Section 1. Identification of the substance/preparation and of the company/undertaking

Product name: LOCTITE EA E-60NC 50ML PTB

Other means of identification: LOCTITE EA E-60NC 50ML PTB
Product code: IDH701990
Recommended use of the chemical and restrictions on use

Intended use: Part B of 2-Component Epoxy Adhesive.
Manufacturer/Importer/Distributor Representative Company

Henkel Adhesive Tech. Vietnam Co., Ltd,
No. 7, Road 9A Bien Hoa II Industrial Zone,
Bien Hoa City,
810000 Dong Nai Province

Vietnam

Phone: +84 (28) 7100 6301
Fax-no.: +84 (28) 7100 6300

E-mail address of person responsible for Safety Data Sheet: ap-ua-psra.sea@henkel.com

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	Route of Exposure	Target organ
Acute toxicity	Category 4	Oral	
Acute toxicity	Category 4	Inhalation	
Acute toxicity	Category 3	Dermal	
Skin corrosion/irritation	Category 1A		
Serious eye damage/eye irritation	Category 1		
Skin sensitizer	Category 1		
Toxic to reproduction	Category 2		
Specific target organ toxicity - repeated exposure	Category 2		Kidney Liver Heart skeletal muscle
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:
H302+H332 Harmful if swallowed or if inhaled.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

Precaution:

Prevention:
P201 Obtain special instructions before use.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response:
P301+P310+P330 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician. Rinse mouth.
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.
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.
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
4-nonylphenol, branched 84852-15-3	30- 60 %	Acute toxicity 4; Ingestion H302 Skin corrosion/irritation 1B H314 Reproductive toxicant. 2 H361 Acute hazards to the aquatic environment 1 H400 Chronic hazards to the aquatic environment 1 H410
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine) 6864-37-5	30- 60 %	Acute toxicity 4; Oral H302 Acute toxicity 2; Inhalation H330 Acute toxicity 3; Dermal H311 Skin corrosion/irritation 1A H314 Serious eye damage/eye irritation 1 H318 Specific target organ toxicity - repeated exposure 2 H373 Acute hazards to the aquatic environment 2 H401 Chronic hazards to the aquatic environment 2 H411
benzyl alcohol 100-51-6	1- 10 %	Acute toxicity 4; Oral H302 Serious eye damage/eye irritation 2A H319 Skin Sensitization 1B H317
N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3	0.1- 1 %	Flammable liquids 4 H227 Acute toxicity 5; Oral H303 Acute toxicity 4; Inhalation H332 Skin corrosion/irritation 3 H316 Serious eye damage/eye irritation 1 H318 Skin Sensitization 1A H317 Specific target organ toxicity - repeated exposure 2; Inhalation H373 Acute hazards to the aquatic environment 2 H401

Section 4. First aid measures

Inhalation: Move to fresh air, consult doctor if complaint persists.

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 from a specialist.
Ingestion:	Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.
Indication of immediate medical attention and special treatment needed:	See section: Description of first aid measures

Section 5. Fire fighting measures

Suitable extinguishing media:	Foam, extinguishing powder, carbon dioxide. Water spray jet
Improper extinguishing media:	High pressure waterjet
Specific hazards arising from the chemical:	Danger of decomposition if exposed to heat.
Special protection equipment and precautions for firefighters:	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
Hazardous combustion products:	See section 10.
Additional fire fighting advice:	Dispose of combustion residues and contaminated fire-fighting water in accordance with statutory regulations.

Section 6. Accidental release measures

Personal precautions:	Immediately remove soiled or soaked clothing. Ensure adequate ventilation. Avoid contact with skin and eyes. Wear protective equipment. See advice in section 8
Environmental precautions:	Do not empty into drains / surface water / ground water.
Clean-up methods:	Remove mechanically. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Dispose of contaminated material as waste according to Section 13.

Section 7. Handling and storage

Handling:	Ensure good ventilation/suction at the workplace. Vapours should be extracted to avoid inhalation. Avoid skin and eye contact. See advice in section 8
Storage:	Store in sealed original container. Store in locked premises or with access restricted to especially instructed personnel.Store in a cool, dry place. Ensure that storage and workrooms are adequately ventilated. Keep away from heat and direct sunlight. Refer to Technical Data Sheet. Store in a cool, dry place. Ensure that storage and workrooms are adequately ventilated. Keep away from heat and direct sunlight.

Section 8. Exposure controls / personal protection

Components with specific control parameters for workplace:

Respiratory protection:	In case of insufficient ventilation, wear suitable respiratory equipment. Filter type: A (EN 14387) Filter type: B The filters mentioned shall be combined, they shall be used at the same time.
Hand protection:	Use of Butyl or Nitrile Rubber gloves is recommended. Please note that in practice the working life of chemical resistant gloves may be considerably reduced as a result of many influencing factors (e.g. temperature). Suitable risk assessment should be carried out by the end user. 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:	Light yellow Liquid
Odor:	Mild
Odor threshold (CA):	No data available.
pH:(Concentration: 100 %)	10 - 12
Melting point / freezing point:	Not applicable, Product is a liquid
Specific gravity:	No data available.
Boiling point:	> 93 °C (> 199.4 °F)
Flash point: (Setaflash Closed Cup; ASTM D3828 Method B)	> 93 °C (> 199.4 °F)
Evaporation rate:	No data available.
Flammability (solid, gas):	The product is not flammable.
Lower explosive limit:	No data available.
Upper explosive limit:	No data available.
Vapor pressure: (; 20 °C (68 °F))	< 700 mbar
Vapor density:	> 1
Density:	0.95 g/cm3
Solubility:	Largely insoluble. (20 °C)
Partition coefficient: n-octanol/water:	No data available.
Auto ignition:	Not available.
Decomposition temperature:	No data available.

Viscosity:	No data available.
VOC content: (2010/75/EC)	< 3 %

Section 10. Stability and reactivity

Reactivity/Incompatible materials:	Oxidizing agents, acids, halogens and halogenated compounds. Reaction with strong bases Will cause some corrosion to copper alloys and aluminum. Do not mix with nitric acid or sodium nitrite. Reaction with some curing agents may produce an exothermic reaction which in large masses could cause runaway polymerization.
Chemical stability:	Stable under recommended storage conditions.
Conditions to avoid:	Avoid moisture. Danger of decomposition if exposed to heat. Avoid mixing resin (Part A) and curing agent (Part B) unless you plan to use immediately. Failure to observe these precautions may result in excessive heat build-up causing an exotherm.
Hazardous decomposition products:	Hydrocarbons Irritating organic vapours. At higher temperature ammonia or amine derivatives may be generated. At higher temperature carbon oxides and nitrogen oxides may be generated. May produce fumes when heated to decomposition. Fumes may contain carbon monoxide and other toxic fumes. See section 5.

Section 11. Toxicological information

Oral toxicity:	Acute toxicity estimate (ATE) : 600.89 mg/kg Method: Calculation method
Inhalative toxicity:	Acute toxicity estimate (ATE) : 1.06 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method
Dermal toxicity:	Acute toxicity estimate (ATE) : 507.06 mg/kg Method: Calculation method

Symptoms of Overexposure**:** INGESTION: Nausea, vomiting, diarrhea, abdominal pain.

RESPIRATORY: Irritation, coughing, shortness of breath, chest tightness.
SKIN: Redness, inflammation.
Causes burns.

Acute oral toxicity:

4-nonylphenol, branched 84852-15-3	Value type	LD50
	Value	1,412 mg/kg
	Species	rat
	Method	not specified
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine) 6864-37-5	Value type	LD50
	Value	320 - 460 mg/kg
	Species	rat
	Method	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine) 6864-37-5	Value type	Acute toxicity estimate (ATE)
	Value	320 mg/kg
	Species	
	Method	Expert judgement
benzyl alcohol 100-51-6	Value type	Acute toxicity estimate (ATE)
	Value	1,200 mg/kg
	Species	
	Method	Expert judgement
N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3	Value type	LD50
	Value	2,295 mg/kg
	Species	rat
	Method	EPA OPPTS 870.1100 (Acute Oral Toxicity)

Acute inhalative toxicity:

2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine) 6864-37-5	Value type	LC50
	Value	0.42 mg/l
	Exposure time	4 h
	Species	rat
	Method	equivalent or similar to OECD Guideline 403 (Acute Inhalation 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)
N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3	Value type	LC50
	Value	1.49 - 2.44 mg/l
	Exposure time	4 h
	Species	rat
	Method	EPA OPPTS 870.1300 (Acute inhalation toxicity)
N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3	Value type	Acute toxicity estimate (ATE)
	Value	1.49 mg/l
	Exposure time	
	Species	
	Method	Expert judgement

Acute dermal toxicity:

4-nonylphenol, branched 84852-15-3	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rabbit
	Method	not specified
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine) 6864-37-5	Value type	LD50
	Value	> 200 - < 400 mg/kg
	Species	rabbit
	Method	equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine) 6864-37-5	Value type	Acute toxicity estimate (ATE)
	Value	201 mg/kg
	Species	
	Method	Expert judgement
benzyl alcohol 100-51-6	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rabbit
	Method	not specified
N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rat
	Method	EPA OPPTS 870.1200 (Acute Dermal Toxicity)

Skin corrosion/irritation:

4-nonylphenol, branched 84852-15-3	Result	Category 1B (corrosive)
	Exposure time	4 h
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine) 6864-37-5	Result	corrosive
	Exposure time	3 min
	Species	rabbit
	Method	equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
benzyl alcohol 100-51-6	Result	not irritating
	Exposure time	4 h
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3	Result	mildly irritating
	Exposure time	4 h
	Species	rabbit
	Method	EPA OPPTS 870.2500 (Acute Dermal Irritation)

Serious eye damage/irritation:

2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine) 6864-37-5	Result	corrosive
	Exposure time	
	Species	rabbit
	Method	equivalent or similar to 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)
N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3	Result	Category 1 (irreversible effects on the eye)
	Exposure time	
	Species	rabbit
	Method	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine) 6864-37-5	Result	not sensitising
	Test type	Guinea pig maximisation test
	Species	guinea pig
	Method	equivalent or similar to OECD Guideline 406 (Skin Sensitisation)
N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3	Result	Sub-Category 1A (sensitising)
	Test type	Guinea pig maximisation test
	Species	guinea pig
	Method	OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine) 6864-37-5	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)
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine) 6864-37-5	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)
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine) 6864-37-5	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)

Repeated dose toxicity:

2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine) 6864-37-5	Result	NOAEL=2.5 mg/kg
	Route of application	oral: gavage
	Exposure time / Frequency of treatment	3 m5 d/w
	Species	rat
	Method	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine) 6864-37-5	Result	NOAEL=12 mg/m3
	Route of application	inhalation
	Exposure time / Frequency of treatment	3 m6 h/d, 5 d/w
	Species	rat
	Method	OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)
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)

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:

4-nonylphenol, branched 84852-15-3	Value type	LC50
	Value	0.135 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Pimephales promelas
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
	Value type	NOEC
	Value	0.25 mg/l
	Acute Toxicity Study	Fish
	Exposure time	14 d
	Species	Leuciscus idus
	Method	OECD Guideline 204 (Fish, Prolonged Toxicity Test: 14-day Study)
	Value type	NOEC
	Value	0.006 mg/l
	Acute Toxicity Study	Fish
	Exposure time	91 d
	Species	Oncorhynchus mykiss
	Method	OECD Guideline 210 (fish early life stage toxicity test)
4-nonylphenol, branched 84852-15-3	Value type	EC50
	Value	0.035 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
4-nonylphenol, branched 84852-15-3	Value type	EC50
	Value	0.0563 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	not specified
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)

4-nonylphenol, branched 84852-15-3	Value type	EC50
	Value	Toxicity > Water solubility
	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)
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine) 6864-37-5	Value type	LC50
	Value	22.4 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Oryzias latipes
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine) 6864-37-5	Value type	EC50
	Value	4.57 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine) 6864-37-5	Value type	EC50
	Value	7.9 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	not specified
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	NOEC
	Value	0.13 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	not specified
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine) 6864-37-5	Value type	EC20
	Value	160 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	30 min
	Species	activated sludge, domestic
	Method	ISO 8192 (Test for Inhibition of Oxygen Consumption by Activated Sludge)
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)
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Value type	LC50
	Value	168 mg/l
	Acute Toxicity Study	Fish

1760-24-3	Exposure time	96 h
	Species	Pimephales promelas
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3	Value type	EC50
	Value	87.4 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3	Value type	EC50
	Value	8.8 mg/l
	Acute Toxicity Study	Algae
	Exposure time	96 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	NOEC
	Value	3.1 mg/l
	Acute Toxicity Study	Algae
	Exposure time	96 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3	Value type	EC50
	Value	435 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	3 h
	Species	
	Method	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)

Persistence and degradability:

4-nonylphenol, branched 84852-15-3	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	48.2 %
	Method	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine) 6864-37-5	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 C (Ready Biodegradability: Modified MITI Test (I))
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))
N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	39 %
	Method	EU Method C.4-A (Determination of the "Ready" BiodegradabilityDissolved Organic Carbon (DOC) Die-Away Test)

Bioaccumulative potential / Mobility in soil:

4-nonylphenol, branched 84852-15-3	Bioconcentration factor (BCF)	231
	Exposure time	14 d
	Species	Lepomis macrochirus
	Temperature	
	Method	other guideline:
4-nonylphenol, branched 84852-15-3	LogPow	5.4
	Temperature	23 °C
	Method	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine) 6864-37-5	Bioconcentration factor (BCF)	> 6 - < 60
	Exposure time	60 d
	Species	Cyprinus carpio
	Temperature	

	Method	OECD Guideline 305 C (Bioaccumulation: Test for the Degree of Bioconcentration in Fish)
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine) 6864-37-5	LogPow	1.8 - 2.3
	Temperature	23 °C
	Method	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
benzyl alcohol 100-51-6	LogPow	1.05
	Temperature	20 °C
	Method	EU Method A.8 (Partition Coefficient)
N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3	LogPow	-1.67
	Temperature	
	Method	not specified

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:	CT1
Hazard ident. number:	86
UN no.:	2922
Label:	8 (6.1)
Technical name:	CORROSIVE LIQUID, TOXIC, N.O.S. (cycloaliphatic amine,Nonylphenol)

Railroad transport RID:

Class:	8
Packing group:	II
Classification code:	CT1
Hazard ident. number:	86
UN no.:	2922
Label:	8 (6.1)
Technical name:	CORROSIVE LIQUID, TOXIC, N.O.S. (cycloaliphatic amine,Nonylphenol)

Inland water transport ADN:

Class:	8
Packing group:	II
Classification code:	CT1
Hazard ident. number:	86
UN no.:	2922
Label:	8, 6.1
Technical name:	CORROSIVE LIQUID, TOXIC, N.O.S. (cycloaliphatic amine,Nonylphenol)

Marine transport IMDG:

Class:	8
Packing group:	II
UN no.:	2922
Label:	8 (6.1)
EmS:	F-A ,S-B
Seawater pollutant:	Marine pollutant
Proper shipping name:	CORROSIVE LIQUID, TOXIC, N.O.S. (cycloaliphatic amine,Nonylphenol)

Air transport IATA:

Class:	8
Packing group:	II
Packaging instructions (passenger):	851
Packaging instructions (cargo):	855
UN no.:	2922
Label:	8 (6.1)
Proper shipping name:	Corrosive liquid, toxic, n.o.s. (cycloaliphatic amine,Nonylphenol)

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
ENCS (JP)	yes
ISHL (JP)	yes
KECI (KR)	yes
IECSC	yes
NZIOC	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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