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

Product name:
LOCTITE 2620 HI TEMP TL HS 30G

Other means of identification:
LOCTITE 2620 HI TEMP TL HS 30G

Product code:
IDH1138282
Recommended use of the chemical and restrictions on use

Intended use:
Anaerobic 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
Acute toxicity	Category 3	Inhalation
Skin sensitizer	Category 1	
Toxic to reproduction	Category 1B	
Acute hazards to the aquatic environment	Category 1	
Chronic hazards to the aquatic environment	Category 2	

GHS label elements:

Hazard pictogram:



Signal word:
Danger

Hazard statement:
H317 May cause an allergic skin reaction.
H331 Toxic if inhaled.
H360 May damage fertility or the unborn child.
H400 Very toxic to aquatic life.
H411 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.
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:
P302+P352 IF ON SKIN: Wash with plenty of water.
P304+P340+P311 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P391 Collect spillage.

Storage:
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

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
Boric acid 10043-35-3	30- 60 %	Acute toxicity 5; Oral H303 Toxic to reproduction 1B H360
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
Polyamide wax Proprietary	1- 10 %	Skin sensitizer 1 H317 Acute hazards to the aquatic environment 1 H400 Chronic hazards to the aquatic environment 1 H410
Ethene, homopolymer 9002-88-4	1- 10 %	
maleic acid 110-16-7	0.1- 1 %	Acute toxicity 4; Oral H302 Acute toxicity 4; Dermal H312 Skin corrosion/irritation 2 H315 Serious eye damage/eye irritation 2A H319 Skin sensitizer 1 H317 Specific target organ toxicity - single exposure 3 H335 Acute hazards to the aquatic environment 3 H402
N,N-Diethyl-p-toluidine 613-48-9	0.1- 1 %	Flammable liquids 4 H227 Acute toxicity 3; Oral H301 Acute toxicity 3; Inhalation H331 Acute toxicity 3; Dermal H311 Skin corrosion/irritation 2 H315 Specific target organ toxicity - repeated exposure 2 H373 Acute hazards to the aquatic environment 3 H402 Chronic hazards to the aquatic environment 3 H412
α, α-dimethylbenzyl hydroperoxide 80-15-9	0.1- 1 %	Flammable liquids 4 H227 Organic peroxides E H242 Acute toxicity 4; Oral H302 Acute toxicity 2; Inhalation H330 Acute toxicity 4; Dermal H312 Skin corrosion/irritation 1 H314 Specific target organ toxicity - single exposure 3 H335 Specific target organ toxicity - repeated exposure 2

		H373 Acute hazards to the aquatic environment 2 H401 Chronic hazards to the aquatic environment 2 H411
Acetic acid, 2-phenylhydrazide 114-83-0	0.1- 1 %	Acute toxicity 4; Oral H302 Skin sensitizer 1 H317 Carcinogenicity 2 H351 Acute hazards to the aquatic environment 1 H400 Chronic hazards to the aquatic environment 1 H410
1,4-Naphthalenedione 130-15-4	< 0.1 %	Acute toxicity 3; Oral H301 Acute toxicity 1; Inhalation H330 Skin corrosion/irritation 1 H314 Serious eye damage/eye irritation 1 H318 Skin sensitizer 1 H317 Specific target organ toxicity - single exposure 3 H335 Acute hazards to the aquatic environment 1 H400 Chronic hazards to the aquatic environment 1 H410

Section 4. First aid measures

Inhalation:
Move to fresh air.
If symptoms develop and persist, get medical attention.

Skin contact:
Remove contaminated clothing and footwear.
Wash with soap and water.
Wash clothing before reuse.
If symptoms develop and persist, get medical attention.

Eye contact:
Flush with copious amounts of water, preferably, lukewarm water for at least 15 minutes, holding eyelids open all the time.
Get medical attention.

Ingestion:
Do not induce vomiting.
Keep individual calm.
Get medical attention.

Section 5. Fire fighting measures

Suitable extinguishing media:

Water spray (fog), foam, dry chemical or carbon dioxide.

Specific hazards arising from the chemical:
Uncontrolled polymerization may occur at high temperatures resulting in explosions or rupture of storage containers.

Special protection equipment and precautions for firefighters:
Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
In case of fire, keep containers cool with water spray.

Hazardous combustion products:
Oxides of carbon.
Oxides of sulfur.
Oxides of nitrogen.
Toxic fumes.
Irritating organic vapours.

Section 6. Accidental release measures

Environmental precautions:
Do not allow product to enter sewer or waterways.

Clean-up methods:
Remove all sources of ignition.
Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment during clean-up.
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Scrape up as much material as possible.
Store in a partly filled, closed container until disposal.

Section 7. Handling and storage

Handling:
Avoid contact with eyes, skin and clothing.
Avoid breathing vapors or mists of this product.
Wash thoroughly after handling.
Use only with adequate ventilation.

Storage:
Store below 100°F (38°C).
Store in tightly closed containers. In a cool/well-ventilated area.
Keep away from heat and direct sunlight.

Section 8. Exposure controls / personal protection

Components with specific control parameters for workplace:

PARTICLES (INSOLUBLE OR POORLY SOLUBLE) NOT OTHERWISE SPECIFIED, INHALABLE PARTICLES 9002-88-4	**Value type**	Time Weighted Average (TWA):
	mg/m³	10
	Remarks	ACGIH
PARTICLES (INSOLUBLE OR POORLY SOLUBLE) NOT OTHERWISE SPECIFIED, RESPIRABLE PARTICLES 9002-88-4	**Value type**	Time Weighted Average (TWA):
	mg/m³	3
	Remarks	ACGIH

Respiratory protection:
Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Hand protection:
Suitable protective gloves.

Eye protection:
Safety goggles or safety glasses with side shields.
Protective eye equipment should conform to EN166.

Body protection:
Chemical resistant, impermeable gloves.
Neoprene, Butyl-rubber, or nitrile-rubber gloves.
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:	Red Solid, paste
Odor:	mild
Odor threshold (CA):	No data available.
pH:	Not applicable
Melting point / freezing point:	No data available.
Specific gravity:	1.1564
Boiling point:	> 149 °C (> 300.2 °F) Estimated
Flash point:	> 93 °C (> 199.4 °F)
Evaporation rate:	1.0 Estimated
Flammability (solid, gas):	No data available.
Lower explosive limit:	No data available.
Upper explosive limit:	No data available.

Vapor pressure: (; 27 °C (80.6 °F))	< 5 mm hg
Vapor density:	No data available.
Density:	No data available.
Solubility:	Slightly soluble
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:
Strong oxidizing agents.
Reducing agents.
Acids.
Alkalis.
Amines.
Heavy metals.
Peroxides.
Oxygen scavengers.
Free radical initiators.
Other polymerization initiators.
Chemical stability:
Stable under recommended storage conditions.
Possibility of hazardous reactions:
Will not occur.
Conditions to avoid:
Elevated temperatures.
Heat, flames, sparks and other sources of ignition.
Store away from incompatible materials.
Hazardous decomposition products:
Oxides of carbon.
Oxides of sulfur.
Oxides of nitrogen.
Toxic fumes.
Irritating organic fragments.

Section 11. Toxicological information

Oral toxicity:	Acute toxicity estimate (ATE) : > 2,000 mg/kg Method: Calculation method
Inhalative toxicity:	Acute toxicity estimate (ATE) : 0.8 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:

Boric acid 10043-35-3	Value type	LD50
	Value	3,450 mg/kg
	Species	rat
	Method	not specified
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)
Polyamide wax Proprietary	Value type	LD50
	Value	> 5,000 mg/kg
	Species	rat
	Method	other guideline:
Ethene, homopolymer 9002-88-4	Value type	Acute toxicity estimate (ATE)
	Value	> 5,000 mg/kg
	Species	
	Method	Expert judgement
maleic acid 110-16-7	Value type	LD50
	Value	708 mg/kg
	Species	rat
	Method	not specified
N,N-Diethyl-p-toluidine 613-48-9	Value type	Acute toxicity estimate (ATE)
	Value	100 mg/kg
	Species	
	Method	Expert judgement
α, α-dimethylbenzyl hydroperoxide 80-15-9	Value type	LD50
	Value	382 mg/kg
	Species	rat
	Method	other guideline:
Acetic acid, 2-phenylhydrazide 114-83-0	Value type	LD50
	Value	310 mg/kg
	Species	rat
	Method	OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure)
1,4-Naphthalenedione 130-15-4	Value type	LD50
	Value	124 mg/kg
	Species	rat
	Method	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)

Acute inhalative toxicity:

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)
Ethene, homopolymer 9002-88-4	Value type	Acute toxicity estimate (ATE)
	Value	> 5 mg/l
	Exposure time	4 h
	Species	
	Method	Expert judgement
N,N-Diethyl-p-toluidine 613-48-9	Value type	Acute toxicity estimate (ATE)
	Value	3 mg/l
	Exposure time	
	Species	
	Method	Expert judgement
α, α-dimethylbenzyl hydroperoxide 80-15-9	Value type	LC50
	Value	1.370 mg/l
	Exposure time	4 h
	Species	rat
	Method	not specified
1,4-Naphthalenedione 130-15-4	Value type	LC50
	Value	0.046 mg/l
	Exposure time	4 h
	Species	rat
	Method	OECD Guideline 403 (Acute Inhalation Toxicity)

Acute dermal toxicity:

Boric acid 10043-35-3	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rabbit
	Method	not specified
Polyamide wax Proprietary	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rat
	Method	other guideline:
Ethene, homopolymer 9002-88-4	Value type	Acute toxicity estimate (ATE)
	Value	> 5,000 mg/kg
	Species	
	Method	Expert judgement
maleic acid 110-16-7	Value type	LD50
	Value	1,560 mg/kg
	Species	rabbit
	Method	not specified
N,N-Diethyl-p-toluidine 613-48-9	Value type	Acute toxicity estimate (ATE)
	Value	300 mg/kg
	Species	
	Method	Expert judgement
α, α-dimethylbenzyl hydroperoxide 80-15-9	Value type	Acute toxicity estimate (ATE)
	Value	1,100 mg/kg
	Species	
	Method	Expert judgement

Skin corrosion/irritation:

Boric acid 10043-35-3	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 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)
maleic acid 110-16-7	Result	irritating
	Exposure time	24 h
	Species	human
	Method	Patch Test
N,N-Diethyl-p-toluidine 613-48-9	Result	irritating
	Exposure time	4 h
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
α, α-dimethylbenzyl hydroperoxide 80-15-9	Result	corrosive
	Exposure time	
	Species	rabbit
	Method	Draize Test
Acetic acid, 2-phenylhydrazide 114-83-0	Result	not corrosive
	Exposure time	
	Species	Human, EpiSkinTM (SM), Reconstructed Human Epidermis (RHE)
	Method	OECD Guideline 431 (In Vitro Skin Corrosion: Reconstructed Human Epidermis (RHE) Test Method)
Acetic acid, 2-phenylhydrazide 114-83-0	Result	not irritating
	Exposure time	
	Species	Human, EpiSkinTM (SM), Reconstructed Human Epidermis (RHE)
	Method	OECD Guideline 439 (In Vitro Skin Irritation: Reconstructed Human Epidermis (RHE) Test Method)
1,4-Naphthalenedione 130-15-4	Result	Category 1C (corrosive)
	Exposure time	
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Boric acid 10043-35-3	Result	not irritating
	Exposure time	
	Species	rabbit
	Method	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
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)
Ethene, homopolymer 9002-88-4	Result	not irritating
	Exposure time	24 h
	Species	rabbit
	Method	FDA Guideline
maleic acid 110-16-7	Result	highly irritating
	Exposure time	
	Species	rabbit
	Method	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Acetic acid, 2-phenylhydrazide 114-83-0	Result	not irritating
	Exposure time	
	Species	Chicken, eye, isolated
	Method	OECD Guideline 438 (Isolated Chicken Eye Test Method)

Respiratory or skin sensitization:

Boric acid 10043-35-3	Result	not sensitising
	Test type	Buehler test
	Species	guinea pig
	Method	OECD Guideline 406 (Skin Sensitisation)
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)
Polyamide wax Proprietary	Result	sensitising
	Test type	Guinea pig maximisation test
	Species	guinea pig
	Method	OECD Guideline 406 (Skin Sensitisation)
Polyamide wax Proprietary	Result	sensitising
	Test type	Guinea pig maximisation test
	Species	guinea pig
	Method	OECD Guideline 406 (Skin Sensitisation)
Ethene, homopolymer 9002-88-4	Result	not sensitising
	Test type	Mouse local lymphnode assay (LLNA)
	Species	mouse
	Method	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
maleic acid 110-16-7	Result	sensitising
	Test type	Mouse local lymphnode assay (LLNA)
	Species	mouse
	Method	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
maleic acid 110-16-7	Result	sensitising
	Test type	Mouse local lymphnode assay (LLNA)
	Species	guinea pig
	Method	OECD Guideline 406 (Skin Sensitisation)
Acetic acid, 2-phenylhydrazide 114-83-0	Result	positive
	Test type	Direct peptide reactivity assay (DPRA)
	Species	cysteine and lysine, in chemico test
	Method	OECD Guideline 442C (Direct Peptide Reactivity Assay (DPRA))
Acetic acid, 2-phenylhydrazide 114-83-0	Result	positive
	Test type	Activation of keratinocytes
	Species	human keratinocytes, in vitro test
	Method	OECD Guideline 442D (ARE-Nrf2 Luciferase Test Method)
Acetic acid, 2-phenylhydrazide 114-83-0	Result	positive
	Test type	activation of dendritic cells
	Species	human monocytes, in vitro test
	Method	OECD Guideline 442E (H-CLAT: Human Cell Line Activation Test)
1,4-Naphthalenedione 130-15-4	Result	sensitising
	Test type	not specified
	Species	guinea pig
	Method	not specified

Germ cell mutagenicity:

Boric acid 10043-35-3	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)
Boric acid 10043-35-3	Result	negative
	Type of study / Route of administration	sister chromatid exchange assay in mammalian cells
	Metabolic activation / Exposure time	with and without
	Method	not specified
Boric acid 10043-35-3	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)
Boric acid 10043-35-3	Result	negative
	Type of study / Route of administration	oral: gavage
	Metabolic activation / Exposure time	
	Species	mouse
	Method	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
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)
Ethene, homopolymer 9002-88-4	Result	negative
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without
	Method	Ames Test
maleic acid 110-16-7	Result	negative
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	no data
	Method	Ames Test
maleic acid 110-16-7	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)
α, α-dimethylbenzyl hydroperoxide 80-15-9	Result	positive
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	without
	Method	OECD Guideline 471 (Bacterial Reverse Mutation Assay)
α, α-dimethylbenzyl hydroperoxide 80-15-9	Result	negative
	Type of study / Route of administration	dermal
	Metabolic activation / Exposure time	
	Species	mouse
	Method	not specified
Acetic acid, 2-phenylhydrazide 114-83-0	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)
Acetic acid, 2-phenylhydrazide 114-83-0	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)

Repeated dose toxicity:

Boric acid 10043-35-3	Result	NOAEL=100 mg/kg
	Route of application	oral: feed
	Exposure time / Frequency of treatment	2 ydaily
	Species	rat
	Method	not specified
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)
maleic acid 110-16-7	Result	NOAEL=>= 40 mg/kg
	Route of application	oral: feed
	Exposure time / Frequency of treatment	90 ddaily
	Species	rat
	Method	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
α, α-dimethylbenzyl hydroperoxide 80-15-9	Result	
	Route of application	inhalation: aerosol
	Exposure time / Frequency of treatment	6 h/d5 d/w
	Species	rat
	Method	not specified

Section 12. Ecological information

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

Ecotoxicity: H400 Very toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.

Toxicity:

Boric acid 10043-35-3	Value type	LC50
	Value	455 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Pimephales promelas
	Method	other guideline:
	Value type	NOEC
	Value	36.6 mg/l
	Acute Toxicity Study	Fish
	Exposure time	34 d
	Species	Danio rerio (reported as Brachydanio rerio)
	Method	OECD Guideline 210 (fish early lite stage toxicity test)
Boric acid 10043-35-3	Value type	EC50
	Value	520 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Ceriodaphnia dubia
	Method	other guideline:
Boric acid 10043-35-3	Value type	EC50
	Value	299.6 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)

	Value type	EC10
	Value	200.12 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)
Boric acid 10043-35-3	Value type	EC0
	Value	20 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	16 h
	Species	Pseudomonas putida
	Method	DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm-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)
Polyamide wax Proprietary	Value type	LC50
	Value	> 0.2 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	carp
	Method	not specified
Polyamide wax Proprietary	Value type	EL50
	Value	15.63 - 250 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Polyamide wax Proprietary	Value type	ErC50
	Value	0.0012 mg/l
	Acute Toxicity Study	Algae
	Exposure time	48 h
	Species	Skeletonema costatum
	Method	ISO 10253 (Water quality)
	Value type	EC10
	Value	0.00087 mg/l
	Acute Toxicity Study	Algae
	Exposure time	48 h
	Species	Skeletonema costatum
	Method	ISO 10253 (Water quality)
Ethene, homopolymer 9002-88-4	Value type	LC50
	Value	> 100 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Leuciscus idus
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
Ethene, homopolymer 9002-88-4	Value type	EC0
	Value	> 1,000 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	3 h
	Species	not specified
	Method	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
maleic acid 110-16-7	Value type	LC50
	Value	> 245 mg/l
	Acute Toxicity Study	Fish
	Exposure time	48 h

	Species	Leuciscus idus
	Method	DIN 38412-15
maleic acid 110-16-7	Value type	EC50
	Value	42.81 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
maleic acid 110-16-7	Value type	EC50
	Value	74.35 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	11.8 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
maleic acid 110-16-7	Value type	EC10
	Value	44.6 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	18 h
	Species	Pseudomonas putida
	Method	DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm-Test)
N,N-Diethyl-p-toluidine 613-48-9	Value type	LC50
	Value	78.62 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Danio rerio
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
N,N-Diethyl-p-toluidine 613-48-9	Value type	EC50
	Value	10.34 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
N,N-Diethyl-p-toluidine 613-48-9	Value type	EC50
	Value	23.69 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)
α, α-dimethylbenzyl hydroperoxide 80-15-9	Value type	LC50
	Value	3.9 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Oncorhynchus mykiss
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
α, α-dimethylbenzyl hydroperoxide 80-15-9	Value type	EC50
	Value	18.84 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
α, α-dimethylbenzyl hydroperoxide 80-15-9	Value type	EC50
	Value	3.1 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Desmodesmus subspicatus (reported as Scenedesmus subspicatus)
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	NOEC
	Value	1 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Desmodesmus subspicatus (reported as Scenedesmus subspicatus)
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
α, α-dimethylbenzyl hydroperoxide 80-15-9	Value type	EC10
	Value	70 mg/l

	Acute Toxicity Study	Bacteria
	Exposure time	30 min
	Species	not specified
	Method	not specified
Acetic acid, 2-phenylhydrazide 114-83-0	Value type	EC50
	Value	1.1 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Acetic acid, 2-phenylhydrazide 114-83-0	Value type	EC50
	Value	0.258 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	0.012 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
1,4-Naphthalenedione 130-15-4	Value type	LC50
	Value	0.045 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Oryzias latipes
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
1,4-Naphthalenedione 130-15-4	Value type	EC50
	Value	0.026 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
1,4-Naphthalenedione 130-15-4	Value type	NOEC
	Value	0.07 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	EC50
	Value	0.42 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
1,4-Naphthalenedione 130-15-4	Value type	EC50
	Value	5.94 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)

Persistence and degradability:

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)
Polyamide wax Proprietary	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	69.3 %
	Method	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
Ethene, homopolymer 9002-88-4	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	1 %
	Method	ISO 10708 (BODIS-Test)
maleic acid 110-16-7	Result	readily biodegradable
	Route of application	aerobic

	Degradability	97.08 %
	Method	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
N,N-Diethyl-p-toluidine 613-48-9	Result	not readily biodegradable.
	Route of application	not specified
	Degradability	1 %
	Method	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
α, α-dimethylbenzyl hydroperoxide 80-15-9	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	3 %
	Method	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
Acetic acid, 2-phenylhydrazide 114-83-0	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	39 %
	Method	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
1,4-Naphthalenedione 130-15-4	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	0 %
	Method	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)

Bioaccumulative potential / Mobility in soil:

Boric acid 10043-35-3	Bioconcentration factor (BCF)	< 0.1
	Exposure time	90 d
	Species	Oncorhynchus tschawytscha
	Temperature	12 °C
	Method	not specified
Boric acid 10043-35-3	LogPow	-1.09
	Temperature	22 °C
	Method	EU Method A.8 (Partition Coefficient)
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)
Polyamide wax Proprietary	LogPow	5.4 - 6.6
	Temperature	25 °C
	Method	EU Method A.8 (Partition Coefficient)
maleic acid 110-16-7	LogPow	-1.3
	Temperature	20 °C
	Method	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
N,N-Diethyl-p-toluidine 613-48-9	LogPow	3.7
	Temperature	
	Method	QSAR (Quantitative Structure Activity Relationship)
α, α-dimethylbenzyl hydroperoxide 80-15-9	Bioconcentration factor (BCF)	9.1
	Exposure time	
	Species	calculation
	Temperature	
	Method	OECD Guideline 305 (Bioconcentration: Flow-through Fish Test)
α, α-dimethylbenzyl hydroperoxide 80-15-9	LogPow	1.6
	Temperature	25 °C
	Method	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
Acetic acid, 2-phenylhydrazide 114-83-0	LogPow	0.74
	Temperature	
	Method	QSAR (Quantitative Structure Activity Relationship)
1,4-Naphthalenedione 130-15-4	LogPow	1.71
	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. (Diamid wax mixture)

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. (Diamid wax mixture)

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. (Diamid wax mixture)

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. (Diamid wax mixture)

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. (Diamid wax mixture)

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
TCSI	yes
TSCA	yes
DSL	yes
KECI (KR)	yes
IECSC	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.
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