

Safety Data Sheet

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SDS No.: 401517

V001.6

Revision: 20.05.2021 printing date: 06.09.2024

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

Product name:

AQUENCE LD 344 known as Adhesin 344 MD100 KG

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Other means of identification:

AQUENCE LD 344 100KG

Product code:

IDH1238553

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

Hazard Category

Skin sensitizer

Category 1

Chronic hazards to the aquatic environment

Category 3

GHS label elements:

Hazard pictogram:



Signal word:

Warning

Hazard statement:

H317 May cause an allergic skin reaction.

H412 Harmful to aquatic life with long lasting effects.

Precaution:

Prevention:

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.

Response:

P302+P352 IF ON SKIN: Wash with plenty of water.

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
Titanium dioxide	1- 10 %	
13463-67-7		
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-,	< 0.01 %	Acute toxicity 3; Oral
mixt. with 2-methyl-3(2H)-isothiazolone		H301
55965-84-9		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	< 0.01 %	Acute toxicity 3; Oral
2682-20-4		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.

Specific hazards arising from the chemical:

In the event of a fire, carbon monoxide (CO) and carbon dioxide (CO2) can be released.

Special protection equipment and precautions for firefighters:

Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Section 6. Accidental release measures

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.

Section 7. Handling and storage

Handling:

Avoid skin and eye contact.

Use only in well-ventilated areas.

Do not return unused product to original container.

Storage:

Store in tightly closed containers, cool and dry.

Keep away from heat and direct sunlight.

 $> + 15 \, {}^{\circ}\text{C}$

< + 30 °C

Section 8. Exposure controls / personal protection

Components with specific control parameters for workplace:

TITANIUM DIOXIDE	Value type	Time Weighted Average (TWA):
13463-67-7	ma/m³	10
1	mg/m³ Remarks	ACGIH
	Kemarks	ACOIII

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:

Ensure adequate 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:

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.

Good industrial hygiene practices should be observed.

Section 9. Physical and chemical properties

Appearance: Milky white

Odor: liquid characteristic
Odor threshold (CA): No data available.

pH: 4 - 6

Melting point / freezing point: $< 4 \, ^{\circ}\text{C} (< 39.2 \, ^{\circ}\text{F})$

Specific gravity: 1.05

Boiling point: > 100 °C (> 212 °F) **Flash point:** > 100 °C (> 212 °F)

Evaporation rate:

(Water = 1)

Flammability (solid, gas):

Lower explosive limit:

Upper explosive limit:

Vapor pressure:

No data available.

No data available.

17.5 mm hg

(; 20 °C (68 °F))

Vapor density: 0.62

(Air = 1)

Density: No data available.

Solubility: Miscible

Partition coefficient: n- No data available.

octanol/water:

Auto ignition:No data available.Decomposition temperature:No data available.Viscosity:10,000 - 13,000 cp

(Brookfield; Instrument: RVT; 27 °C (80.6 °F); speed of rotation: 10 min-1; Spindle No: 4; Method: no method)

VOC content: 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

Symptoms of Overexposure: None known.

Acute oral toxicity:

Titanium dioxide	Value type	LD50
13463-67-7	Value	> 5,000 mg/kg
	Species	rat
	Method	OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure)
Mixture, 3(2H)-Isothiazolone, 5-	Value type	LD50
chloro-2-methyl-, mixt. with 2-	Value	66 mg/kg
methyl-3(2H)-isothiazolone	Species	rat
55965-84-9	Method	OECD Guideline 401 (Acute Oral Toxicity)
2-methylisothiazol-3(2H)-one	Value type	LD50
2682-20-4	Value	120 mg/kg
	Species	rat
	Method	EPA OPPTS 870.1100 (Acute Oral Toxicity)

Acute inhalative toxicity:

Titanium dioxide	Value type	LC50
13463-67-7	Value	> 6.82 mg/l
	Exposure time	4 h
	Species	rat
	Method	not specified
Mixture, 3(2H)-Isothiazolone, 5-	Value type	LC50
chloro-2-methyl-, mixt. with 2-	Value	0.171 mg/l
methyl-3(2H)-isothiazolone	Exposure time	4 h
55965-84-9	Species	rat
	Method	OECD Guideline 403 (Acute Inhalation Toxicity)
2-methylisothiazol-3(2H)-one	Value type	LC50
2682-20-4	Value	0.11 mg/l
	Exposure time	4 h
	Species	rat
	Method	OECD Guideline 403 (Acute Inhalation Toxicity)

Acute dermal toxicity:

Titanium dioxide	Value type	LD50
13463-67-7	Value	>= 10,000 mg/kg
	Species	hamster
	Method	not specified
Mixture, 3(2H)-Isothiazolone, 5-	Value type	LD50
chloro-2-methyl-, mixt. with 2-	Value	87.12 mg/kg
methyl-3(2H)-isothiazolone	Species	rabbit
55965-84-9	Method	OECD Guideline 402 (Acute Dermal Toxicity)
2-methylisothiazol-3(2H)-one	Value type	LD50
2682-20-4	Value	242 mg/kg
	Species	rat
	Method	OECD Guideline 402 (Acute Dermal Toxicity)

Skin corrosion/irritation:

Titanium dioxide	Result	not irritating
13463-67-7	Exposure time	4 h
	Species	rabbit
	Method	equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Mixture, 3(2H)-Isothiazolone, 5-chloro-	Result	corrosive
2-methyl-, mixt. with 2-methyl-3(2H)-	Exposure time	4 h
isothiazolone	Species	rabbit
55965-84-9	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
2-methylisothiazol-3(2H)-one	Result	corrosive
2682-20-4	Exposure time	4 h
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Titanium dioxide	Result	not irritating
13463-67-7	Exposure time	
	Species	rabbit
	Method	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Mixture, 3(2H)-Isothiazolone, 5-chloro-	Result	Category 1 (irreversible effects on the eye)
2-methyl-, mixt. with 2-methyl-3(2H)-	Exposure time	
isothiazolone	Species	rabbit
55965-84-9	Method	not specified

Respiratory or skin sensitization:

Titanium dioxide	Result	not sensitising
13463-67-7	Test type	Mouse local lymphnode assay (LLNA)
	Species	mouse
	Method	equivalent or similar to OECD Guideline 429 (Skin Sensitisation: Local
		Lymph Node Assay)
Mixture, 3(2H)-Isothiazolone, 5-	Result	sensitising
chloro-2-methyl-, mixt. with 2-	Test type	Guinea pig maximisation test
methyl-3(2H)-isothiazolone	Species	guinea pig
55965-84-9	Method	OECD Guideline 406 (Skin Sensitisation)
Mixture, 3(2H)-Isothiazolone, 5-	Result	sensitising
chloro-2-methyl-, mixt. with 2-	Test type	Mouse local lymphnode assay (LLNA)
methyl-3(2H)-isothiazolone	Species	mouse
55965-84-9	Method	not specified
2-methylisothiazol-3(2H)-one	Result	sensitising
2682-20-4	Test type	Buehler test
	Species	guinea pig
	Method	OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

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Titanium dioxide	Result	negative
13463-67-7	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time Method	with and without
Titanium dioxide	Result	OECD Guideline 471 (Bacterial Reverse Mutation Assay)
13463-67-7	Type of study / Route of administration	negative in vitro mammalian chromosome aberration test
13403-07-7	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 473 (In vitro Mammalian Chromosome
	Wellou	Aberration Test)
Titanium dioxide	Result	negative
13463-67-7	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)
Titanium dioxide	Result	negative
13463-67-7	Type of study / Route of administration	oral: gavage
	Metabolic activation / Exposure time	
	Species	mouse
	Method	OECD Guideline 474 (Mammalian Erythrocyte
		Micronucleus Test)
Mixture, 3(2H)-Isothiazolone, 5-	Result	ambiguous
chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
55965-84-9	Metabolic activation / Exposure time Method	with and without
33903-84-9	Method	equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Mixture, 3(2H)-Isothiazolone, 5-	Dogult	positive
chloro-2-methyl-, mixt. with 2-	Result Type of study / Route of administration	in vitro mammalian chromosome aberration test
methyl-3(2H)-isothiazolone	Metabolic activation / Exposure time	with and without
55965-84-9	Method	EPA OPP 84-2 (Mutagenicity Testing)
Mixture, 3(2H)-Isothiazolone, 5-	Result	positive
chloro-2-methyl-, mixt. with 2-	Type of study / Route of administration	mammalian cell gene mutation assay
methyl-3(2H)-isothiazolone	Metabolic activation / Exposure time	with and without
55965-84-9	Method	OECD Guideline 476 (In vitro Mammalian Cell Gene
	Wellou	Mutation Test)
Mixture, 3(2H)-Isothiazolone, 5-	Result	negative
chloro-2-methyl-, mixt. with 2-	Type of study / Route of administration	DNA damage and repair assay, unscheduled DNA
methyl-3(2H)-isothiazolone		synthesis in mammalian cells in vitro
55965-84-9	Metabolic activation / Exposure time	not applicable
	Method	OECD Guideline 482 (Genetic Toxicology: DNA Damage
		and Repair, Unscheduled DNA Synthesis in Mammalian
	<u> </u>	Cells In Vitro)
Mixture, 3(2H)-Isothiazolone, 5-	Result	negative
chloro-2-methyl-, mixt. with 2-	Type of study / Route of administration	
mathril 2(211) is athiogalana		oral: gavage
methyl-3(2H)-isothiazolone	Metabolic activation / Exposure time	
methyl-3(2H)-isothiazolone 55965-84-9	Metabolic activation / Exposure time Species	mouse
	Metabolic activation / Exposure time	mouse OECD Guideline 474 (Mammalian Erythrocyte
55965-84-9	Metabolic activation / Exposure time Species Method	mouse OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
55965-84-9 Mixture, 3(2H)-Isothiazolone, 5-	Metabolic activation / Exposure time Species Method Result	mouse OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) negative
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-	Metabolic activation / Exposure time Species Method Result Type of study / Route of administration	mouse OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
55965-84-9 Mixture, 3(2H)-Isothiazolone, 5-	Metabolic activation / Exposure time Species Method Result Type of study / Route of administration Metabolic activation / Exposure time	mouse OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) negative oral: gavage
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	Metabolic activation / Exposure time Species Method Result Type of study / Route of administration Metabolic activation / Exposure time Species	mouse OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) negative oral: gavage mouse
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	Metabolic activation / Exposure time Species Method Result Type of study / Route of administration Metabolic activation / Exposure time	mouse OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) negative oral: gavage mouse OECD Guideline 475 (Mammalian Bone Marrow
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	Metabolic activation / Exposure time Species Method Result Type of study / Route of administration Metabolic activation / Exposure time Species	mouse OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) negative oral: gavage mouse
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9 Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-	Metabolic activation / Exposure time Species Method Result Type of study / Route of administration Metabolic activation / Exposure time Species Method	mouse OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) negative oral: gavage mouse 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 Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	Metabolic activation / Exposure time Species Method Result Type of study / Route of administration Metabolic activation / Exposure time Species Method Result	mouse OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) negative oral: gavage mouse OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration Test) negative oral: feed
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9 Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-	Metabolic activation / Exposure time Species Method Result Type of study / Route of administration Metabolic activation / Exposure time Species Method Result Type of study / Route of administration Metabolic activation / Exposure time Species	mouse OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) negative oral: gavage mouse OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration Test) negative oral: feed Drosophila melanogaster
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9 Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	Metabolic activation / Exposure time Species Method Result Type of study / Route of administration Metabolic activation / Exposure time Species Method Result Type of study / Route of administration Metabolic activation / Exposure time	mouse OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) negative oral: gavage mouse OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration Test) negative oral: feed Drosophila melanogaster OECD Guideline 477 (Genetic Toxicology: Sex-linked
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9 Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	Metabolic activation / Exposure time Species Method Result Type of study / Route of administration Metabolic activation / Exposure time Species Method Result Type of study / Route of administration Metabolic activation / Exposure time Species Method	mouse OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) negative oral: gavage mouse OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration Test) negative oral: feed Drosophila melanogaster 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 Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9 Mixture, 3(2H)-Isothiazolone, 5-	Metabolic activation / Exposure time Species Method Result Type of study / Route of administration Metabolic activation / Exposure time Species Method Result Type of study / Route of administration Metabolic activation / Exposure time Species Method Result Type of study / Route of administration Metabolic activation / Exposure time Species Method Result	mouse OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) negative oral: gavage mouse OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration Test) negative oral: feed Drosophila melanogaster OECD Guideline 477 (Genetic Toxicology: Sex-linked Recessive Lethal Test in Drosophila melanogaster) negative
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Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9 Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9 Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	Metabolic activation / Exposure time Species Method Result Type of study / Route of administration Metabolic activation / Exposure time Species Method Result Type of study / Route of administration Metabolic activation / Exposure time Species Method Result Type of study / Route of administration Metabolic activation / Exposure time Species Method Result Type of study / Route of administration Metabolic activation / Exposure time Species Method	mouse OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) negative oral: gavage mouse OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration Test) negative oral: feed Drosophila melanogaster OECD Guideline 477 (Genetic Toxicology: Sex-linked Recessive Lethal Test in Drosophila melanogaster) negative oral: gavage rat 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 Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9 Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9 Mixture, 3(2H)-Isothiazolone, 5-methyl-3(2H)-isothiazolone, 5-shloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone, 5-shloro-2-methyl-, mixt. with 3-shloro-2-methyl-, mixt. with 3-shloro-3-methyl-, mixt. with 3-shloro-3-methyl-, mixt. with 3-shloro-3-methyl-, mixt. with 3-shloro-3-methyl-, mixt. w	Metabolic activation / Exposure time Species Method Result Type of study / Route of administration Metabolic activation / Exposure time Species Method Result Type of study / Route of administration Metabolic activation / Exposure time Species Method Result Type of study / Route of administration Metabolic activation / Exposure time Species Method Result Type of study / Route of administration Metabolic activation / Exposure time Species Method Result Result	mouse OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) negative oral: gavage mouse OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration Test) negative oral: feed Drosophila melanogaster OECD Guideline 477 (Genetic Toxicology: Sex-linked Recessive Lethal Test in Drosophila melanogaster) negative oral: gavage rat OECD Guideline 486 (Unscheduled DNA Synthesis (UDS) Test with Mammalian Liver Cells in vivo) negative
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	Method	EPA OPP 84-2 (Mutagenicity Testing)
2-methylisothiazol-3(2H)-one	Result	negative
2682-20-4	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	Result	negative
2682-20-4	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	Result	negative
2682-20-4	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	Result	negative
2682-20-4	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	Result	negative
2682-20-4	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:

Titanium dioxide	Result	NOAEL=1,000 mg/kg
13463-67-7	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)
Mixture, 3(2H)-Isothiazolone, 5-	Result	NOAEL=16.3 mg/kg
chloro-2-methyl-, mixt. with 2-	Route of application	oral: drinking water
methyl-3(2H)-isothiazolone	Exposure time / Frequency of treatment	90 ddaily
55965-84-9	Species	rat
	Method	OECD Guideline 408 (Repeated Dose 90-Day Oral
		Toxicity in Rodents)
Mixture, 3(2H)-Isothiazolone, 5-	Result	NOAEL=0.34 mg/m3
chloro-2-methyl-, mixt. with 2-	Route of application	inhalation: aerosol
methyl-3(2H)-isothiazolone 55965-84-9	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-	Result	NOAEL=2.625 mg/kg
chloro-2-methyl-, mixt. with 2-	Route of application	dermal
methyl-3(2H)-isothiazolone	Exposure time / Frequency of treatment	90 d6 h/d
55965-84-9	Species	rat
	Method	EPA OPP 82-3 (Subchronic Dermal Toxicity 90 Days)
2-methylisothiazol-3(2H)-one	Result	NOAEL=60 mg/kg
2682-20-4	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:

Titanium dioxide	Value type	LC50
13463-67-7	Value	Toxicity > Water solubility
	Acute Toxicity Study	Fish

	Exposure time	48 h
	Species Species	Leuciscus idus
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
Titanium dioxide	Value type	EC50
13463-67-7	Value	Toxicity > Water solubility
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Titanium dioxide	Value type	EC50
13463-67-7	Value	Toxicity > Water solubility
	Acute Toxicity Study Exposure time	Algae 72 h
	Species Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
Titanium dioxide	Value type	ECO
13463-67-7	Value	Toxicity > Water solubility
	Acute Toxicity Study	Bacteria
	Exposure time	24 h
	Species	Pseudomonas fluorescens
	Method	DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm-Test)
Mixture, 3(2H)-Isothiazolone, 5-	Value type	LC50
chloro-2-methyl-, mixt. with 2-	Value	0.22 mg/l
methyl-3(2H)-isothiazolone	Acute Toxicity Study	Fish
55965-84-9	Exposure time	96 h
	Species	Oncorhynchus mykiss OECD Cuidalina 202 (Figh. A outa Tariaity Tagt)
	Method Value type	OECD Guideline 203 (Fish, Acute Toxicity Test) NOEC
	Value type 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-	Value type	EC50
chloro-2-methyl-, mixt. with 2-	Value	0.12 mg/l
methyl-3(2H)-isothiazolone	Acute Toxicity Study	Daphnia
55965-84-9	Exposure time	48 h
	Species	Daphnia magna
2077 7 11 1	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-	Value type Value	EC50
methyl-3(2H)-isothiazolone	Acute Toxicity Study	0.0052 mg/l Algae
55965-84-9	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-	Value type	EC20
chloro-2-methyl-, mixt. with 2- methyl-3(2H)-isothiazolone 55965-84-9	Value	0.97 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time Species	3 h activated sludge
	Method	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
2-methylisothiazol-3(2H)-one	Value type	LC50
2682-20-4	Value	4.77 mg/l
2002-20-4	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)
1.7 mothylicothiogol 2(2H) one	Value type	NOEC
2-methylisothiazol-3(2H)-one	2.1	0.00
2682-20-4	Value Acute Toxicity Study	0.03 mg/l 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:

Mixture, 3(2H)-Isothiazolone, 5-	Result	inherently biodegradable
chloro-2-methyl-, mixt. with 2- methyl-3(2H)-isothiazolone 55965-84-9	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 WaterSimulation
		Biodegradation Test)

Bioaccumulative potential / Mobility in soil:

Mixture, 3(2H)-Isothiazolone, 5- chloro-2-methyl-, mixt. with 2- methyl-3(2H)-isothiazolone 55965-84-9	Bioconcentration factor (BCF)	3.6
	Exposure time	
	Species	calculation
	Temperature	
	Method	QSAR (Quantitative Structure Activity Relationship)
Mixture, 3(2H)-Isothiazolone, 5- chloro-2-methyl-, mixt. with 2- methyl-3(2H)-isothiazolone 55965-84-9	LogPow	-0.71 - 0.75
	Temperature	20 °C
	Method	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC
		Method)
2-methylisothiazol-3(2H)-one 2682-20-4	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
DSL yes
KECI (KR) yes
AICS yes
CH INV yes
EINECS 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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