



## Safety Data Sheet

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AQUENCE ENV 2047 ENVAFILM known as Adhesin LOK 2047  
PB20 KG

SDS No. : 401608  
V001.10

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

**Product name:**

AQUENCE ENV 2047 ENVAFILM known as Adhesin LOK 2047 PB20 KG

**Other means of identification:**

AQUENCE ENV 2047 20KG ENVAFILM

**Product code:**

IDH1238295

**Recommended use of the chemical and restrictions on use**

**Intended use:**

Water based adhesive

**Identification of manufacturer, importer or distributor**

**Manufacturer:** Henkel Thailand Ltd Amata Nakorn Industrial Estate, 700/349 Mu 6, Tambol Nong Mai Daeng, Amphur Muang, Chonburi 20000, Thailand. Phone : +6638456300 Fax : +6638456393

**E-mail address of person responsible for Safety Data Sheet:**

ap-ua-psra.sea@henkel.com

**Emergency information:**

FOR EMERGENCIES ONLY (Spill, major leak, Fire, Exposure, or Accident). Call CHEMTREC: +1 703-741-5970

### Section 2. Hazards identification

**GHS Classification:**

**Hazard Class**

Skin sensitizer  
Toxic to reproduction  
Chronic hazards to the aquatic  
environment

**Hazard Category**

Category 1  
Category 2  
Category 3

**GHS label elements:**

**Hazard pictogram:**



**Signal word:**

Warning

**Hazard statement:**

H317 May cause an allergic skin reaction.  
H361 Suspected of damaging fertility or the unborn child.  
H412 Harmful 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.  
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.

**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
rosin 8050-09-7	1- 10 %	Acute toxicity 5; Oral H303 Skin sensitizer 1 H317
Toluene 108-88-3	1- 10 %	Flammable liquids 2 H225 Acute toxicity 5; Inhalation H333 Skin corrosion/irritation 2 H315 Toxic to reproduction 2 H361 Specific target organ toxicity - single exposure 3 H336 Specific target organ toxicity - repeated exposure 2; Inhalation H373 Aspiration hazard 1 H304 Acute hazards to the aquatic environment 2 H401 Chronic hazards to the aquatic environment 3 H412
Reaction mass of oxydiethylene dibenzoate and oxydipropyl dibenzoate	1- 10 %	Acute toxicity 5; Oral H303
White mineral oil, highly refined, Visc. >7 mm <sup>2</sup> /s <20.5 mm <sup>2</sup> /s, 40° (not cmr) 8042-47-5	0.1- 1 %	Aspiration hazard 1 H304
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	< 0.01 %	Acute toxicity 3; Oral H301 Acute toxicity 2; Inhalation H330 Acute toxicity 2; Dermal H310 Skin corrosion/irritation 1 H314 Serious eye damage/eye irritation 1 H318 Skin sensitizer 1A H317 Acute hazards to the aquatic environment 1 H400 Chronic hazards to the aquatic environment 1 H410
2-methylisothiazol-3(2H)-one 2682-20-4	< 0.01 %	Acute toxicity 3; Oral H301 Acute toxicity 2; Inhalation H330 Acute toxicity 3; Dermal H311 Skin corrosion/irritation 1 H314 Serious eye damage/eye irritation 1 H318 Skin sensitizer 1A H317 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 not breathing, give artificial respiration.  
Get medical attention.

**Skin contact:**

Wash with soap and water.  
If symptoms develop and persist, get medical attention.

**Eye contact:**

Immediately flush eyes with water for at least 15 minutes, while holding eyelids open. Seek medical attention at once.  
If symptoms develop and persist, get medical attention.

**Ingestion:**

Never give anything by mouth to an unconscious person.  
Get medical attention.

#### Section 5. Fire fighting measures

**Suitable extinguishing media:**

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

**Special protection equipment and precautions for firefighters:**

Fire fighters should wear full-face, self contained breathing apparatus and impervious protective clothing. Fire fighters should avoid inhaling any combustion products.

**Hazardous combustion products:**

Carbon monoxide.  
Carbon dioxide.

#### Section 6. Accidental release measures

**Personal precautions:**

Ensure adequate ventilation.

**Environmental precautions:**

Do not empty into drains / surface water / ground water.

**Clean-up methods:**

Absorb spill with inert material. Shovel material into appropriate container for disposal.  
Wash spillage site thoroughly with soap and water or detergent solution.  
Dispose of contaminated material as waste according to Section 13.

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<b>Section 7. Handling and storage</b>
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**Handling:**

Avoid skin and eye contact.

Use only in well-ventilated areas.

Do not return unused product to original container.

Do not handle or store near an open flame, heat or other sources of ignition.

**Storage:**

Storage at 25-35 deg C is recommended.

Store in tightly closed containers. In a cool/well-ventilated area.

Keep away from sources of ignition.

Keep away from heat and direct sunlight.

**Section 8. Exposure controls / personal protection**

**Components with specific control parameters for workplace:**

ROSIN CORE SOLDER THERMAL DECOMPOSITION PRODUCTS (COLOPHONY) 8050-09-7	<b>Remarks</b>	ACGIH Exposure by all routes should be carefully controlled to levels as low as possible.
ROSIN CORE SOLDER THERMAL DECOMPOSITION PRODUCTS (COLOPHONY) 8050-09-7	<b>Remarks</b>	ACGIH Included in the regulation but with no data values. See regulation for further details
RESIN ACIDS, AS TOTAL RESIN ACIDS, INHALABLE FRACTION 8050-09-7	<b>Value type</b>	Time Weighted Average (TWA):
	<b>mg/m<sup>3</sup></b>	0.001
	<b>Remarks</b>	ACGIH
TOLUENE 108-88-3	<b>Value type</b>	Time Weighted Average (TWA):
	<b>ppm</b>	20
	<b>Remarks</b>	ACGIH
TOLUENE 108-88-3	<b>Value type</b>	Time Weighted Average (TWA):
	<b>ppm</b>	200
	<b>Remarks</b>	TH OEL
TOLUENE 108-88-3	<b>Value type</b>	Ceiling Limit Value:
	<b>ppm</b>	300
	<b>Remarks</b>	TH OEL
TOLUENE 108-88-3	<b>Value type</b>	Short Term Exposure Limit (STEL):
	<b>ppm</b>	500
	<b>Remarks</b>	TH OEL 10-min
MINERAL OIL, EXCLUDING METAL WORKING FLUIDS, PURE, HIGHLY AND SEVERELY REFINED, INHALABLE FRACTION 8042-47-5	<b>Value type</b>	Time Weighted Average (TWA):
	<b>mg/m<sup>3</sup></b>	5
	<b>Remarks</b>	ACGIH

**Respiratory protection:**

Use a NIOSH approved respirator if ventilation is inadequate.

**Hand protection:**

Use impervious gloves.

**Eye protection:**

Wear chemical goggles; face shield (if splashing is possible).  
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:**

Use local exhaust ventilation.

Ventilation should effectively remove and prevent buildup of any vapor/mist/fume/dust generated from the handling of this product.

**General protection and hygiene measures:**

Eyewash fountains and emergency showers are required.

**Hygienic measures:**

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

Good industrial hygiene practices should be observed.

### Section 9. Physical and chemical properties

<b>Appearance:</b>	Off white liquid
<b>Odor:</b>	characteristic
<b>Odor threshold (CA):</b>	No data available.
<b>pH:</b>	4 - 6
<b>Melting point / freezing point:</b>	< 4 °C (< 39.2 °F)
<b>Specific gravity:</b>	1.05
<b>Boiling point:</b>	> 100 °C (> 212 °F)
<b>Flash point:</b>	Not available.
<b>Evaporation rate:</b>	1 (Water = 1)
<b>Flammability (solid, gas):</b>	No data available.
<b>Lower explosive limit:</b>	No data available.
<b>Upper explosive limit:</b>	No data available.
<b>Vapor pressure:</b>	17.5 mm hg (; 20 °C (68 °F))
<b>Vapor density:</b>	0.62 (Air = 1)
<b>Density:</b>	1.05 g/cm <sup>3</sup>
<b>Solubility:</b>	Miscible
<b>Partition coefficient: n-octanol/water:</b>	No data available.
<b>Auto ignition:</b>	No data available.
<b>Decomposition temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.
<b>VOC content:</b>	No data available.

### Section 10. Stability and reactivity

**Reactivity/Incompatible materials:**

Avoid contact with materials sensitive to water.

**Conditions to avoid:**

Stable under recommended storage conditions.

**Hazardous decomposition products:**

Carbon monoxide.

Carbon dioxide.

### Section 11. Toxicological information

**Oral toxicity:** Acute toxicity estimate (ATE) : > 5,000 mg/kg  
Method: Calculation method

**Inhalative toxicity:** Acute toxicity estimate (ATE) : > 40 mg/l

Exposure time: 4 h  
Test atmosphere: Vapor.  
Method: Calculation method

Symptoms of Overexposure: None known.

**Acute oral toxicity:**

rosin 8050-09-7	Value type	LD50
	Value	2,800 mg/kg
	Species	rat
	Method	not specified
Toluene 108-88-3	Value type	LD50
	Value	5,580 mg/kg
	Species	rat
	Method	EU Method B.1 (Acute Toxicity (Oral))
Reaction mass of oxydiethylene dibenzoate and oxydipropyl dibenzoate	Value type	LD50
	Value	4,190 mg/kg
	Species	rat
	Method	OECD Guideline 401 (Acute Oral Toxicity)
White mineral oil, highly refined, Visc. >7 mm <sup>2</sup> /s <20.5 mm <sup>2</sup> /s, 40° (not cmr) 8042-47-5	Value type	LD50
	Value	> 5,000 mg/kg
	Species	rat
	Method	OECD Guideline 401 (Acute Oral Toxicity)
Mixture, 3(2H)-Isothiazolone, 5- chloro-2-methyl-, mixt. with 2- methyl-3(2H)-isothiazolone 55965-84-9	Value type	LD50
	Value	66 mg/kg
	Species	rat
	Method	OECD Guideline 401 (Acute Oral Toxicity)
2-methylisothiazol-3(2H)-one 2682-20-4	Value type	LD50
	Value	120 mg/kg
	Species	rat
	Method	EPA OPPTS 870.1100 (Acute Oral Toxicity)



**Acute inhalative toxicity:**

Toluene 108-88-3	Value type	LC50
	Value	28.1 mg/l
	Exposure time	4 h
	Species	rat
	Method	equivalent or similar to OECD Guideline 403 (Acute Inhalation Toxicity)
Reaction mass of oxydiethylene dibenzoate and oxydipropyl dibenzoate	Value type	LC50
	Value	> 200 mg/l
	Exposure time	4 h
	Species	rat
	Method	not specified
White mineral oil, highly refined, Visc. >7 mm <sup>2</sup> /s <20.5 mm <sup>2</sup> /s, 40° (not cmr) 8042-47-5	Value type	LC50
	Value	> 5 mg/l
	Exposure time	4 h
	Species	rat
	Method	OECD Guideline 403 (Acute Inhalation Toxicity)
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	Value type	LC50
	Value	0.171 mg/l
	Exposure time	4 h
	Species	rat
	Method	OECD Guideline 403 (Acute Inhalation Toxicity)
2-methylisothiazol-3(2H)-one 2682-20-4	Value type	LC50
	Value	0.11 mg/l
	Exposure time	4 h
	Species	rat
	Method	OECD Guideline 403 (Acute Inhalation Toxicity)

**Acute dermal toxicity:**

rosin 8050-09-7	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rat
	Method	OECD Guideline 402 (Acute Dermal Toxicity)
Toluene 108-88-3	Value type	LD50
	Value	> 5,000 mg/kg
	Species	rabbit
	Method	not specified
Reaction mass of oxydiethylene dibenzoate and oxydipropyl dibenzoate	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rat
	Method	OECD Guideline 402 (Acute Dermal Toxicity)
White mineral oil, highly refined, Visc. >7 mm <sup>2</sup> /s <20.5 mm <sup>2</sup> /s, 40° (not cmr) 8042-47-5	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rabbit
	Method	OECD Guideline 402 (Acute Dermal Toxicity)
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	Value type	LD50
	Value	87.12 mg/kg
	Species	rabbit
	Method	OECD Guideline 402 (Acute Dermal Toxicity)
2-methylisothiazol-3(2H)-one 2682-20-4	Value type	LD50
	Value	242 mg/kg
	Species	rat
	Method	OECD Guideline 402 (Acute Dermal Toxicity)

**Skin corrosion/irritation:**

rosin 8050-09-7	Result	not irritating
	Exposure time	4 h
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Toluene 108-88-3	Result	irritating
	Exposure time	4 h
	Species	rabbit
	Method	EU Method B.4 (Acute Toxicity: Dermal Irritation / Corrosion)
White mineral oil, highly refined, Visc.	Result	not irritating

>7 mm <sup>2</sup> /s <20.5 mm <sup>2</sup> /s, 40° (not cmr) 8042-47-5	Exposure time	
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	Result	corrosive
	Exposure time	4 h
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
2-methylisothiazol-3(2H)-one 2682-20-4	Result	corrosive
	Exposure time	4 h
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

**Serious eye damage/irritation:**

rosin 8050-09-7	Result	not irritating
	Exposure time	
	Species	rabbit
	Method	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Toluene 108-88-3	Result	not irritating
	Exposure time	
	Species	rabbit
	Method	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
White mineral oil, highly refined, Visc. >7 mm <sup>2</sup> /s <20.5 mm <sup>2</sup> /s, 40° (not cmr) 8042-47-5	Result	not irritating
	Exposure time	
	Species	rabbit
	Method	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	Result	Category 1 (irreversible effects on the eye)
	Exposure time	
	Species	rabbit
	Method	not specified

**Respiratory or skin sensitization:**

Toluene 108-88-3	Result	not sensitising
	Test type	Guinea pig maximisation test
	Species	guinea pig
	Method	EU Method B.6 (Skin Sensitisation)
White mineral oil, highly refined, Visc. >7 mm <sup>2</sup> /s <20.5 mm <sup>2</sup> /s, 40° (not cmr) 8042-47-5	Result	not sensitising
	Test type	Buehler test
	Species	guinea pig
	Method	OECD Guideline 406 (Skin Sensitisation)
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	Result	sensitising
	Test type	Guinea pig maximisation test
	Species	guinea pig
	Method	OECD Guideline 406 (Skin Sensitisation)
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	Result	sensitising
	Test type	Mouse local lymphnode assay (LLNA)
	Species	mouse
	Method	not specified
2-methylisothiazol-3(2H)-one 2682-20-4	Result	sensitising
	Test type	Buehler test
	Species	guinea pig
	Method	OECD Guideline 406 (Skin Sensitisation)

**Germ cell mutagenicity:**

rosin 8050-09-7	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)
Toluene 108-88-3	Result	negative
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without
	Method	EU Method B.13/14 (Mutagenicity)
Toluene 108-88-3	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)
Toluene 108-88-3	Result	negative
	Type of study / Route of administration	intraperitoneal
	Metabolic activation / Exposure time	
	Species	rat
Toluene 108-88-3	Result	negative
	Type of study / Route of administration	inhalation: vapour
	Metabolic activation / Exposure time	
	Species	mouse
White mineral oil, highly refined, Visc. >7 mm <sup>2</sup> /s <20.5 mm <sup>2</sup> /s, 40° (not cmr) 8042-47-5	Result	negative
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with
	Method	OECD Guideline 471 (Bacterial Reverse Mutation Assay)
White mineral oil, highly refined, Visc. >7 mm <sup>2</sup> /s <20.5 mm <sup>2</sup> /s, 40° (not cmr) 8042-47-5	Result	negative
	Type of study / Route of administration	mammalian cell gene mutation assay
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
White mineral oil, highly refined, Visc. >7 mm <sup>2</sup> /s <20.5 mm <sup>2</sup> /s, 40° (not cmr) 8042-47-5	Result	negative
	Type of study / Route of administration	intraperitoneal
	Metabolic activation / Exposure time	
	Species	mouse
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	Result	ambiguous
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without
	Method	equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	Result	positive
	Type of study / Route of administration	in vitro mammalian chromosome aberration test
	Metabolic activation / Exposure time	with and without
	Method	EPA OPP 84-2 (Mutagenicity Testing)
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	Result	positive
	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)
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	Result	negative
	Type of study / Route of administration	DNA damage and repair assay, unscheduled DNA synthesis in mammalian cells in vitro
	Metabolic activation / Exposure time	not applicable
	Method	OECD Guideline 482 (Genetic Toxicology: DNA Damage and Repair, Unscheduled DNA Synthesis in Mammalian Cells In Vitro)
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	Result	negative
	Type of study / Route of administration	oral: gavage
	Metabolic activation / Exposure time	
	Species	mouse
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	Result	negative
	Type of study / Route of administration	oral: gavage
	Metabolic activation / Exposure time	
	Method	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-	Result	negative
	Type of study / Route of administration	oral: gavage

methyl-3(2H)-isothiazolone 55965-84-9	Metabolic activation / Exposure time	
	Species	mouse
	Method	OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration Test)
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	Result	negative
	Type of study / Route of administration	oral: feed
	Metabolic activation / Exposure time	
	Species	Drosophila melanogaster
	Method	OECD Guideline 477 (Genetic Toxicology: Sex-linked Recessive Lethal Test in Drosophila melanogaster)
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	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)
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	Result	negative
	Type of study / Route of administration	oral: gavage
	Metabolic activation / Exposure time	
	Species	rat
	Method	EPA OPP 84-2 (Mutagenicity Testing)
2-methylisothiazol-3(2H)-one 2682-20-4	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-methylisothiazol-3(2H)-one 2682-20-4	Result	negative
	Type of study / Route of administration	in vitro mammalian chromosome aberration test
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
2-methylisothiazol-3(2H)-one 2682-20-4	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)
2-methylisothiazol-3(2H)-one 2682-20-4	Result	negative
	Type of study / Route of administration	oral: gavage
	Metabolic activation / Exposure time	
	Species	mouse
	Method	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
2-methylisothiazol-3(2H)-one 2682-20-4	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)

**Repeated dose toxicity:**

Toluene 108-88-3	Result	NOAEL=625 mg/kg
	Route of application	oral: gavage
	Exposure time / Frequency of treatment	13 weeksdaily, 5 d/w
	Species	rat
	Method	EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents)
Toluene 108-88-3	Result	NOAEL=2355 mg/m3
	Route of application	inhalation: vapour
	Exposure time / Frequency of treatment	15 w6.5 h/d, 5 d/w
	Species	rat
	Method	EU Method B.29 (Sub-Chronic Inhalation Toxicity Test:90-Day Repeated Inhalation Dose Study Using Rodent Species)
White mineral oil, highly refined, Visc. >7 mm <sup>2</sup> /s <20.5 mm <sup>2</sup> /s, 40° (not cmr) 8042-47-5	Result	NOAEL=>= 1,600 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)
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	Result	NOAEL=16.3 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)
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	Result	NOAEL=0.34 mg/m3
	Route of application	inhalation: aerosol
	Exposure time / Frequency of treatment	90 d6 h/d, 5 d/w
	Species	rat
	Method	OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	Result	NOAEL=2.625 mg/kg
	Route of application	dermal
	Exposure time / Frequency of treatment	90 d6 h/d
	Species	rat
	Method	EPA OPP 82-3 (Subchronic Dermal Toxicity 90 Days)
2-methylisothiazol-3(2H)-one 2682-20-4	Result	NOAEL=60 mg/kg
	Route of application	oral: gavage
	Exposure time / Frequency of treatment	90 ddaily
	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:** Harmful to aquatic life with long lasting effects.

**Toxicity:**

Toluene 108-88-3	Value type	NOEC
	Value	3.2 mg/l
	Acute Toxicity Study	Fish
	Exposure time	28 d
	Species	Cyprinodon variegatus
	Method	OECD Guideline 204 (Fish, Prolonged Toxicity Test: 14-day Study)
	Value type	LC50
	Value	5.5 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Oncorhynchus kisutch
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
Toluene 108-88-3	Value type	EC50
	Value	11.5 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h

	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Toluene 108-88-3	Value type	IC50
	Value	12 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)
Toluene 108-88-3	Value type	NOEC
	Value	29 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	16 h
	Species	Pseudomonas putida
	Method	DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm-Test)
White mineral oil, highly refined, Visc. >7 mm <sup>2</sup> /s <20.5 mm <sup>2</sup> /s, 40° (not cmr) 8042-47-5	Value type	LC50
	Value	> 1,000 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Leuciscus idus
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
White mineral oil, highly refined, Visc. >7 mm <sup>2</sup> /s <20.5 mm <sup>2</sup> /s, 40° (not cmr) 8042-47-5	Value type	EL50
	Value	> 100 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
White mineral oil, highly refined, Visc. >7 mm <sup>2</sup> /s <20.5 mm <sup>2</sup> /s, 40° (not cmr) 8042-47-5	Value type	NOELR
	Value	100 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
White mineral oil, highly refined, Visc. >7 mm <sup>2</sup> /s <20.5 mm <sup>2</sup> /s, 40° (not cmr) 8042-47-5	Value type	IC50
	Value	> 100 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	93 d
	Species	other:
	Method	other guideline:
Mixture, 3(2H)-Isothiazolone, 5- chloro-2-methyl-, mixt. with 2- methyl-3(2H)-isothiazolone 55965-84-9	Value type	LC50
	Value	0.22 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Oncorhynchus mykiss
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
	Value type	NOEC
	Value	0.098 mg/l
	Acute Toxicity Study	Fish
	Exposure time	28 d
	Species	Oncorhynchus mykiss
	Method	OECD Guideline 210 (fish early lite stage toxicity test)
Mixture, 3(2H)-Isothiazolone, 5- chloro-2-methyl-, mixt. with 2- methyl-3(2H)-isothiazolone 55965-84-9	Value type	EC50
	Value	0.12 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Mixture, 3(2H)-Isothiazolone, 5- chloro-2-methyl-, mixt. with 2- methyl-3(2H)-isothiazolone 55965-84-9	Value type	EC50
	Value	0.0052 mg/l
	Acute Toxicity Study	Algae
	Exposure time	48 h
	Species	Skeletonema costatum
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	NOEC
	Value	0.00064 mg/l
	Acute Toxicity Study	Algae
	Exposure time	48 h
	Species	Skeletonema costatum
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
Mixture, 3(2H)-Isothiazolone, 5- chloro-2-methyl-, mixt. with 2-	Value type	EC20
	Value	0.97 mg/l

methyl-3(2H)-isothiazolone 55965-84-9	Acute Toxicity Study	Bacteria
	Exposure time	3 h
	Species	activated sludge
	Method	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
2-methylisothiazol-3(2H)-one 2682-20-4	Value type	LC50
	Value	4.77 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Oncorhynchus mykiss
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
2-methylisothiazol-3(2H)-one 2682-20-4	Value type	EC50
	Value	0.93 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
2-methylisothiazol-3(2H)-one 2682-20-4	Value type	NOEC
	Value	0.03 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	0.22 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-methylisothiazol-3(2H)-one 2682-20-4	Value type	EC 50
	Value	41 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	3 h
	Species	activated sludge
	Method	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)

**Persistence and degradability:**

rosin 8050-09-7	Result	readily biodegradable
	Route of application	aerobic
	Degradability	71 %
	Method	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Toluene 108-88-3	Result	readily biodegradable
	Route of application	aerobic
	Degradability	80 %
	Method	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
White mineral oil, highly refined, Visc. >7 mm <sup>2</sup> /s <20.5 mm <sup>2</sup> /s, 40° (not cmr) 8042-47-5	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	31.3 %
	Method	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	Result	inherently biodegradable
	Route of application	aerobic
	Degradability	100 %
	Method	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)
	Result	readily biodegradable
	Route of application	aerobic
	Degradability	> 60 %
	Method	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
2-methylisothiazol-3(2H)-one 2682-20-4	Result	inherently biodegradable
	Route of application	aerobic
	Degradability	97 %
	Method	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)
	Result	readily biodegradable
	Route of application	aerobic
	Degradability	> 70 %
	Method	OECD Guideline 309 (Aerobic Mineralisation in Surface Water Simulation Biodegradation Test)

**Bioaccumulative potential / Mobility in soil:**

rosin 8050-09-7	LogPow	> 3 - 6.2
	Temperature	
	Method	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
Toluene 108-88-3	Bioconcentration factor (BCF)	90
	Exposure time	3 d
	Species	Leuciscus idus melanotus
	Temperature	
Toluene 108-88-3	Method	OECD Guideline 305 (Bioconcentration: Flow-through Fish Test)
	LogPow	2.73
	Temperature	20 °C
White mineral oil, highly refined, Visc. >7 mm <sup>2</sup> /s <20.5 mm <sup>2</sup> /s, 40° (not cmr) 8042-47-5	Method	EU Method A.8 (Partition Coefficient)
	LogPow	> 4
	Temperature	
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	Method	EU Method A.8 (Partition Coefficient)
	Bioconcentration factor (BCF)	3.6
	Exposure time	
	Species	calculation
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	Temperature	
	Method	QSAR (Quantitative Structure Activity Relationship)
	LogPow	-0.71 - 0.75
	Temperature	20 °C
2-methylisothiazol-3(2H)-one 2682-20-4	Method	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
	LogPow	-0.5
	Temperature	
	Method	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask 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:**

Not dangerous goods

**Railroad transport RID:**

Not dangerous goods

**Inland water transport ADN:**

Not dangerous goods

**Marine transport IMDG:**

Not dangerous goods

**Air transport IATA:**

Not dangerous 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
KECI (KR)	yes
IECSC	yes
AICS	yes
PICCS (PH)	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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