

ZAR® NuDECK® Wood and Concrete Restorative Coating Tint Base (Medium)

Version number: REV 2.0
Replaces version of: 2021-03-11 (REV 1)

Revision: 2022-03-03

SECTION 1: Identification

1.1 Product identifier

Trade name **ZAR® NuDECK® Wood and Concrete Restorative Coating Tint Base (Medium)**

Alternative number(s) UFI: 7W6F-T1U9-G50Q-FYQ7

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses paint

1.3 Details of the supplier of the safety data sheet

United Gilsonite Laboratories, Inc.
1396 Jefferson Avenue
Dunmore PA 18509
United States

Telephone: +1 (570) 344-1202
Telefax: (570) 969-7634
e-mail: sales@ugl.com
Website: <http://www.ugl.com/>

e-mail (competent person) nicholas.shaffmaster@ugl.com (Nicholas Shaffmaster)

1.4 Emergency telephone number

Emergency information service 1-800-424-9300 Chemtrec (NORTH AMERICA)
Emergency telephone number: outside office hours

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Section	Hazard class	Category	Hazard class and category	Hazard statement
A.7	reproductive toxicity	1B	Repr. 1B	H360D
A.9	specific target organ toxicity - repeated exposure	2	STOT RE 2	H373

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects
Delayed or immediate effects can be expected after short or long-term exposure.

2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

- Signal word danger

- Pictograms

GHS08



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- Hazard statements

H360D May damage the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.

- Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P201 Obtain special instructions before use.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313 If exposed or concerned: Get medical advice/attention.
P314 Get medical advice/attention if you feel unwell.
P405 Store locked up.
P501 Dispose of contents/container to industrial combustion plant.

- Hazardous ingredients for labelling

Ethylene glycol, Zinc(2+) bis(2-sulfanylidene-1,2-dihydropyridin-1-olate)

2.3 Other hazards

Hazards not otherwise classified

Contains 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.
Very toxic to aquatic life with long lasting effects (GHS category 1: aquatic toxicity - acute and/or chronic).

Endocrine disrupting properties

Contains an endocrine disruptor (EDC) in a concentration of $\geq 0,1\%$.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)

3.2 Mixtures

Description of the mixture

Name of substance	Identifier	Wt%	Classification acc. to GHS
Titanium dioxide	CAS No 13463-67-7	1 - < 5	Carc. 2 / H351
Ethylene glycol	CAS No 107-21-1	1 - < 5	Acute Tox. 4 / H302 STOT RE 2 / H373
Aluminium oxide	CAS No 1344-28-1	0.05 - < 1	Acute Tox. 3 / H331
Zinc(2+) bis(2-sulfanylidene-1,2-dihydropyridin-1-olate)	CAS No 13463-41-7	0.05 - < 1	Acute Tox. 4 / H302 Acute Tox. 2 / H330 Eye Dam. 1 / H318 Repr. 1B / H360D STOT RE 1 / H372
1,2-benzisothiazol-3(2H)-one	CAS No 2634-33-5	< 0.05	Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Eye Dam. 1 / H318 Skin Sens. 1 / H317

For full text of abbreviations: see SECTION 16.

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SECTION 4: First-aid measures

4.1 Description of first-aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray, BC-powder, Carbon dioxide (CO₂)

Unsuitable extinguishing media

Water jet

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

Nitrogen oxides (NO_x), Carbon monoxide (CO), Carbon dioxide (CO₂)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Coordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

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6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Control of the effects

Protect against external exposure, such as

frost

- Packaging compatibilities

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used.

7.3 Specific end use(s)

See section 16 for a general overview.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)											
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m ³]	STEL [ppm]	STEL [mg/m ³]	Ceiling-C [ppm]	Ceiling-C [mg/m ³]	Notation	Source
US	ethylene glycol	107-21-1	REL							appx-D	NIOSH REL
US	ethylene glycol	107-21-1	TLV®				10			i, aerosol	ACGIH® 2022
US	ethylene glycol	107-21-1	PEL (CA)					40	100	vap	Cal/ OSHA PEL
US	ethylene glycol	107-21-1	TLV®	25		50				vap	ACGIH® 2022
US	zinc oxide	1314-13-2	REL		5 (10 h)				15	dust	NIOSH REL
US	zinc oxide	1314-13-2	PEL (CA)		5		10			fume	Cal/ OSHA PEL
US	zinc oxide	1314-13-2	REL		5 (10 h)		10			fume	NIOSH REL
US	zinc oxide	1314-13-2	PEL		5					fume	29 CFR 1910.10 00
US	zinc oxide	1314-13-2	PEL		15					i, dust	29 CFR 1910.10 00
US	zinc oxide	1314-13-2	TLV®		2		10			r	ACGIH® 2022
US	zinc oxide	1314-13-2	PEL		5					r, dust	29 CFR 1910.10 00
US	alpha-Alumina	1344-28-1	REL							appx-D	NIOSH REL
US	alpha-alumina	1344-28-1	PEL		15					i, dust	29 CFR 1910.10 00
US	alpha-alumina	1344-28-1	PEL		5					r, dust	29 CFR 1910.10 00
US	aluminium, insoluble compounds	1344-28-1	TLV®		1					r	ACGIH® 2022
US	aluminium oxide	1344-28-1	PEL (CA)		10					dust	Cal/ OSHA PEL
US	aluminium oxide	1344-28-1	PEL (CA)		5					r	Cal/ OSHA PEL

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Occupational exposure limit values (Workplace Exposure Limits)											
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m ³]	STEL [ppm]	STEL [mg/m ³]	Ceiling-C [ppm]	Ceiling-C [mg/m ³]	Notation	Source
US	titanium dioxide	13463-67-7	PEL		15					i, dust	29 CFR 1910.1000
US	titanium dioxide	13463-67-7	REL							lowest, appx-A	NIOSH REL
US	Titanium dioxide finescale particles	13463-67-7	TLV®		2.5					r	ACGIH® 2022
US	Titanium dioxide nanoscale particles	13463-67-7	TLV®		0.2					r	ACGIH® 2022

Notation

aerosol	as aerosols
appx-A	NIOSH Potential Occupational Carcinogen (Appendix A)
appx-D	see Appendix D - Substances with No Established RELS
Ceiling-C	ceiling value is a limit value above which exposure should not occur
dust	as dust
fume	as fume
i	inhalable fraction
lowest	exposure by all routes should be carefully controlled to levels as low as possible
r	respirable fraction
STEL	short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)
TWA	time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours
vap	time-weighted average (unless otherwise specified as vapors)

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid
Color	light white, creamy
Particle	not relevant (liquid)
Odor	Amine

Other safety parameters

pH (value)	8 – 9
Melting point/freezing point	not determined
Initial boiling point and boiling range	not determined
Flash point	not determined
Evaporation rate	not determined
Flammability (solid, gas)	not relevant, (fluid)
Vapor pressure	100 Pa at 51.1 °C
Density	1.437 g/cm ³ at 20 °C
Vapor density	this information is not available
Solubility(ies)	not determined

Partition coefficient

- n-octanol/water (log KOW)	this information is not available
Auto-ignition temperature	412 °C
Viscosity	not determined
Explosive properties	none
Oxidizing properties	none

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SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

Oxidizers

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Acute toxicity

Shall not be classified as acutely toxic.

Acute toxicity estimate (ATE) of components of the mixture			
Name of substance	CAS No	Exposure route	ATE
Aluminium oxide	1344-28-1	inhalation: vapor	3 mg/l/4h
Aluminium oxide	1344-28-1	inhalation: dust/mist	>0.888 mg/l/4h
Zinc(2+) bis(2-sulfanylidene-1,2-dihydropyridin-1-olate)	13463-41-7	oral	302 mg/kg
Zinc(2+) bis(2-sulfanylidene-1,2-dihydropyridin-1-olate)	13463-41-7	inhalation: dust/mist	0.05 mg/l/4h
1,2-benzisothiazol-3(2H)-one	2634-33-5	oral	670 mg/kg

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitization

Contains 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.

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Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

Name of substance	CAS No	Classification	Number
Titanium dioxide	13463-67-7	2B	

Legend

2B Possibly carcinogenic to humans

Reproductive toxicity

May damage the unborn child.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Very toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Ethylene glycol	107-21-1	LC50	>72,860 mg/l	fish	96 h
Ethylene glycol	107-21-1	EC50	>100 mg/l	aquatic invertebrates	48 h
Ethylene glycol	107-21-1	ErC50	<13,000 mg/l	algae	96 h
Zinc(2+) bis(2-sulfanylidene-1,2-dihydropyridin-1-olate)	13463-41-7	LC50	2.6 µg/l	fish	96 h
Zinc(2+) bis(2-sulfanylidene-1,2-dihydropyridin-1-olate)	13463-41-7	EC50	8.2 µg/l	aquatic invertebrates	48 h
1,2-benzisothiazol-3(2H)-one	2634-33-5	LC50	16.7 mg/l	fish	96 h
1,2-benzisothiazol-3(2H)-one	2634-33-5	EC50	2.94 mg/l	aquatic invertebrates	48 h
1,2-benzisothiazol-3(2H)-one	2634-33-5	ErC50	150 µg/l	algae	72 h

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Aquatic toxicity (chronic) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Ethylene glycol	107-21-1	LC50	>1,500 mg/l	fish	28 d
Ethylene glycol	107-21-1	EC50	>15,000 mg/l	aquatic invertebrates	21 d
Zinc(2+) bis(2-sulfanylidene-1,2-dihydropyridin-1-olate)	13463-41-7	EC50	29 µg/l	aquatic invertebrates	21 d
Zinc(2+) bis(2-sulfanylidene-1,2-dihydropyridin-1-olate)	13463-41-7	ErC50	4.1 µg/l	algae	120 h
Zinc(2+) bis(2-sulfanylidene-1,2-dihydropyridin-1-olate)	13463-41-7	EbC50	3 µg/l	algae	120 h
1,2-benzisothiazol-3(2H)-one	2634-33-5	EC50	13 mg/l	microorganisms	3 h

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Endocrine disrupting properties

Contains an endocrine disruptor (EDC) in a concentration of $\geq 0,1\%$. None of the ingredients are listed.

12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packages

Only packagings which are approved (e.g. acc. to DOT) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

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SECTION 14: Transport information

14.1 UN number

DOT	UN 3082
IMDG-Code	UN 3082
ICAO-TI	UN 3082

14.2 UN proper shipping name

DOT	Environmentally hazardous substance, liquid, n.o.s.
IMDG-Code	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
ICAO-TI	Environmentally hazardous substance, liquid, n.o.s.
Technical name (hazardous ingredients)	Zinc oxide, Zinc(2+) bis(2-sulfanylidene-1,2-dihydropyridin-1-olate)

14.3 Transport hazard class(es)

DOT	9
IMDG-Code	9
ICAO-TI	9

14.4 Packing group

DOT	III
IMDG-Code	III
ICAO-TI	III

14.5 Environmental hazards

	hazardous to the aquatic environment
Environmentally hazardous substance (aquatic environment)	Zinc oxide, Zinc(2+) bis(2-sulfanylidene-1,2-dihydropyridin-1-olate)

14.6 Special precautions for user

There is no additional information.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

The cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations

Transport of dangerous goods by road or rail (49 CFR US DOT) - Additional information

Particulars in the shipper's declaration	UN3082, Environmentally hazardous substance, liquid, n.o.s., (contains: Zinc oxide, Zinc(2+) bis(2-sulfanylidene-1,2-dihydropyridin-1-olate)), 9, III
Reportable quantity (RQ)	292,398 lbs (132,749 kg) (ammonia) (Ammonia, aqueous solution)
Danger label(s)	9, fish and tree



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Environmental hazards	YES (hazardous to the aquatic environment)
Special provisions (SP)	8, 146, 173, 335, IB3, T4, TP1, TP29
ERG No	171

International Maritime Dangerous Goods Code (IMDG) - Additional information

Marine pollutant	YES (hazardous to the aquatic environment) (Zinc oxide)
Danger label(s)	9, fish and tree



Special provisions (SP)	274, 335, 969
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
EmS	F-A, S-F
Stowage category	A

International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Environmental hazards	YES (hazardous to the aquatic environment)
Danger label(s)	9, fish and tree



Special provisions (SP)	A97, A158, A197, A215
Excepted quantities (EQ)	E1
Limited quantities (LQ)	30 kg

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

National regulations (United States)

Toxic Substance Control Act (TSCA) all ingredients are listed

Superfund Amendment and Reauthorization Act (SARA TITLE III)

- Specific Toxic Chemical Listings (EPCRA Section 313)

Toxics Release Inventory: Specific Toxic Chemical Listings			
Name of substance	CAS No	Remarks	Effective date
Aluminium oxide	1344-28-1	fibrous forms	1986-12-31
Ethylene glycol	107-21-1		1986-12-31

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Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

- List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

Name of substance	CAS No	Remarks	Statutory code	Final RQ pounds (Kg)
Ethylene glycol	107-21-1		3	5000 (2270)

Legend

3 "3" indicates that the source is section 112 of the Clean Air Act

Right to Know Hazardous Substance List

- Cleaning Product Right to Know Act Substance List (CA-RTK)

Name of substance	CAS No	Functionality	Authoritative Lists
Titanium dioxide	13463-67-7		IARC Carcinogens - 2B Prop 65
Ethylene glycol	107-21-1		CA NLS CA TACS NTP OHAT - Repr. or Dev. Toxicants OEHHA RELs Prop 65

- Toxic or Hazardous Substance List (MA-TURA)

Name of substance	CAS No	DEP CODE	PBT / HHS / LHS	PBT / HHS Threshold	De Minimis Concentration Threshold
Aluminium oxide	1344-28-1				1.0 %
Ethylene glycol	107-21-1				1.0 %
Zinc(2+) bis(2-sulfanylidene-1,2-dihydropyridin-1-olate)		1039			1.0 %

- Hazardous Substances List (MN-ERTK)

Name of substance	CAS No	References	Remarks
Titanium dioxide	13463-67-7	A	
Ethylene glycol	107-21-1	A	particulate vapor

Legend

A American Conference of Governmental Industrial Hygienists (ACGIH), "Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices for 1992-93", available from ACGIH

- Hazardous Substance List (NJ-RTK)

Name of substance	CAS No	Remarks	Classifications
Titanium dioxide	13463-67-7		
Aluminium oxide	1344-28-1		
Ethylene glycol	107-21-1		
Zinc(2+) bis(2-sulfanylidene-1,2-dihydropyridin-1-olate)			

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- Hazardous Substance List (Chapter 323) (PA-RTK)

Name acc. to inventory	CAS No	Classification
TITANIUM OXIDE (TiO ₂)	13463-67-7	
ALUMINUM OXIDE (Al ₂ O ₃)	1344-28-1	E
1,2-ETHANEDIOL	107-21-1	E
ZINC	7440-66-6	*, E

Legend

* Any compound of this substance is also an environmental hazard
E Environmental hazard

- Hazardous Substance List (RI-RTK)

Name of substance	CAS No	References
Titanium dioxide	13463-67-7	T
Aluminium oxide	1344-28-1	T
Ethylene glycol	107-21-1	T, F

Legend

F Flammability (NFPA®)
T Toxicity (ACGIH®)

California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

Proposition 65 List of chemicals			
Name acc. to inventory	CAS No	Remarks	Type of the toxicity
silica, crystalline		airborne particles of respirable size	cancer
titanium dioxide	13463-67-7	airborne, unbound particles of respirable size	cancer
ethylene glycol (ethanediol)	107-21-1		developmental
methyl isobutyl ketone	108-10-1		cancer
methyl isobutyl ketone (MIBK)	108-10-1		developmental
1,4-dioxane	123-91-1		cancer
ethylene oxide	75-21-8		cancer
ethylene oxide	75-21-8		female
ethylene oxide	75-21-8		developmental, male
acetaldehyde	75-07-0		cancer

Industry or sector specific available guidance(s)

NPCA-HMIS® III

Hazardous Materials Identification System. American Coatings Association.

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Category	Rating	Description
Chronic	*	chronic (long-term) health effects may result from repeated overexposure
Health	0	no significant risk to health
Flammability	1	material that must be preheated before ignition can occur
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive
Personal protection	-	

NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

Category	Degree of hazard	Description
Flammability	1	material that must be preheated before ignition can occur
Health	0	material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

National inventories

Country	Inventory	Status
EU	REACH Reg.	not all ingredients are listed
US	TSCA	all ingredients are listed
KR	KECI	not all ingredients are listed
AU	AICS	not all ingredients are listed
CA	DSL	not all ingredients are listed
CN	IECSC	not all ingredients are listed
EU	ECSI	not all ingredients are listed
JP	CSCL-ENCS	not all ingredients are listed
JP	ISHA-ENCS	not all ingredients are listed
MX	INSQ	not all ingredients are listed
NZ	NZIoC	not all ingredients are listed
PH	PICCS	not all ingredients are listed
TR	CICR	not all ingredients are listed
TW	TCSI	not all ingredients are listed

Legend

AICS	Australian Inventory of Chemical Substances
CICR	Chemical Inventory and Control Regulation
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
DSL	Domestic Substances List (DSL)
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China

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Legend

INSQ	National Inventory of Chemical Substances
ISHA-ENCS	Inventory of Existing and New Chemical Substances (ISHA-ENCS)
KECI	Korea Existing Chemicals Inventory
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS)
REACH Reg.	REACH registered substances
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information, including date of preparation or last revision

Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
1.3	e-mail (competent person): mark.fortese@ugl.com (Mark Fortese)	e-mail (competent person): nicholas.shaffmaster@ugl.com (Nicholas Shaffmaster)	yes
2.1	Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200): This mixture does not meet the criteria for classification.	Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)	yes
2.1		Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200): change in the listing (table)	yes
2.1		The most important adverse physicochemical, human health and environmental effects: Delayed or immediate effects can be expected after short or long-term exposure.	yes
2.2	Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200): not required	Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)	yes
2.2		- Signal word: danger	yes
2.2		- Pictograms	yes
2.2		- Pictograms: change in the listing (table)	yes
2.2		- Hazard statements: change in the listing (table)	yes
2.2		- Precautionary statements: change in the listing (table)	yes
2.2		- Hazardous ingredients for labelling: Ethylene glycol, Zinc(2+) bis(2-sulfanylidene-1,2-dihydropyridin-1-olate)	yes
2.3	Other hazards: of no significance	Other hazards	yes
2.3		Hazards not otherwise classified	yes
2.3		Hazards not otherwise classified: change in the listing (table)	yes

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2.3		Endocrine disrupting properties: Contains an endocrine disruptor (EDC) in a concentration of $\geq 0,1\%$.	yes
3.2		Description of the mixture: change in the listing (table)	yes
5.1	Suitable extinguishing media: Water spray, Alcohol resistant foam, BC-powder, Carbon dioxide (CO2)	Suitable extinguishing media: Water spray, BC-powder, Carbon dioxide (CO2)	yes
5.2		Hazardous combustion products: Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO2)	yes
6.2	Environmental precautions: Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.	Environmental precautions: Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.	yes
6.4	Reference to other sections: Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.	Reference to other sections: Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.	yes
7.2		- Packaging compatibilities: Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used.	yes
8.1		Occupational exposure limit values (Workplace Exposure Limits): change in the listing (table)	yes
9.1		Particle: not relevant (liquid)	yes
9.1	Vapor pressure: not determined	Vapor pressure: 100 Pa at 51.1 °C	yes
9.1	Solubility(ies)	Solubility(ies): not determined	yes
9.1	Water solubility: miscible in any proportion		yes
9.1	Auto-ignition temperature: not determined	Auto-ignition temperature: 412 °C	yes
10.2	Chemical stability: The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.	Chemical stability: See below "Conditions to avoid".	yes
10.5	Incompatible materials: There is no additional information.	Incompatible materials: Oxidizers	yes
11.1	Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200): This mixture does not meet the criteria for classification.	Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)	yes
11.1		Acute toxicity estimate (ATE) of components of the mixture: change in the listing (table)	yes

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Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
11.1	Respiratory or skin sensitization: Shall not be classified as a respiratory or skin sensitizer.	Respiratory or skin sensitization: Contains 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.	yes
11.1	Reproductive toxicity: Shall not be classified as a reproductive toxicant.	Reproductive toxicity: May damage the unborn child.	yes
11.1	Specific target organ toxicity - repeated exposure: Shall not be classified as a specific target organ toxicant (repeated exposure).	Specific target organ toxicity - repeated exposure: May cause damage to organs through prolonged or repeated exposure.	yes
12.1	Toxicity: Shall not be classified as hazardous to the aquatic environment.	Toxicity: Very toxic to aquatic life with long lasting effects.	yes
12.1		Aquatic toxicity (acute) of components of the mixture: change in the listing (table)	yes
12.1		Aquatic toxicity (chronic) of components of the mixture: change in the listing (table)	yes
12.6	Endocrine disrupting properties: None of the ingredients are listed.	Endocrine disrupting properties: Contains an endocrine disruptor (EDC) in a concentration of $\geq 0,1\%$. None of the ingredients are listed.	yes
13.1	Waste treatment of containers/packages: Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.	Waste treatment of containers/packages: Only packagings which are approved (e.g. acc. to DOT) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.	yes
14.1	UN number: not subject to transport regulations	UN number	yes
14.1		DOT: UN 3082	yes
14.1		IMDG-Code: UN 3082	yes
14.1		ICAO-TI: UN 3082	yes
14.2	UN proper shipping name: not assigned	UN proper shipping name	yes
14.2		DOT: Environmentally hazardous substance, liquid, n.o.s.	yes
14.2		IMDG-Code: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	yes
14.2		ICAO-TI: Environmentally hazardous substance, liquid, n.o.s.	yes
14.2		Technical name (hazardous ingredients): Zinc oxide, Zinc(2+) bis(2-sulfanylidene-1,2-dihydropyridin-1-olate)	yes
14.3	Transport hazard class(es): not assigned	Transport hazard class(es)	yes

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Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
14.3		DOT: 9	yes
14.3		IMDG-Code: 9	yes
14.3		ICAO-TI: 9	yes
14.4	Packing group: not assigned	Packing group	yes
14.4		DOT: III	yes
14.4		IMDG-Code: III	yes
14.4		ICAO-TI: III	yes
14.5	Environmental hazards: non-environmentally hazardous acc. to the dangerous goods regulations	Environmental hazards: hazardous to the aquatic environment	yes
14.5		Environmentally hazardous substance (aquatic environment): Zinc oxide, Zinc(2+) bis(2-sulfanylidene-1,2-dihydropyridin-1-olate)	yes
14.7	Transport of dangerous goods by road or rail (49 CFR US DOT) - Additional information: Not subject to transport regulations.	Transport of dangerous goods by road or rail (49 CFR US DOT) - Additional information	yes
14.7		Particulars in the shipper's declaration: UN3082, Environmentally hazardous substance, liquid, n.o.s., (contains: Zinc oxide, Zinc(2+) bis(2-sulfanylidene-1,2-dihydropyridin-1-olate)), 9, III	yes
14.7		Reportable quantity (RQ): 292,398 lbs (132,749 kg) (ammonia) (Ammonia, aqueous solution)	yes
14.7		Danger label(s): 9, fish and tree	yes
14.7		Danger label(s): change in the listing (table)	yes
14.7		Environmental hazards: yes (hazardous to the aquatic environment)	yes
14.7		Special provisions (SP): 8, 146, 173, 335, IB3, T4, TP1, TP29	yes
14.7		ERG No: 171	yes
14.7	International Maritime Dangerous Goods Code (IMDG) - Additional information: Not subject to IMDG.	International Maritime Dangerous Goods Code (IMDG) - Additional information	yes
14.7		Marine pollutant: yes (hazardous to the aquatic environment) (Zinc oxide)	yes

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14.7		Danger label(s): 9, fish and tree	yes
14.7		Danger label(s): change in the listing (table)	yes
14.7		Special provisions (SP): 274, 335, 969	yes
14.7		Excepted quantities (EQ): E1	yes
14.7		Limited quantities (LQ): 5 L	yes
14.7		EmS: F-A, S-F	yes
14.7		Stowage category: A	yes
14.7	International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information: Not subject to ICAO-IATA.	International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information	yes
14.7		Environmental hazards: yes (hazardous to the aquatic environment)	yes
14.7		Danger label(s): 9, fish and tree	yes
14.7		Danger label(s): change in the listing (table)	yes
14.7		Special provisions (SP): A97, A158, A197, A215	yes
14.7		Excepted quantities (EQ): E1	yes
14.7		Limited quantities (LQ): 30 kg	yes
15.1		Toxic Substance Control Act (TSCA): all ingredients are listed	yes
15.1		Toxics Release Inventory: Specific Toxic Chemical Listings: change in the listing (table)	yes
15.1		Toxic or Hazardous Substance List (MA-TURA): change in the listing (table)	yes
15.1		Hazardous Substances List (MN-ERTK)	yes
15.1		Hazardous Substances List (MN-ERTK): change in the listing (table)	yes
15.1		Hazardous Substance List (NJ-RTK): change in the listing (table)	yes
15.1		Hazardous Substance List (Chapter 323) (PA-RTK)	yes
15.1		Hazardous Substance List (Chapter 323) (PA-RTK): change in the listing (table)	yes

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15.1		Hazardous Substance List (RI-RTK): change in the listing (table)	yes
15.1		Proposition 65 List of chemicals: change in the listing (table)	yes
15.1		NPCA-HMIS® III: change in the listing (table)	yes
15.1		NFPA® 704: change in the listing (table)	yes
15.1		National inventories: change in the listing (table)	yes
16		List of relevant phrases (code and full text as stated in section 2 and 3): change in the listing (table)	yes

Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.

Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H351	Suspected of causing cancer.
H360D	May damage the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

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End of safety data sheet