Safety Data Sheet

Loctite 3421B Kit component

SDS No. : 152796
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Section 1. Identification of the substance/preparation and of the company/undertaking

Product name: Loctite 3421B Kit component

Other means of identification: Loctite 3421B Kit component
Product code: IDH925869
Recommended use of the chemical and restrictions on use

Intended use: Epoxy Hardener
Manufacturer/Importer/Distributor Representative Company

Henkel Adhesive Tech. Vietnam Co., Ltd,
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Emergency Telephone for Chemical Accidents: FOR EMERGENCIES ONLY (Spill, major leak, Fire, Exposure, or Accident). Call: +84 28 71006388

Section 2. Hazards identification

GHS Classification:

Hazard Class	Hazard Category
Skin corrosion/irritation	Category 1B
Serious eye damage/eye irritation	Category 1
Skin sensitizer	Category 1
Acute hazards to the aquatic environment	Category 1
Chronic hazards to the aquatic environment	Category 1

GHS label elements:

Hazard pictogram:



Signal word: Danger

Hazard statement:	H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H410 Very toxic to aquatic life with long lasting effects.

Precaution:

Prevention:	P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P264 Wash hands thoroughly after handling. P272 Contaminated work clothing should not be allowed out of the workplace. P273 Avoid release to the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection.
Response:	P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. P304+P340+P310 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician. 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. P363 Wash contaminated clothing before reuse. P391 Collect spillage.
Disposal:	P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Section 3. Composition / information on ingredients

Substance or Mixture:
Mixture

Declaration of hazardous chemical:

Hazard component CAS-No.	Content	GHS Classification
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine 68082-29-1	30- 60 %	Skin corrosion/irritation 2 H315 Serious eye damage/eye irritation 1 H318 Skin Sensitization 1 H317 Acute hazards to the aquatic environment 1 H400 Chronic hazards to the aquatic environment 1 H410
Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine 68082-29-1	10- 30 %	Skin corrosion/irritation 2 H315 Serious eye damage/eye irritation 1 H318 Skin Sensitization 1 H317 Acute hazards to the aquatic environment 2 H401 Chronic hazards to the aquatic environment 2 H411
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with 4,4'-isopropylidenediphenol -1-chloro-2,3-epoxypropane co-oligomer, tall-oil fatty acids, tetraethylenepentamine and triethylenetetramine 106906-26-7	10- 30 %	Acute hazards to the aquatic environment 1 H400 Chronic hazards to the aquatic environment 1 H410
benzyl alcohol 100-51-6	1- 10 %	Acute toxicity 4; Oral H302 Serious eye damage/eye irritation 2A H319 Skin Sensitization 1B H317
2,4,6-tris(dimethylaminomethyl)phenol 90-72-2	1- 10 %	Acute toxicity 4; Oral H302 Skin corrosion/irritation 1C H314 Serious eye damage/eye irritation 1 H318 Acute hazards to the aquatic environment 3 H402
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	1- 10 %	Acute toxicity 4; Ingestion H302 Acute toxicity 4; Dermal H312 Skin corrosion/irritation 1B H314 Serious eye damage/eye irritation 1 H318 Skin Sensitization 1 H317 Acute hazards to the aquatic environment 3 H402 Chronic hazards to the aquatic environment 3 H412
2-piperazin-1-ylethylamine 140-31-8	1- 10 %	Acute toxicity 4; Oral H302 Acute toxicity 3; Dermal H311 Skin corrosion/irritation 1B H314 Serious eye damage/eye irritation 1 H318 Skin Sensitization 1B H317 Specific target organ toxicity - repeated exposure 1; Inhalation H372 Acute hazards to the aquatic environment 3

		H402 Chronic hazards to the aquatic environment 3 H412
3,6-diazaoctanethylenediamine 112-24-3	0.1- 1 %	Acute toxicity 4; Ingestion H302 Acute toxicity 4; Dermal H312 Skin corrosion/irritation 1B H314 Skin Sensitization 1 H317 Acute hazards to the aquatic environment 3 H402 Chronic hazards to the aquatic environment 3 H412
Amines, polyethylenepoly-, tetraethylenepentamine fraction 90640-66-7	0.1- 1 %	Acute toxicity 5; Oral H303 Acute toxicity 4; Dermal H312 Skin corrosion/irritation 1B H314 Serious eye damage/eye irritation 1 H318 Skin Sensitization 1 H317 Acute hazards to the aquatic environment 2 H401 Chronic hazards to the aquatic environment 2 H411

Section 4. First aid measures

Inhalation: Move to fresh air. If symptoms persist, seek medical advice.

Skin contact: Rinse with running water and soap.
Obtain medical attention if irritation persists.

Eye contact: Rinse immediately with plenty of running water (for 10 minutes). Seek medical attention if necessary.

Ingestion: Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.

Section 5. Fire fighting measures

Suitable extinguishing media: Carbon dioxide, foam, powder

Improper extinguishing media: High pressure waterjet

Specific hazards arising from the chemical: In the event of a fire, carbon monoxide (CO), carbon dioxide (CO2) and nitrogen oxides (NOx) can be released.
In case of fire, keep containers cool with water spray.

Special protection equipment and precautions for firefighters: Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Section 6. Accidental release measures

Personal precautions: Avoid skin and eye contact.
Wear protective equipment.
Ensure adequate ventilation.

See advice in section 8

Environmental precautions: Do not empty into drains / surface water / ground water.

Clean-up methods: For small spills wipe up with paper towel and place in container for disposal.
For large spills absorb onto inert absorbent material and place in sealed container for disposal.
Wash spillage site thoroughly with soap and water or detergent solution.
Dispose of contaminated material as waste according to Section 13.

Section 7. Handling and storage

Handling: Use only in well-ventilated areas.
Avoid skin and eye contact.
Prolonged or repeated skin contact should be avoided to minimise any risk of sensitisation.
See advice in section 8

Storage: Store in a cool, well-ventilated place.
Refer to Technical Data Sheet.

Section 8. Exposure controls / personal protection

Components with specific control parameters for workplace:

Respiratory protection: Ensure adequate ventilation.
An approved mask or respirator fitted with an organic vapour cartridge should be worn if the product is used in a poorly ventilated area
Filter type: A (EN 14387)

Hand protection: Chemical-resistant protective gloves (EN 374).
Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374):
nitrile rubber (NBR; >= 0.4 mm thickness)
Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374):
nitrile rubber (NBR; >= 0.4 mm thickness)
This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection: Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing.
Protective eye equipment should conform to EN166.

Body protection: Wear suitable protective clothing.
Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Engineering controls:	Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product.
General protection and hygiene measures:	The workplace should be equipped with an emergency shower and eye-rinsing facility.
Hygienic measures:	Wash hands before work breaks and after finishing work. Do not eat, drink or smoke while working. Take off contaminated clothing and wash before reuse.

Section 9. Physical and chemical properties

Appearance:	Clear, Amber liquid
Odor:	Amine
Odor threshold (CA):	No data available.
pH:(Concentration: 100 g/l)	11.1
Melting point / freezing point:	Not applicable, Product is a liquid
Specific gravity:	No data available.
Boiling point:	> 180 °C (> 356 °F)
Flash point:	110 °C (230 °F)
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Lower explosive limit:	No data available.
Upper explosive limit:	No data available.
Vapor pressure: (; 21 °C (69.8 °F))	0.04 mbar
Vapor density:	> 1
Density:	1.1 g/cm31.1 g/cm3
Solubility:	Insoluble
Partition coefficient: n-octanol/water:	No data available.
Auto ignition:	No data available.
Decomposition temperature:	No data available.
Viscosity:	11,000.00 - 19,000.00 mPa.s (Brookfield; Instrument: RVT; 25 °C (77 °F); speed of rotation: 10 min-1; Spindle No: 6; Method: ;; LCT STM 10; Viscosity Brookfield)
VOC content: (2010/75/EC)	< 3.00 %

Section 10. Stability and reactivity

Reactivity/Incompatible materials:	Reaction with strong acids. Reacts with strong oxidants.
Chemical stability:	Stable under recommended storage conditions.
Conditions to avoid:	Stable under normal conditions of storage and use.
Hazardous decomposition products:	carbon oxides.

Section 11. Toxicological information

Oral toxicity:	Acute toxicity estimate (ATE) : > 2,000 mg/kg Method: Calculation method
Inhalative toxicity:	Acute toxicity estimate (ATE) : > 5 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method
Dermal toxicity:	Acute toxicity estimate (ATE) : > 2,000 mg/kg

Method: Calculation method

Health Effects:

Skin: Causes skin burns.
May cause an allergic skin reaction.
Eyes: Causes serious eye damage.
Symptoms of Overexposure**:** None known.

Acute oral toxicity:

Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine 68082-29-1	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rat
	Method	OECD Guideline 423 (Acute Oral toxicity)
Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine 68082-29-1	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rat
	Method	OECD Guideline 423 (Acute Oral toxicity)
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with 4,4'-isopropylidenediphenol -1-chloro-2,3-epoxypropane co-oligomer, tall-oil fatty acids, tetraethylenepentamine and triethylenetetramine 106906-26-7	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rat
	Method	not specified
benzyl alcohol 100-51-6	Value type	Acute toxicity estimate (ATE)
	Value	1,200 mg/kg
	Species	
	Method	Expert judgement
2,4,6-tris(dimethylaminomethyl)phenol 90-72-2	Value type	LD50
	Value	1,200 mg/kg
	Species	rat
	Method	not specified
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	Value type	LD50
	Value	1,716 mg/kg
	Species	rat
	Method	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
3,6-diazaoctanethylenediamine 112-24-3	Value type	LD50
	Value	1,591 mg/kg
	Species	rat
	Method	OECD Guideline 401 (Acute Oral Toxicity)
Amines, polyethylenepoly-, tetraethylenepentamine fraction 90640-66-7	Value type	LD50
	Value	3,221 mg/kg
	Species	rat
	Method	not specified

Acute inhalative toxicity:

benzyl alcohol 100-51-6	Value type	LC50
	Value	> 5.4 mg/l
	Exposure time	4 h
	Species	rat
	Method	OECD Guideline 403 (Acute Inhalation Toxicity)
2-piperazin-1-ylethylamine 140-31-8	Value type	Acute toxicity estimate (ATE)
	Value	> 10 mg/l
	Exposure time	4 h
	Species	
	Method	Expert judgement

Acute dermal toxicity:

Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine 68082-29-1	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rat
	Method	OECD Guideline 402 (Acute Dermal Toxicity)
Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine 68082-29-1	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rat
	Method	OECD Guideline 402 (Acute Dermal Toxicity)
benzyl alcohol 100-51-6	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rabbit
	Method	not specified
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	Value type	LD50
	Value	1,465 mg/kg
	Species	rabbit
	Method	OECD Guideline 402 (Acute Dermal Toxicity)
2-piperazin-1-ylethylamine 140-31-8	Value type	LD50
	Value	866 mg/kg
	Species	rabbit
	Method	Draize Test
3,6-diazaoctanethylenediamine 112-24-3	Value type	LD50
	Value	1,465 mg/kg
	Species	rabbit
	Method	OECD Guideline 402 (Acute Dermal Toxicity)
Amines, polyethylenepoly-, tetraethylenepentamine fraction 90640-66-7	Value type	LD50
	Value	1,260 mg/kg
	Species	rabbit
	Method	not specified

Skin corrosion/irritation:

Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine 68082-29-1	Result	irritating or corrosive
	Exposure time	
	Species	Human, EpiDermTM SIT (EPI-200), Reconstructed Human Epidermis (RHE)
	Method	OECD Guideline 439 (In Vitro Skin Irritation: Reconstructed Human Epidermis (RHE) Test Method)
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine 68082-29-1	Result	not corrosive
	Exposure time	
	Species	Human, in vitro skin model
	Method	OECD Guideline 431 (In Vitro Skin Corrosion: Reconstructed Human Epidermis (RHE) Test Method)
Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine 68082-29-1	Result	irritating or corrosive
	Exposure time	
	Species	Human, EpiDermTM SIT (EPI-200), Reconstructed Human Epidermis (RHE)
	Method	OECD Guideline 439 (In Vitro Skin Irritation: Reconstructed Human Epidermis (RHE) Test Method)
Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine 68082-29-1	Result	not corrosive
	Exposure time	
	Species	Human, in vitro skin model
	Method	OECD Guideline 431 (In Vitro Skin Corrosion: Reconstructed

		Human Epidermis (RHE) Test Method)
benzyl alcohol 100-51-6	Result	not irritating
	Exposure time	4 h
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
2,4,6-tris(dimethylaminomethyl)phenol 90-72-2	Result	corrosive
	Exposure time	4 h
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
2,4,6-tris(dimethylaminomethyl)phenol 90-72-2	Result	Sub-Category 1C (corrosive)
	Exposure time	
	Species	Corrositex Biobarrier Membrane (reconstituted collagen matrix)
	Method	OECD Guideline 435 (In Vitro Membrane Barrier Test Method for Skin Corrosion)
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	Result	corrosive
	Exposure time	
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
2-piperazin-1-ylethylamine 140-31-8	Result	corrosive
	Exposure time	20 min
	Species	rabbit
	Method	not specified
3,6-diazaoctanethylenediamine 112-24-3	Result	corrosive
	Exposure time	
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Amines, polyethylenepoly-, tetraethylenepentamine fraction 90640-66-7	Result	corrosive
	Exposure time	
	Species	Corrositex Biobarrier Membrane (reconstituted collagen matrix)
	Method	OECD Guideline 435 (In Vitro Membrane Barrier Test Method for Skin Corrosion)

Serious eye damage/irritation:

Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine 68082-29-1	Result	corrosive
	Exposure time	
	Species	rabbit
	Method	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine 68082-29-1	Result	Category 1 (irreversible effects on the eye)
	Exposure time	
	Species	rabbit
	Method	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
benzyl alcohol 100-51-6	Result	irritating
	Exposure time	24 h
	Species	rabbit
	Method	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	Result	Category 1 (irreversible effects on the eye)
	Exposure time	
	Species	rabbit
	Method	equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion)
2-piperazin-1-ylethylamine 140-31-8	Result	Category 1 (irreversible effects on the eye)
	Exposure time	
	Species	rabbit
	Method	not specified

Respiratory or skin sensitization:

Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine 68082-29-1	Result	sensitising
	Test type	Mouse local lymphnode assay (LLNA)
	Species	mouse
	Method	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine 68082-29-1	Result	sensitising
	Test type	Guinea pig maximisation test
	Species	guinea pig
	Method	equivalent or similar to OECD Guideline 406 (Skin Sensitisation)
Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine 68082-29-1	Result	sensitising
	Test type	Mouse local lymphnode assay (LLNA)
	Species	mouse
	Method	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine 68082-29-1	Result	sensitising
	Test type	Guinea pig maximisation test
	Species	guinea pig
	Method	equivalent or similar to OECD Guideline 406 (Skin Sensitisation)
2,4,6-tris(dimethylaminomethyl)phenol 90-72-2	Result	not sensitising
	Test type	Buehler test
	Species	guinea pig
	Method	OECD Guideline 406 (Skin Sensitisation)
2,4,6-tris(dimethylaminomethyl)phenol 90-72-2	Result	not sensitising
	Test type	Guinea pig maximisation test
	Species	guinea pig
	Method	OECD Guideline 406 (Skin Sensitisation)
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	Result	Sensitizing
	Test type	Buehler test
	Species	guinea pig
	Method	equivalent or similar to OECD Guideline 406 (Skin Sensitisation)
2-piperazin-1-ylethylamine 140-31-8	Result	sensitising
	Test type	Guinea pig maximisation test
	Species	guinea pig
	Method	equivalent or similar to OECD Guideline 406 (Skin Sensitisation)
3,6-diazaoctanethylenediamine 112-24-3	Result	sensitising
	Test type	Guinea pig maximisation test
	Species	guinea pig
	Method	equivalent or similar to OECD Guideline 406 (Skin Sensitisation)
Amines, polyethylenepoly-, tetraethylenepentamine fraction 90640-66-7	Result	Sensitizing
	Test type	Guinea pig maximisation test
	Species	guinea pig
	Method	equivalent or similar to OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine 68082-29-1	Result	negative
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine 68082-29-1	Result	negative
	Type of study / Route of administration	mammalian cell gene mutation assay
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
benzyl alcohol 100-51-6	Result	negative
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without
	Method	equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay)
benzyl alcohol 100-51-6	Result	negative
	Type of study / Route of administration	intraperitoneal
	Metabolic activation / Exposure time	
	Species	mouse
	Method	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
2,4,6-tris(dimethylaminomethyl)phenol 90-72-2	Result	negative
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 471 (Bacterial Reverse Mutation Assay)
2,4,6-tris(dimethylaminomethyl)phenol 90-72-2	Result	negative
	Type of study / Route of administration	in vitro mammalian chromosome aberration test
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
2,4,6-tris(dimethylaminomethyl)phenol 90-72-2	Result	negative
	Type of study / Route of administration	mammalian cell gene mutation assay
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	Result	positive
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	Result	negative
	Type of study / Route of administration	in vitro mammalian cell micronucleus test
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test)
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	Result	negative
	Type of study / Route of administration	intraperitoneal
	Metabolic activation / Exposure time	
	Species	mouse
	Method	equivalent or similar to OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
2-piperazin-1-ylethylamine 140-31-8	Result	negative
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without
	Method	equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay)
2-piperazin-1-ylethylamine 140-31-8	Result	negative
	Type of study / Route of administration	mammalian cell gene mutation assay
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 490 (In Vitro Mammalian Cell Gene Mutation Tests Using the Thymidine Kinase Gene)
2-piperazin-1-ylethylamine 140-31-8	Result	negative
	Type of study / Route of administration	intraperitoneal
	Metabolic activation / Exposure time	
	Species	mouse
	Method	not specified
3,6-diazaoctanethylenediamine 112-24-3	Result	positive
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)

	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 471 (Bacterial Reverse Mutation Assay)
3,6-diazaoctanethylenediamine 112-24-3	Result	negative
	Type of study / Route of administration	DNA damage and repair assay, unscheduled DNA synthesis in mammalian cells in vitro
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 482 (Genetic Toxicology: DNA Damage and Repair, Unscheduled DNA Synthesis in Mammalian Cells In Vitro)
3,6-diazaoctanethylenediamine 112-24-3	Result	negative
	Type of study / Route of administration	intraperitoneal
	Metabolic activation / Exposure time	
	Species	mouse
	Method	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Amines, polyethylenepoly-, tetraethylenepentamine fraction 90640-66-7	Result	positive
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Amines, polyethylenepoly-, tetraethylenepentamine fraction 90640-66-7	Result	positive
	Type of study / Route of administration	mammalian cell gene mutation assay
	Metabolic activation / Exposure time	with and without
	Method	equivalent or similar to OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Amines, polyethylenepoly-, tetraethylenepentamine fraction 90640-66-7	Result	positive
	Type of study / Route of administration	sister chromatid exchange assay in mammalian cells
	Metabolic activation / Exposure time	with and without
	Method	equivalent or similar to OECD Guideline 479 (Genetic Toxicology: In Vitro Sister Chromatid Exchange Assay in Mammalian Cells)
Amines, polyethylenepoly-, tetraethylenepentamine fraction 90640-66-7	Result	negative
	Type of study / Route of administration	in vitro mammalian cell micronucleus test
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test)
Amines, polyethylenepoly-, tetraethylenepentamine fraction 90640-66-7	Result	negative
	Type of study / Route of administration	intraperitoneal
	Metabolic activation / Exposure time	
	Species	mouse
	Method	equivalent or similar to OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)

Repeated dose toxicity:

benzyl alcohol 100-51-6	Result	NOAEL=400 mg/kg
	Route of application	oral: gavage
	Exposure time / Frequency of treatment	13 weeksonce daily, 5 days/week
	Species	rat
	Method	equivalent or similar to OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	Result	LOAEL=50 mg/kg
	Route of application	oral: gavage
	Exposure time / Frequency of treatment	26 wdaily
	Species	rat
	Method	equivalent or similar to OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
2-piperazin-1-ylethylamine 140-31-8	Result	NOAEL=2000 ppm
	Route of application	oral: drinking water
	Exposure time / Frequency of treatment	>= 28 ddaily
	Species	rat
	Method	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
2-piperazin-1-ylethylamine 140-31-8	Result	NOAEL=50 mg/m3
	Route of application	inhalation
	Exposure time / Frequency of treatment	13 w6 h/d, 5 d/w
	Species	rat
	Method	OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)
2-piperazin-1-ylethylamine 140-31-8	Result	NOAEL=> 1,000 mg/kg
	Route of application	dermal
	Exposure time / Frequency of treatment	29 d6 h/d, 5 d/w
	Species	rat
	Method	OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)
3,6-diazaoctanethylenediamine 112-24-3	Result	LOAEL=50 mg/kg
	Route of application	oral: gavage
	Exposure time / Frequency of treatment	26 wdaily
	Species	rat
	Method	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
3,6-diazaoctanethylenediamine 112-24-3	Result	NOAEL=50 mg/kg
	Route of application	oral: gavage
	Exposure time / Frequency of treatment	26 wdaily
	Species	rat
	Method	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Amines, polyethylenepoly-, tetraethylenepentamine fraction 90640-66-7	Result	LOAEL=50 mg/kg
	Route of application	oral: gavage
	Exposure time / Frequency of treatment	26 wdaily
	Species	rat
	Method	equivalent or similar to OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Amines, polyethylenepoly-, tetraethylenepentamine fraction 90640-66-7	Result	NOAEL=200 mg/kg
	Route of application	dermal
	Exposure time / Frequency of treatment	20 d6 h/d, 5 d/w
	Species	rabbit
	Method	OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)

Section 12. Ecological information

General ecological information: Do not empty into drains / surface water / ground water.

Ecotoxicity: H410 Very toxic to aquatic life with long lasting effects.

Toxicity:

Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine 68082-29-1	Value type	LL50
	Value	> 0.15 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Oncorhynchus mykiss
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
	Value type	NOELR
	Value	0.1 mg/l
	Acute Toxicity Study	Fish
	Exposure time	34 d
	Species	Oncorhynchus mykiss
	Method	OECD Guideline 210 (fish early life stage toxicity test)
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine 68082-29-1	Value type	EC50
	Value	7.07 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine 68082-29-1	Value type	EC50
	Value	0.15 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	EC10
	Value	0.022 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine 68082-29-1	Value type	EC10
	Value	130 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	3 h
	Species	activated sludge of a predominantly domestic sewage
	Method	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine 68082-29-1	Value type	LC50
	Value	7.07 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Danio rerio
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine 68082-29-1	Value type	EC50
	Value	7.07 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine 68082-29-1	Value type	EC50
	Value	4.34 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	NOEC
	Value	0.5 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty	Value type	EC50
	Value	384 mg/l

acids and triethylenetetramine 68082-29-1	Acute Toxicity Study	Bacteria
	Exposure time	3 h
	Species	
	Method	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with 4,4'-isopropylidenediphenol -1-chloro-2,3-epoxypropane co-oligomer, tall-oil fatty acids, tetraethylenepentamine and triethylenetetramine 106906-26-7	Value type	EC50
	Value	0.048 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	not specified
benzyl alcohol 100-51-6	Value type	LC50
	Value	460 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Pimephales promelas
	Method	EPA OPP 72-1 (Fish Acute Toxicity Test)
benzyl alcohol 100-51-6	Value type	EC50
	Value	230 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
benzyl alcohol 100-51-6	Value type	EC50
	Value	770 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	NOEC
	Value	310 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
benzyl alcohol 100-51-6	Value type	EC10
	Value	658 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	17 h
	Species	Pseudomonas putida
	Method	DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm-Test)
2,4,6-tris(dimethylaminomethyl)phenol 90-72-2	Value type	LC50
	Value	153 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Brachydanio rerio (new name: Danio rerio)
	Method	ISO 7346-1 (Determination of the Acute Lethal Toxicity of Substances to a Freshwater Fish [Brachydanio rerio Hamilton-Buchanan (Teleostei, Cyprinidae)]
2,4,6-tris(dimethylaminomethyl)phenol 90-72-2	Value type	EC50
	Value	> 100 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
2,4,6-tris(dimethylaminomethyl)phenol 90-72-2	Value type	EC50
	Value	46.7 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	NOEC
	Value	6.44 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
2,4,6-tris(dimethylaminomethyl)phenol	Value type	EC0
	Value	27 mg/l

90-72-2	Acute Toxicity Study	Bacteria
	Exposure time	16 h
	Species	Pseudomonas putida
	Method	DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm-Test)
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	Value type	LC50
	Value	330 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Pimephales promelas
	Method	other guideline:
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	Value type	EC50
	Value	31 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	Value type	EC50
	Value	20 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	EC10
	Value	1.34 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata (reported as Raphidocelis subcapitata)
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-piperazin-1-ylethylamine 140-31-8	Value type	LC50
	Value	2,190 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Pimephales promelas
	Method	other guideline:
2-piperazin-1-ylethylamine 140-31-8	Value type	EC50
	Value	58 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
2-piperazin-1-ylethylamine 140-31-8	Value type	EC50
	Value	> 1,000 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Raphidocelis subcapitata (new name: Pseudokirchneriella subcapitata)
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	NOEC
	Value	0.5 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-piperazin-1-ylethylamine 140-31-8	Value type	EC50
	Value	511 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	2 h
	Species	other:
	Method	ISO DIS 9509 (Assessing the Inhibition of Nitrification of Activated Sludge Microorganisms by Chemicals and Waste Waters)
3,6-diazaoctanethylenediamine 112-24-3	Value type	LC50
	Value	570 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Poecilia reticulata
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
3,6-diazaoctanethylenediamine 112-24-3	Value type	EC50
	Value	31 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna

	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
3,6-diazaoctanethylenediamine 112-24-3	Value type	EC50
	Value	20 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
3,6-diazaoctanethylenediamine 112-24-3	Value type	EC0
	Value	137 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	30 min
	Species	Pseudomonas putida
	Method	DIN 38412, part 27 (Bacterial oxygen consumption test)
Amines, polyethylenepoly-, tetraethylenepentamine fraction 90640-66-7	Value type	LC50
	Value	420 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Poecilia reticulata
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
Amines, polyethylenepoly-, tetraethylenepentamine fraction 90640-66-7	Value type	EC50
	Value	24.1 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Amines, polyethylenepoly-, tetraethylenepentamine fraction 90640-66-7	Value type	EC50
	Value	6.8 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	NOEC
	Value	0.5 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
Amines, polyethylenepoly-, tetraethylenepentamine fraction 90640-66-7	Value type	EC50
	Value	97.3 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	2 h
	Species	other:
	Method	other guideline:

Persistence and degradability:

Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine 68082-29-1	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	15 %
	Method	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
	Result	not inherently biodegradable
	Route of application	aerobic
	Degradability	19 %
	Method	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine 68082-29-1	Result	not inherently biodegradable
	Route of application	no data
	Degradability	19 %
	Method	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
	Result	not readily biodegradable.
	Route of application	no data
	Degradability	0 - 70 %
	Method	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
benzyl alcohol 100-51-6	Result	readily biodegradable
	Route of application	aerobic
	Degradability	92 - 96 %
	Method	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))

2,4,6-tris(dimethylaminomethyl)phenol 90-72-2	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	4 %
	Method	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	0 %
	Method	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
	Result	not inherently biodegradable
	Route of application	aerobic
	Degradability	20 %
	Method	OECD Guideline 302 A (Inherent Biodegradability: Modified SCAS Test)
2-piperazin-1-ylethylamine 140-31-8	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	0 %
	Method	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
3,6-diazaoctanethylenediamine 112-24-3	Result	not inherently biodegradable
	Route of application	aerobic
	Degradability	0 %
	Method	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)
	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	0 %
	Method	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Amines, polyethylenepoly-, tetraethylenepentamine fraction 90640-66-7	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	0 %
	Method	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
	Result	not inherently biodegradable
	Route of application	aerobic
	Degradability	17 %
	Method	OECD Guideline 302 A (Inherent Biodegradability: Modified SCAS Test)

Bioaccumulative potential / Mobility in soil:

Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine 68082-29-1	LogPow	10.34
	Temperature	
	Method	QSAR (Quantitative Structure Activity Relationship)
Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine 68082-29-1	LogPow	10.34
	Temperature	
	Method	QSAR (Quantitative Structure Activity Relationship)
benzyl alcohol 100-51-6	LogPow	1.05
	Temperature	20 °C
	Method	EU Method A.8 (Partition Coefficient)
2,4,6-tris(dimethylaminomethyl)phenol 90-72-2	LogPow	-0.66
	Temperature	21.5 °C
	Method	EPA OPPTS 830.7550 (Partition Coefficient, n-octanol / H2O, Shake Flask Method)
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	LogPow	-2.65
	Temperature	
	Method	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
2-piperazin-1-ylethylamine 140-31-8	LogPow	-1.48
	Temperature	20 °C
	Method	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
3,6-diazaoctanethylenediamine 112-24-3	LogPow	-2.65
	Temperature	
	Method	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Amines, polyethylenepoly-, tetraethylenepentamine fraction 90640-66-7	LogPow	-3.16
	Temperature	
	Method	QSAR (Quantitative Structure Activity Relationship)

Section 13. Disposal considerations

Product

Method of disposal: Dispose of in accordance with local and national regulations.

Packaging

Disposal of uncleaned packages: Packaging that cannot be cleaned are to be disposed of in the same manner as the product.

Section 14. Transport information

Road transport ADR:

Class:	8
Packing group:	II
Classification code:	C7
Hazard ident. number:	80
UN no.:	2735
Label:	8
Technical name:	AMINES, LIQUID, CORROSIVE, N.O.S. (2,4,6-Tris(dimethyl amino methyl) phenole,Amines, polyethylenepoly-, triethylenetetramine fraction)

Railroad transport RID:

Class:	8
Packing group:	II
Classification code:	C7
Hazard ident. number:	80
UN no.:	2735
Label:	8
Technical name:	AMINES, LIQUID, CORROSIVE, N.O.S. (2,4,6-Tris(dimethyl amino methyl) phenole,Amines, polyethylenepoly-, triethylenetetramine fraction)

Inland water transport ADN:

Class:	8
Packing group:	II
Classification code:	C7
Hazard ident. number:	80
UN no.:	2735
Label:	8
Technical name:	AMINES, LIQUID, CORROSIVE, N.O.S. (2,4,6-Tris(dimethyl amino methyl) phenole,Amines, polyethylenepoly-, triethylenetetramine fraction)

Marine transport IMDG:

Class:	8
Packing group:	II
UN no.:	2735
Label:	8
EmS:	F-A ,S-B

Seawater pollutant:	Marine pollutant
Proper shipping name:	AMINES, LIQUID, CORROSIVE, N.O.S. (2,4,6-Tris(dimethyl amino methyl) phenole,Amines, polyethylenepoly-, triethylenetetramine fraction,Polyamide/epoxy adduct)

Air transport IATA:

Class:	8
Packing group:	II
Packaging instructions (passenger):	851
Packaging instructions (cargo):	855
UN no.:	2735
Label:	8
Proper shipping name:	Amines, liquid, corrosive, n.o.s. (2,4,6-Tris(dimethyl amino methyl) phenole,Amines, polyethylenepoly-, triethylenetetramine fraction)

Section 15. Regulatory information

Regulatory Information: This Safety Data Sheet has been generated based on

LAW ON CHEMICALS No. 69/2025/QH15, issued on June 14, 2025;

Decree No. 24/2026/NĐ-CP, issued on January 17, 2026, ON THE LISTS OF CHEMICALS GOVERNED BY THE LAW ON CHEMICALS;

Decree No. 25/2026/NĐ-CP, issued on January 17, 2026, DETAILED REGULATIONS AND MEASURES FOR ORGANIZING AND GUIDING THE IMPLEMENTATION OF CERTAIN ARTICLES OF THE LAW ON CHEMICALS CONCERNING THE DEVELOPMENT OF THE CHEMICAL INDUSTRY AND CHEMICAL SAFETY AND SECURITY;

Decree No. 26/2026/NĐ-CP, issued on January 17, 2026, DETAILED REGULATIONS AND GUIDELINES FOR IMPLEMENTING CERTAIN ARTICLES OF THE LAW ON CHEMICALS REGARDING THE MANAGEMENT OF CHEMICAL ACTIVITIES AND HAZARDOUS CHEMICALS IN PRODUCTS AND GOODS;

Circular No. 01/2026/TT-BCT, issued on January 17, 2026, DETAILED REGULATIONS AND GUIDELINES FOR IMPLEMENTING CERTAIN ARTICLES OF THE LAW ON CHEMICALS AND GOVERNMENT DECREE NO. 26/2026/ND-CP DETAILING AND GUIDING THE IMPLEMENTATION OF CERTAIN ARTICLES OF THE LAW ON CHEMICALS REGARDING THE MANAGEMENT OF CHEMICAL ACTIVITIES AND HAZARDOUS CHEMICALS IN PRODUCTS AND GOODS;

Circular No. 02/2026/TT-BCT, issued on January 17, 2026, REGULATIONS ON SOME IMPLEMENTATION MEASURES OF THE LAW ON CHEMICALS AND GOVERNMENT DECREE NO. 25/2026/ND-CP DETAILING AND PROVIDING MEASURES FOR ORGANIZING AND GUIDING THE IMPLEMENTATION OF SOME ARTICLES OF THE LAW ON CHEMICALS CONCERNING THE DEVELOPMENT OF THE CHEMICAL INDUSTRY AND CHEMICAL SAFETY AND SECURITY;

Decree No. 161/2024/ND-CP, issued on December 18, 2024, ON LIST OF DANGEROUS GOODS, TRANSPORT OF DANGEROUS GOODS AND PROCEDURES FOR ISSUANCE OF LICENSES OR CERTIFICATES OF COMPLETION OF TRAINING PROGRAMS FOR DRIVERS OR ESCORTS TRANSPORTING DANGEROUS GOODS BY ROAD;

Decree No. 34/2024/NĐ-CP, issued on March 31, 2024, ON LIST OF DANGEROUS GOODS, TRANSPORT OF DANGEROUS GOODS BY INLAND WATERCRAFT;

Decree No. 33/2024/NĐ-CP, issued on March 27, 2024, IMPLEMENTING THE CONVENTION ON THE PROHIBITION OF THE DEVELOPMENT, PRODUCTION, STOCKPILING AND USE OF CHEMICAL WEAPONS AND ON THEIR;

Decree No. 37/2026/NĐ-CP, issued on January 23, 2026, ELABORATING CERTAIN ARTICLES AND MEASURES FOR ORGANIZING AND GUIDING THE IMPLEMENTATION OF THE LAW ON PRODUCT AND GOODS QUALITY.

If other regulatory information applies that is not already provided or updated elsewhere in this Safety Data Sheet, then it is described in this subsection.

Global inventory status:

Regulatory list	Notification
TCSI	yes
TSCA	yes
DSL	yes
IECSC	yes

Section 16. Other information

Disclaimer:

This Safety Data Sheet has been generated based on Law On Chemicals No. 69/2025/QH15; Decree No. 24/2026/NĐ-CP; Decree No. 25/2026/NĐ-CP; Decree No. 26/2026/NĐ-CP; Circular No. 01/2026/TT-BCT; Circular No. 02/2026/TT-BCT; Decree No. 161/2024/ND-CP; Decree No. 34/2024/NĐ-CP; Decree No. 33/2024/NĐ-CP, and Decree No. 37/2026/NĐ-CP.
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This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.
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