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

Product name:
LOCTITE ABLESTIK ABP 8303A

Other means of identification:
LOCTITE ABLESTIK ABP 8303A

Product code:
IDH2601825

Recommended use of the chemical and restrictions on use

Intended use:
Die attach adhesive

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	Route of Exposure	Target organ
Acute toxicity	Category 4	Inhalation	
Skin sensitizer	Category 1		
Toxic to reproduction	Category 2		
Specific target organ toxicity - repeated exposure	Category 2		Nervous system
Acute hazards to the aquatic environment	Category 1		
Chronic hazards to the aquatic environment	Category 1		

GHS label elements:

Hazard pictogram:



Signal word:
Warning

Hazard statement:
H317 May cause an allergic skin reaction.
H332 Harmful if inhaled.
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.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response:
P304+P340+P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.

Section 3. Composition / information on ingredients

Substance or Mixture:
Mixture

Declaration of hazardous chemical:

Hazard component CAS-No.	Content	GHS Classification
Silver >= 99,9 % Ag as powder (>100nm<1mm) classified for environment 7440-22-4	60- 100 %	Toxic to reproduction 2 H361 Specific target organ toxicity - repeated exposure 2 H373 Acute hazards to the aquatic environment 1 H400 Chronic hazards to the aquatic environment 1 H410
Acrylate Proprietary	1- 10 %	Acute toxicity 4; Inhalation H332 Acute hazards to the aquatic environment 2 H401 Chronic hazards to the aquatic environment 2 H411
Dodecyl acrylate 2156-97-0	1- 10 %	Skin corrosion/irritation 2 H315 Serious eye damage/eye irritation 2A H319 Skin sensitizer 1 H317 Specific target organ toxicity - single exposure 3 H335 Chronic hazards to the aquatic environment 2 H411
Bismaleimide resin Proprietary	1- 10 %	Acute toxicity 4; Oral H302 Acute toxicity 4; Dermal H312 Skin corrosion/irritation 2 H315 Acute hazards to the aquatic environment 1 H400 Chronic hazards to the aquatic environment 1 H410
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	1- 10 %	Acute toxicity 4; Oral H302 Acute toxicity 2; Inhalation H330 Skin sensitizer 1A H317 Acute hazards to the aquatic environment 3 H402 Chronic hazards to the aquatic environment 2 H411
Epoxy Resin Proprietary	0.1- 1 %	Acute toxicity 5; Oral H303 Skin corrosion/irritation 2; Dermal H315 Serious eye damage/eye irritation 2A H319 Skin sensitizer 1 H317 Germ cell mutagenicity 2 H341 Chronic hazards to the aquatic environment 2 H411
Epoxy resin Proprietary	0.1- 1 %	Skin sensitizer 1 H317 Germ cell mutagenicity 2 H341
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane 3388-04-3	0.1- 1 %	Skin sensitizer 1B H317 Germ cell mutagenicity 2 H341 Carcinogenicity 2 H351 Acute hazards to the aquatic environment 3

		H402 Chronic hazards to the aquatic environment 3 H412

Section 4. First aid measures

Inhalation:
Fresh air, oxygen supply, warmth; seek specialist medical attention.

Skin contact:
Rinse with running water and soap. Apply replenishing cream. Change all contaminated clothing. If necessary, see a dermatologist.

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.

Section 5. Fire fighting measures

Suitable extinguishing media:
Carbon dioxide, foam, powder

Special protection equipment and precautions for firefighters:
Wear self-contained breathing apparatus.
Wear protective equipment.

Hazardous combustion products:
Hydrocarbons
carbon oxides.
Irritating organic fragments.
nitrogen oxides

Additional fire fighting advice:
Avoid open flames and sources of ignition.
Do not inhale vapors and fumes.

Section 6. Accidental release measures

Personal precautions:
Avoid contact with skin and eyes.
Wear protective equipment.

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.

Section 7. Handling and storage

Handling:
Ensure good ventilation/suction at the workplace.
Avoid skin and eye contact.

Storage:
Keep away from heat and direct sunlight.
Keep container tightly sealed.
Refer to Technical Data Sheet.

Section 8. Exposure controls / personal protection

Components with specific control parameters for workplace:

Silver, metal, dust and fume 7440-22-4	**Value type**	Time Weighted Average (TWA):
	mg/m³	0.1
	Remarks	ACGIH

Respiratory protection:
An approved mask or respirator fitted with an organic vapour cartridge should be worn if the product is used in a poorly ventilated area

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:
Wear safety glasses with side shields.

Body protection:
Wear protective equipment.

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:	Silver liquid
Odor:	Mild
Odor threshold (CA):	No data available.

pH:	Not applicable, Product is non-polar/aprotic.
Melting point / freezing point:	Not applicable, Product is a liquid
Specific gravity:	3.5
Boiling point:	No data available.
Flash point:	> 93 °C (> 199.4 °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:	No data available.
Vapor density:	No data available.
Density:	3.5 g/cm3
Solubility:	Insoluble
Partition coefficient: n-octanol/water:	No data available.
Auto ignition:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.
VOC content:	No data available.

Section 10. Stability and reactivity

Reactivity/Incompatible materials:
Reaction with strong oxidants.
Reacts with alcohols and amines.
Reaction with strong acids.
Chemical stability:
Stable under recommended storage conditions.
Conditions to avoid:
Heat, flames, sparks and other sources of ignition.
Exposure to light.
Hazardous decomposition products:
Irritating organic vapours.
carbon oxides.
Hydrocarbons
Oxides of nitrogen.

Section 11. Toxicological information

Oral toxicity:	Acute toxicity estimate (ATE) : > 2,000 mg/kg Method: Calculation method
Inhalative toxicity:	Acute toxicity estimate (ATE) : 3.36 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

Symptoms of Overexposure**:** None known.

Acute oral toxicity:

Silver >= 99,9 % Ag as powder (>100nm<1mm) classified for environment 7440-22-4	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rat
	Method	OECD Guideline 401 (Acute Oral Toxicity)
Acrylate Proprietary	Value type	LD50
	Value	> 5,000 mg/kg
	Species	rat
	Method	not specified
Dodecyl acrylate 2156-97-0	Value type	LD50
	Value	> 5,570 mg/kg
	Species	rat
	Method	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
Bismaleimide resin Proprietary	Value type	Acute toxicity estimate (ATE)
	Value	500 mg/kg
	Species	
	Method	Expert judgement
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	Value type	Acute toxicity estimate (ATE)
	Value	500 mg/kg
	Species	
	Method	Expert judgement
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	Value type	LD50
	Value	> 300 - 2,000 mg/kg
	Species	rat
	Method	OECD Guideline 423 (Acute Oral toxicity)
Epoxy Resin Proprietary	Value type	LD50
	Value	4,240 mg/kg
	Species	rat
	Method	not specified
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane 3388-04-3	Value type	LD50
	Value	13,000 mg/kg
	Species	rat
	Method	not specified

Acute inhalative toxicity:

Acrylate Proprietary	Value type	LC50
	Value	> 2.79 mg/l
	Exposure time	4 h
	Species	rat
	Method	not specified
Acrylate Proprietary	Value type	Acute toxicity estimate (ATE)
	Value	2.791 mg/l
	Exposure time	4 h
	Species	
	Method	Expert judgement
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	Value type	LC50
	Value	0.055 mg/l
	Exposure time	4 h
	Species	rat
	Method	OECD Guideline 403 (Acute Inhalation Toxicity)

Acute dermal toxicity:

Silver >= 99,9 % Ag as powder (>100nm<1mm) classified for environment 7440-22-4	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rat
	Method	OECD Guideline 402 (Acute Dermal Toxicity)
Acrylate Proprietary	Value type	LD50
	Value	> 5,000 mg/kg
	Species	rabbit
	Method	not specified
Dodecyl acrylate 2156-97-0	Value type	LD50
	Value	> 5,000 mg/kg
	Species	rat
	Method	OECD Guideline 402 (Acute Dermal Toxicity)
Bismaleimide resin Proprietary	Value type	Acute toxicity estimate (ATE)
	Value	1,100 mg/kg
	Species	
	Method	Expert judgement
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane 3388-04-3	Value type	LD50
	Value	6,700 mg/kg
	Species	rabbit
	Method	not specified

Skin corrosion/irritation:

Acrylate Proprietary	Result	slightly irritating
	Exposure time	24 h
	Species	rabbit
	Method	not specified
Bismaleimide resin Proprietary	Result	irritating
	Exposure time	
	Species	not specified
	Method	Expert judgement
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	Result	not corrosive
	Exposure time	60 min
	Species	Human, EpiDermTM SIT (EPI-200), Reconstructed Human Epidermis (RHE)
	Method	OECD Guideline 431 (In Vitro Skin Corrosion: Reconstructed Human Epidermis (RHE) Test Method)
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	Result	not irritating
	Exposure time	60 min
	Species	Human, EpiDermTM SIT (EPI-200), Reconstructed Human Epidermis (RHE)
	Method	OECD Guideline 439 (In Vitro Skin Irritation: Reconstructed Human Epidermis (RHE) Test Method)
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane 3388-04-3	Result	not irritating
	Exposure time	4 h
	Species	rabbit
	Method	equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Acrylate Proprietary	Result	not irritating
	Exposure time	
	Species	rabbit
	Method	not specified
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	Result	not irritating
	Exposure time	
	Species	Bovine, cornea, in vitro test
	Method	OECD Guideline 437 (BCOP)
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane 3388-04-3	Result	not irritating
	Exposure time	
	Species	rabbit
	Method	equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

Acrylate Proprietary	Result	not sensitising
	Test type	Buehler test
	Species	guinea pig
	Method	not specified
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	Result	not sensitising
	Test type	Mouse local lymphnode assay (LLNA)
	Species	mouse
	Method	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane 3388-04-3	Result	sensitising
	Test type	Buehler test
	Species	guinea pig
	Method	OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

Silver >= 99,9 % Ag as powder (>100nm<1mm) classified for environment 7440-22-4	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)
Acrylate Proprietary	Result	negative
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	
	Method	not specified
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	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)
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	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)
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	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)
Epoxy resin Proprietary	Result	positive with metabolic activation
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	
	Method	not specified
Epoxy resin Proprietary	Result	positive
	Type of study / Route of administration	intraperitoneal
	Metabolic activation / Exposure time	
	Species	
	Method	not specified
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane 3388-04-3	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)
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane 3388-04-3	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-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane 3388-04-3	Result	positive
	Type of study / Route of administration	sister chromatid exchange assay in mammalian cells
	Metabolic activation / Exposure time	with and without
	Method	EU Method B.19 (Sister Chromatid Exchange Assay In Vitro)

Repeated dose toxicity:

1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	Result	NOAEL=15 mg/kg
	Route of application	oral: gavage
	Exposure time / Frequency of treatment	42-52 ddaily
	Species	rat
	Method	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

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:

Silver >= 99,9 % Ag as powder (>100nm<1mm) classified for environment 7440-22-4	Value type	LC50
	Value	0.0012 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Pimephales promelas
	Method	other guideline:
	Value type	EC10
	Value	0.00019 mg/l
	Acute Toxicity Study	Fish
	Exposure time	217 d
	Species	Salmo trutta
	Method	OECD Guideline 210 (fish early lite stage toxicity test)
Silver >= 99,9 % Ag as powder (>100nm<1mm) classified for environment 7440-22-4	Value type	EC50
	Value	0.00022 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	other guideline:
Silver >= 99,9 % Ag as powder (>100nm<1mm) classified for environment 7440-22-4	Value type	EC10
	Value	0.00016 mg/l
	Acute Toxicity Study	Algae
	Exposure time	15 d
	Species	other:
	Method	other guideline:
Acrylate Proprietary	Value type	LC50
	Value	9 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Lepomis macrochirus
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
Dodecyl acrylate 2156-97-0	Value type	LC50
	Value	Toxicity > Water solubility
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Pimephales promelas
	Method	other guideline:
	Value type	NOEC
	Value	Toxicity > Water solubility
	Acute Toxicity Study	Fish
	Exposure time	30 d
	Species	Brachydanio rerio (new name: Danio rerio)
	Method	OECD Guideline 210 (fish early lite stage toxicity test)
Dodecyl acrylate 2156-97-0	Value type	EC50
	Value	Toxicity > Water solubility
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Dodecyl acrylate 2156-97-0	Value type	EC50
	Value	Toxicity > Water solubility
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
Dodecyl acrylate 2156-97-0	Value type	EC50
	Value	> 10,000 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	30 min
	Species	
	Method	not specified
Bismaleimide resin Proprietary	Value type	LC0
	Value	> 0.354 mg/l

	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Danio rerio
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
Bismaleimide resin Proprietary	Value type	EC50
	Value	0.056 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	EC10
	Value	0.015 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)
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	Value type	EC50
	Value	31.6 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	Value type	ErC50
	Value	67.898 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Desmodesmus subspicatus
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	EC10
	Value	0.308 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Desmodesmus subspicatus
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
Epoxy Resin Proprietary	Value type	LC50
	Value	1.2 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Oncorhynchus mykiss
	Method	EPA-660 (Methods for Acute Toxicity Tests with Fish, Macroinvertebrates and Amphibians)
Epoxy Resin Proprietary	Value type	EC50
	Value	2.7 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	other guideline:
Epoxy Resin Proprietary	Value type	EC50
	Value	> 11 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Scenedesmus capricornutum
	Method	other guideline:
	Value type	NOEC
	Value	4.2 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Scenedesmus capricornutum
	Method	other guideline:
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane 3388-04-3	Value type	LC50
	Value	42.3 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Cyprinus carpio
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane 3388-04-3	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-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane 3388-04-3	Value type	NOEC
	Value	6 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	EC50
	Value	90 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-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane 3388-04-3	Value type	EC50
	Value	> 100 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	30 min
	Species	
	Method	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)

Persistence and degradability:

Acrylate Proprietary	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	0 %
	Method	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Dodecyl acrylate 2156-97-0	Result	readily biodegradable
	Route of application	aerobic
	Degradability	80 - 90 %
	Method	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
Bismaleimide resin Proprietary	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	0 %
	Method	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	0 %
	Method	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Epoxy Resin Proprietary	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	5 %
	Method	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Epoxy resin Proprietary	Result	
	Route of application	
	Degradability	7 %
	Method	not specified
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane 3388-04-3	Result	
	Route of application	aerobic
	Degradability	28 %
	Method	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)

Bioaccumulative potential / Mobility in soil:

Silver >= 99,9 % Ag as powder (>100nm<1mm) classified for environment 7440-22-4	Bioconcentration factor (BCF)	70
	Exposure time	42 d
	Species	Cyprinus carpio
	Temperature	20 °C
	Method	other guideline:
Acrylate Proprietary	LogPow	3.39
	Temperature	
	Method	not specified
Dodecyl acrylate 2156-97-0	LogPow	6.13
	Temperature	
	Method	QSAR (Quantitative Structure Activity Relationship)
Bismaleimide resin Proprietary	LogPow	> 4
	Temperature	
	Method	

1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	LogPow	0.67
	Temperature	24 °C
	Method	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
Epoxy Resin Proprietary	LogPow	1.79
	Temperature	
	Method	QSAR (Quantitative Structure Activity Relationship)
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane 3388-04-3	LogPow	4.1
	Temperature	23 °C
	Method	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)

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:	M6
Hazard ident. number:	90
UN no.:	3082
Label:	9
Technical name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Silver)

Railroad transport RID:

Class:	9
Packing group:	III
Classification code:	M6
Hazard ident. number:	90
UN no.:	3082
Label:	9
Technical name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Silver)

Inland water transport ADN:

Class:	9
Packing group:	III
Classification code:	M6
Hazard ident. number:	90
UN no.:	3082
Label:	9
Technical name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Silver)

Marine transport IMDG:

Class:	9
Packing group:	III
UN no.:	3082
Label:	9
EmS:	F-A ,S-F
Seawater pollutant:	Marine pollutant
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Silver)

Air transport IATA:

Class:	9
Packing group:	III
Packaging instructions (passenger):	964
Packaging instructions (cargo):	964
UN no.:	3082
Label:	9
Proper shipping name:	Environmentally hazardous substance, liquid, n.o.s. (Silver)

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

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.
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