potential

Aliphatic amine (2855-13-2)	
BCF - Fish [1]	1.827 – 3.16 (BCFBAF v3.01, Pisces, Estimated value)
Partition coefficient n-octanol/water (Log Pow)	0.99 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 23 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

(1309-64-4)	
BCF - Other aquatic organisms [1]	5.6 l/kg (17 day(s), Hyalella azteca, Fresh water, Experimental value, Fresh weight)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

Diethylmethylbenzene diamine (68479-98-1)	
BCF - Other aquatic organisms [1]	2.75 (BCFBAF v3.00, QSAR, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	1.4 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

(111-40-0)	
BCF - Fish [1]	0.3 – 6.3 (OECD 305: Bioconcentration: Flow-Through Fish Test, 8 week(s), Cyprinus carpio, Flow-through system, Fresh water, Experimental value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	-1.58 (Calculated, 20 °C)
Bioaccumulative potential	Not bioaccumulative.

(112-24-3)	
Partition coefficient n-octanol/water (Log Pow)	-2.65 (Estimated value, KOWWIN)
Bioaccumulative potential	Not bioaccumulative.

(2426-08-6)	
Partition coefficient n-octanol/water (Log Pow)	0.63 (Literature)

(2426-08-6)	
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

Aliphatic amine (2855-13-2)	
Surface tension	3470 mN/m (23 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.97 (log Koc, QSAR)
Ecology - soil	Low potential for adsorption in soil.

(1309-64-4)	
Surface tension	No data available in the literature
Ecology - soil	Adsorbs into the soil.

Diethylmethylbenzene diamine (68479-98-1)	
Surface tension	50 mN/m (0.5 %)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.12 – 2.23 (log Koc, SRC PCKOCWIN v1.66, QSAR)
Ecology - soil	Low potential for adsorption in soil.

(111-40-0)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.4 – 4.6 (log Koc, Other, Experimental value, GLP)
Ecology - soil	Adsorbs into the soil. Low potential for mobility in soil. Soil contaminant.

(112-24-3)	
Surface tension	No data available in the literature
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.885 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Highly mobile in soil.

(2426-08-6)	
Surface tension	No data available (test not performed)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.092 – 1.167 (log Koc, SRC PCKOCWIN v2.0, Calculated 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

DOT NA No	:	UN3267
UN-No. (TDG)	:	Not applicable
UN-No. (IMDG)	:	3267
UN-No. (IATA)	:	3267

14.2. UN proper shipping name

Proper Shipping Name (DOT)	:	Corrosive liquid, basic, organic, n.o.s. (DIETHYLENETRIAMINE SOLUTION, ISOPHORONE DIAMINE SOLUTION)
Proper Shipping Name (TDG)	:	Not applicable
Proper Shipping Name (IMDG)	:	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (DIETHYLENETRIAMINE SOLUTION, ISOPHORONE DIAMINE SOLUTION)
Proper Shipping Name (IATA)	:	Corrosive liquid, basic, organic, n.o.s. (DIETHYLENETRIAMINE SOLUTION, ISOPHORONE DIAMINE SOLUTION)
Transport document description (DOT)	:	UN3267 Corrosive liquid, basic, organic, n.o.s. (DIETHYLENETRIAMINE SOLUTION, ISOPHORONE DIAMINE SOLUTION), 8, III
Transport document description (IMDG)	:	UN 3267 CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (DIETHYLENETRIAMINE SOLUTION, ISOPHORONE DIAMINE SOLUTION), 8, III
Transport document description (IATA)	:	UN 3267 Corrosive liquid, basic, organic, n.o.s. (DIETHYLENETRIAMINE SOLUTION, ISOPHORONE DIAMINE SOLUTION), 8, III

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT)	:	8
Hazard labels (DOT)	:	8

TDG

Transport hazard class(es) (TDG)	:	Not applicable

IMDG

Transport hazard class(es) (IMDG)	:	8
Hazard labels (IMDG)	:	8

IATA

Transport hazard class(es) (IATA) : 8
Hazard labels (IATA) : 8

14.4. Packing group

Packing group (DOT) : III
Packing group (TDG) : Not applicable
Packing group (IMDG) : III
Packing group (IATA) : III

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

DOT

UN-No.(DOT) : UN3267
DOT Special Provisions (49 CFR 172.102) : IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 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..... 178.275(d)(3)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / 1 + a (tr - tf) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.
DOT Packaging Exceptions (49 CFR 173.xxx) : 154
DOT Packaging Non Bulk (49 CFR 173.xxx) : 203
DOT Packaging Bulk (49 CFR 173.xxx) : 241
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 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

Emergency Response Guide (ERG) Number : 153

IMDG

Special provision (IMDG) : 223, 274
Limited quantities (IMDG) : 5 L
Excepted quantities (IMDG) : E1
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.

IATA

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

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

antimony(III) oxide	CAS-No. 1309-64-4	15-25%
Bisphenol A	CAS-No. 80-05-7	1-5%

(1309-64-4)

CERCLA RQ	1000 lb

15.2. International regulations

CANADA

Aliphatic amine (2855-13-2)

Listed on the Canadian DSL (Domestic Substances List)

(1309-64-4)

Listed on the Canadian DSL (Domestic Substances List)

Diethylmethylbenzene diamine (68479-98-1)

Listed on the Canadian DSL (Domestic Substances List)

(111-40-0)

Listed on the Canadian DSL (Domestic Substances List)

(112-24-3)

Listed on the Canadian DSL (Domestic Substances List)

(80-05-7)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

(1309-64-4)

Listed on IARC (International Agency for Research on Cancer)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

(111-40-0)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

(112-24-3)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

(80-05-7)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

(2426-08-6)

Listed on IARC (International Agency for Research on Cancer)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. US State regulations

WARNING: This product can expose you to , which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Component	State or local regulations
Aliphatic amine(2855-13-2)	U.S. - New Jersey - Right to Know Hazardous Substance List
(1309-64-4)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
(111-40-0)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
(112-24-3)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
(80-05-7)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
(2426-08-6)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Revision date : 08/16/2022
Other information :

Full text of H-phrases	
H226	Flammable liquid and vapor
H302	Harmful if swallowed
H311	Toxic in contact with skin
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage
H319	Causes serious eye irritation
H330	Fatal if inhaled
H332	Harmful if inhaled
H335	May cause respiratory irritation
H341	Suspected of causing genetic defects
H351	Suspected of causing cancer.
H360	May damage fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure
H412	Harmful to aquatic life with long lasting effects

Abbreviations and acronyms	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road

Abbreviations and acronyms	
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.