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

Product name:
LOCTITE ABLESTIK CE 3520-3

Other means of identification:
LOCTITE ABLESTIK CE 3520-3

Product code:
IDH1189767

Recommended use of the chemical and restrictions on use

Intended use:
Conductive Epoxy

Manufacturer/Importer/Distributor Representative Company

Henkel Thailand Ltd. The Offices at Centralworld,
35th Floor, 999/9 Rama 1 Rd.,
Kwang Patumwan, Khet Patumwan,
10330 Bangkok

Thailand

Phone: +66 (2209) 8000
Fax-no.: +66 (2209) 8008

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: +662 209 8008

Section 2. Hazards identification

GHS Classification:

Hazard Class	Hazard Category	Target organ
Skin corrosion/irritation	Category 2	
Serious eye damage/eye irritation	Category 2A	
Skin sensitizer	Category 1	
Carcinogenicity	Category 1A	
Specific target organ toxicity - repeated exposure	Category 1	respiratory tract
Chronic hazards to the aquatic environment	Category 2	

GHS label elements:

Hazard pictogram:



Signal word:
Danger

Hazard statement:
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H350 May cause cancer.
H372 Causes damage to organs through prolonged or repeated exposure.

H411 Toxic to aquatic life with long lasting effects.

Precaution:

Prevention:
P201 Obtain special instructions before use.
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.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

Response:
P302+P352 IF ON SKIN: Wash with plenty of water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 IF exposed or concerned: Get medical advice/attention.
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.
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
Nickel 7440-02-0	60- 100 %	Skin sensitizer 1 H317 Carcinogenicity 2 H351 Specific target organ toxicity - repeated exposure 1 H372 Acute hazards to the aquatic environment 3 H402 Chronic hazards to the aquatic environment 3 H412
2-(2-Butoxyethoxy)ethyl acetate 124-17-4	1- 10 %	Serious eye damage/eye irritation 2A H319 Acute hazards to the aquatic environment 3 H402
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 25068-38-6	1- 10 %	Skin corrosion/irritation 2 H315 Serious eye damage/eye irritation 2A H319 Skin sensitizer 1 H317 Acute hazards to the aquatic environment 2 H401 Chronic hazards to the aquatic environment 2 H411
Reaction mass bisphenol-F-(epichlorhydrin) 9003-36-5	1- 10 %	Skin corrosion/irritation 2 H315 Skin sensitizer 1A H317 Acute hazards to the aquatic environment 2 H401 Chronic hazards to the aquatic environment 2 H411
diuron 330-54-1	1- 10 %	Acute toxicity 4; Oral H302 Acute toxicity 5; Inhalation H333 Carcinogenicity 2 H351 Specific target organ toxicity - repeated exposure 2 H373 Acute hazards to the aquatic environment 1 H400 Chronic hazards to the aquatic environment 1 H410
nickel monoxide 1313-99-1	0.1- 1 %	Skin sensitizer 1 H317 Carcinogenicity 1A H350 Specific target organ toxicity - repeated exposure 1 H372 Chronic hazards to the aquatic environment 4 H413
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 sensitizer 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:
Should not be a problem as product is of low volatility. However, if feeling unwell remove patient to fresh air.

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:
water, 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.

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

Additional fire fighting advice:
In case of fire, keep containers cool with water spray.

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:
Dispose of contaminated material as waste according to Section 13.
Scrape up as much material as possible.
Sweep up spilled material. Avoid creating dust.
Store in a partly filled, closed container until disposal.

Section 7. Handling and storage

Handling:
Avoid skin and eye contact.
See advice in section 8

Storage:
Ensure good ventilation/extraction.
Keep container tightly sealed.
Keep frozen.
Refer to Technical Data Sheet.

Section 8. Exposure controls / personal protection

Components with specific control parameters for workplace:

NICKEL, ELEMENTAL, INHALABLE FRACTION 7440-02-0	**Value type**	Time Weighted Average (TWA):
	mg/m³	1.5
	Remarks	ACGIH
NICKEL METAL AND INSOLUBLE COMPOUNDS, AS NI 7440-02-0	**Value type**	Time Weighted Average (TWA):
	mg/m³	1
	Remarks	TH OEL
DIURON 330-54-1	**Value type**	Time Weighted Average (TWA):
	mg/m³	10
	Remarks	ACGIH
DIURON 330-54-1	**Value type**	Time Weighted Average (TWA):
	mg/m³	10
	Remarks	TH OEL
NICKEL, INSOLUBLE INORGANIC COMPOUNDS (NOS), AS NI, INHALABLE FRACTION 1313-99-1	**Value type**	Time Weighted Average (TWA):
	mg/m³	0.2
	Remarks	ACGIH
NICKEL METAL AND INSOLUBLE COMPOUNDS, AS NI 1313-99-1	**Value type**	Time Weighted Average (TWA):
	mg/m³	1
	Remarks	TH OEL

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:	Dark gray / grey solid
Odor:	Epoxy
Odor threshold (CA):	No data available.
pH:	Not applicable, Product is non-soluble (in water).
Melting point / freezing point:	20 - 25 °C (68 - 77 °F)
Specific gravity:	2.53
Boiling point:	No data available.
Flash point: (Closed cup)	> 100 °C (> 212 °F)
Evaporation rate:	No data available.
Flammability (solid, gas):	Not flammable.
Lower explosive limit:	No data available.
Upper explosive limit:	No data available.
Vapor pressure: (; 20 °C (68 °F))	< 0.01 mm hg
Vapor density:	Not applicable, Product is a solid
Density:	2.53 g/cm3
Solubility:	Insoluble (20 °C)
Partition coefficient: n-octanol/water:	No data available.
Auto ignition:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.
VOC content: (2010/75/EC)	< 3 %

Section 10. Stability and reactivity

Reactivity/Incompatible materials:
Reacts with strong oxidants.
Reaction with strong acids.
Chemical stability:
Stable under recommended storage conditions.
Possibility of hazardous reactions:
Rapid polymerization may generate excessive heat and pressure.
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

Symptoms of Overexposure**:** SKIN: Redness, inflammation.
SKIN: Rash, Urticaria.
Prolonged or repeated contact may cause eye irritation.

Acute oral toxicity:

Nickel 7440-02-0	Value type	LD50
	Value	> 9,000 mg/kg
	Species	rat
	Method	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
2-(2-Butoxyethoxy)ethyl acetate 124-17-4	Value type	LD50
	Value	11,920 mg/kg
	Species	rat
	Method	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 25068-38-6	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rat
	Method	OECD Guideline 420 (Acute Oral Toxicity)
Reaction mass bisphenol-F-(epichlorhydrin) 9003-36-5	Value type	LD50
	Value	> 5,000 mg/kg
	Species	rat
	Method	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
diuron 330-54-1	Value type	LD50
	Value	1,000 - 1,017 mg/kg
	Species	rat
	Method	not specified
diuron 330-54-1	Value type	Acute toxicity estimate (ATE)
	Value	1,000 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-Butoxyethoxy)ethyl acetate 124-17-4	Value type	LC50
	Value	72.5 mg/l
	Exposure time	4 h
	Species	rat
	Method	not specified
diuron 330-54-1	Value type	LC50
	Value	> 5.05 mg/l
	Exposure time	4 h
	Species	rat
	Method	OECD Guideline 403 (Acute Inhalation Toxicity)
diuron 330-54-1	Value type	Acute toxicity estimate (ATE)
	Value	5.051 mg/l
	Exposure time	
	Species	
	Method	Expert judgement
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:

2-(2-Butoxyethoxy)ethyl acetate 124-17-4	Value type	LD50
	Value	5,400 mg/kg
	Species	rabbit
	Method	equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 25068-38-6	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rat
	Method	OECD Guideline 402 (Acute Dermal Toxicity)
Reaction mass bisphenol-F-(epichlorhydrin) 9003-36-5	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rat
	Method	equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)
diuron 330-54-1	Value type	LD50
	Value	> 5,000 mg/kg
	Species	rat
	Method	OECD Guideline 402 (Acute Dermal Toxicity)
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:

2-(2-Butoxyethoxy)ethyl acetate 124-17-4	Result	not irritating
	Exposure time	24 h
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 25068-38-6	Result	irritating
	Exposure time	
	Species	
	Method	Weight of evidence
Reaction mass bisphenol-F-(epichlorhydrin)	Result	irritating
	Exposure time	4 h

9003-36-5	Species	rabbit
	Method	equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
diuron 330-54-1	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-Butoxyethoxy)ethyl acetate 124-17-4	Result	Category 2A (irritating to eyes)
	Exposure time	2 h
	Species	Human, in vitro, reconstituted human corneal model
	Method	OECD Guideline 492 (Reconstructed Human Cornea-like Epithelium (RhCE) Test Method)
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 25068-38-6	Result	irritating
	Exposure time	
	Species	
	Method	Weight of evidence
Reaction mass bisphenol-F-(epichlorhydrin) 9003-36-5	Result	not irritating
	Exposure time	
	Species	rabbit
	Method	equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion)
diuron 330-54-1	Result	not irritating
	Exposure time	
	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-Butoxyethoxy)ethyl acetate 124-17-4	Result	not sensitising
	Test type	Buehler test
	Species	guinea pig
	Method	EU Method B.6 (Skin Sensitisation)
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 25068-38-6	Result	sensitising
	Test type	Mouse local lymphnode assay (LLNA)
	Species	mouse
	Method	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Reaction mass bisphenol-F-(epichlorhydrin) 9003-36-5	Result	Sub-Category 1A (sensitising)
	Test type	Mouse local lymphnode assay (LLNA)
	Species	mouse
	Method	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
diuron 330-54-1	Result	not sensitising
	Test type	Guinea pig maximisation test
	Species	guinea pig
	Method	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-Butoxyethoxy)ethyl acetate 124-17-4	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-Butoxyethoxy)ethyl acetate 124-17-4	Result	negative
	Type of study / Route of administration	in vitro mammalian chromosome aberration test
	Metabolic activation / Exposure time	with and without
	Method	equivalent or similar to OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
2-(2-Butoxyethoxy)ethyl acetate 124-17-4	Result	negative
	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)
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 25068-38-6	Result	negative
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 472 (Genetic Toxicology: Escherichia coli, Reverse Mutation Assay)
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 25068-38-6	Result	negative
	Type of study / Route of administration	oral: gavage
	Metabolic activation / Exposure time	
	Species	mouse
	Method	not specified
Reaction mass bisphenol-F-(epichlorhydrin) 9003-36-5	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)
Reaction mass bisphenol-F-(epichlorhydrin) 9003-36-5	Result	negative
	Type of study / Route of administration	oral: gavage
	Metabolic activation / Exposure time	
	Species	mouse
	Method	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Reaction mass bisphenol-F-(epichlorhydrin) 9003-36-5	Result	negative
	Type of study / Route of administration	oral: gavage
	Metabolic activation / Exposure time	
	Species	rat
	Method	OECD Guideline 486 (Unscheduled DNA Synthesis (UDS) Test with Mammalian Liver Cells in vivo)
diuron 330-54-1	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)
diuron 330-54-1	Result	negative
	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)
diuron 330-54-1	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)
diuron 330-54-1	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-Butoxyethoxy)ethyl acetate 124-17-4	Result	NOAEL=250 mg/kg
	Route of application	oral: drinking water
	Exposure time / Frequency of treatment	90 ddaily
	Species	rat
	Method	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 25068-38-6	Result	NOAEL=50 mg/kg
	Route of application	oral: gavage
	Exposure time / Frequency of treatment	14 wdaily
	Species	rat
	Method	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Reaction mass bisphenol-F-(epichlorhydrin) 9003-36-5	Result	NOAEL=250 mg/kg
	Route of application	oral: gavage
	Exposure time / Frequency of treatment	13 wdaily
	Species	rat
	Method	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
diuron 330-54-1	Result	NOAEL=6.7 mg/kg
	Route of application	oral: feed
	Exposure time / Frequency of treatment	3 monthsdaily
	Species	rat
	Method	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
diuron 330-54-1	Result	NOAEL=8.7 mg/kg
	Route of application	oral: feed
	Exposure time / Frequency of treatment	3 monthsdaily
	Species	rat
	Method	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: H411 Toxic to aquatic life with long lasting effects.

Toxicity:

2-(2-Butoxyethoxy)ethyl acetate 124-17-4	Value type	LC50
	Value	50 - 70 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Brachydanio rerio (new name: Danio rerio)
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
2-(2-Butoxyethoxy)ethyl acetate 124-17-4	Value type	EC50
	Value	665 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
2-(2-Butoxyethoxy)ethyl acetate 124-17-4	Value type	EC0
	Value	1,575 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	30 min
	Species	
	Method	not specified
4,4'-Isopropylidenediphenol, oligomeric reaction products with	Value type	LC50
	Value	1.75 mg/l

1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 25068-38-6	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Oncorhynchus mykiss
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 25068-38-6	Value type	EC50
	Value	1.7 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 25068-38-6	Value type	EC50
	Value	> 11 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Scenedesmus capricornutum
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	NOEC
	Value	4.2 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Scenedesmus capricornutum
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 25068-38-6	Value type	IC50
	Value	> 100 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	3 h
	Species	activated sludge, industrial
	Method	other guideline:
Reaction mass bisphenol-F-(epichlorhydrin) 9003-36-5	Value type	LC50
	Value	5.7 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Leuciscus idus
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
Reaction mass bisphenol-F-(epichlorhydrin) 9003-36-5	Value type	EC50
	Value	2.55 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Reaction mass bisphenol-F-(epichlorhydrin) 9003-36-5	Value type	EC50
	Value	1.8 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
Reaction mass bisphenol-F-(epichlorhydrin) 9003-36-5	Value type	IC50
	Value	> 100 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	3 h
	Species	activated sludge, industrial
	Method	other guideline:
diuron 330-54-1	Value type	NOEC
	Value	4.2 mg/l
	Acute Toxicity Study	Fish
	Exposure time	7 d
	Species	Pimephales promelas
	Method	OECD Guideline 204 (Fish, Prolonged Toxicity Test: 14-day Study)
	Value type	LC50
	Value	6.6 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Leuciscus idus melanotus
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
diuron 330-54-1	Value type	EC50
	Value	1.4 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

diuron 330-54-1	Value type	NOEC
	Value	0.0032 mg/l
	Acute Toxicity Study	Algae
	Exposure time	96 h
	Species	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	EC50
	Value	0.022 mg/l
	Acute Toxicity Study	Algae
	Exposure time	96 h
	Species	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
diuron 330-54-1	Value type	EC50
	Value	> 10,000 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	
	Species	
	Method	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3	Value type	LC50
	Value	168 mg/l
	Acute Toxicity Study	Fish
	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:

2-(2-Butoxyethoxy)ethyl acetate 124-17-4	Result	
	Route of application	aerobic
	Degradability	> 90 %
	Method	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)
	Result	readily biodegradable
	Route of application	aerobic
	Degradability	100 %
	Method	EU Method C.4-E (Determination of the "Ready" BiodegradabilityClosed Bottle Test)
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 25068-38-6	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	5 %
	Method	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Reaction mass bisphenol-F-(epichlorhydrin)	Result	not readily biodegradable.
	Route of application	aerobic

9003-36-5	Degradability	0 %
	Method	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
diuron 330-54-1	Result	
	Route of application	aerobic
	Degradability	0 %
	Method	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
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:

2-(2-Butoxyethoxy)ethyl acetate 124-17-4	LogPow	1.3
	Temperature	
	Method	not specified
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 25068-38-6	LogPow	3.242
	Temperature	25 °C
	Method	EU Method A.8 (Partition Coefficient)
Reaction mass bisphenol-F-(epichlorhydrin) 9003-36-5	LogPow	2.7 - 3.6
	Temperature	
	Method	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
diuron 330-54-1	LogPow	2.84
	Temperature	20 °C
	Method	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
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:	9
Packing group:	III
Classification code:	M7
Hazard ident. number:	90
UN no.:	3077
Label:	9
Technical name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Epoxy resin,diuron)

Railroad transport RID:

Class:	9
Packing group:	III
Classification code:	M7
Hazard ident. number:	90
UN no.:	3077
Label:	9
Technical name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Epoxy resin,diuron)

Inland water transport ADN:

Class:	9
Packing group:	III
Classification code:	M7
Hazard ident. number:	90
UN no.:	3077
Label:	9
Technical name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Epoxy resin,diuron)

Marine transport IMDG:

Class:	9
Packing group:	III
UN no.:	3077
Label:	9
EmS:	F-A ,S-F
Seawater pollutant:	Marine pollutant
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Epoxy resin,diuron)

Air transport IATA:

Class:	9
Packing group:	III
Packaging instructions (passenger):	956
Packaging instructions (cargo):	956
UN no.:	3077
Label:	9
Proper shipping name:	Environmentally hazardous substance, solid, n.o.s. (Epoxy resin,diuron)

Further information for transport:

The transport classifications in this section apply generally to packed and bulk goods alike. For containers with a net volume of no more than 5 L for liquid substances or a net mass of no more than 5 kg for solid substances per individual or inner package, the exemptions SP 375 (ADR), A197 (IATA), 2.10.2.7 (IMDG), NZ 4.3(10) may be applied, which can result in a deviation from the transport classification for packed goods.

Section 15. Regulatory information

Regulatory Information:
Ministry of Industry Notice. The system to classify and communicate the hazard of hazardous material, BE. 2555

Global inventory status:

Regulatory list	Notification
ENCS (JP)	yes
ISHL (JP)	yes

Section 16. Other information

Disclaimer:
This Safety Data Sheet has been generated based on Ministry of Industry Notice. The system to classify and communicate the hazard of hazardous material, BE. 2555 only. No warranty or representation of any kind is given with respect to the substantive or export laws of any other jurisdiction or country. Please confirm that the information provided herein conforms to the substantive export or other law of any other jurisdiction prior to export. Please contact Henkel Product Safety and Regulatory Affairs for additional assistance.
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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