SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : Sikagard®-320

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

Product use : Concrete protection

1.3 Details of the supplier of the safety data sheet

Company name of supplier : Sika Norge AS
Sanitetsveien 1
2013 Skjetten

Telephone : +47 67 06 79 00

E-mail address of person responsible for the SDS : kundeservice@no.sika.com

1.4 Emergency telephone number

Giftinformasjonen: 22 59 13 00

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Long-term (chronic) aquatic hazard, Category 3	H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Warning

Hazard statements :	H317	May cause an allergic skin reaction.
	H412	Harmful to aquatic life with long lasting effects.
Precautionary statements :	P101	If medical advice is needed, have product container or label at hand.
	P102	Keep out of reach of children.

Prevention:

P261	Avoid breathing mist or vapours.
P273	Avoid release to the environment.
P280	Wear protective gloves.

Disposal:

P501	Dispose of contents/container in accordance with local regulation.

Hazardous components which must be listed on the label:

2-octyl-2H-isothiazole-3-one (OIT)

Additional Labelling

EUH211	Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: This substance/mixture contains components considered to have endocrine disrupting properties for environment , according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Contains a biocide in order to protect the product. Active ingredient: pyrithione zinc, 13463-41-7, terbutryn, 886-50-0, 2-octyl-2H-isothiazole-3-one (OIT), 26530-20-1. Please use treated articles responsibly.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Registration number	Classification	Concentration (% w/w)
ethanediol	107-21-1 203-473-3 01-2119456816-28-XXXX	Acute Tox. 4; H302 STOT RE 2; H373 (Kidney, Liver)	>= 1 - < 2,5

pyrithione zinc	13463-41-7 236-671-3 01-2119511196-46-XXXX	Acute Tox. 3; H301 Acute Tox. 2; H330 Eye Dam. 1; H318 Repr. 1B; H360D STOT RE 1; H372 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 --- M-Factor (Acute aquatic toxicity): 1.000 M-Factor (Chronic aquatic toxicity): 10 --- Acute toxicity estimate Acute oral toxicity: 221 mg/kg Acute inhalation toxicity (dust/mist): 0,14 mg/l	>= 0,0025 - < 0,025
terbutryn	886-50-0 212-950-5	Acute Tox. 4; H302 Skin Sens. 1B; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 --- M-Factor (Acute aquatic toxicity): 100 M-Factor (Chronic aquatic toxicity): 100 --- specific concentration limit Skin Sens. 1B; H317 >= 3 %	>= 0,0025 - < 0,025

2-octyl-2H-isothiazole-3-one (OIT)	26530-20-1 247-761-7 01-2120768921-45-XXXX	Acute Tox. 3; H301 Acute Tox. 2; H330 Acute Tox. 3; H311 Skin Corr. 1; H314 Eye Dam. 1; H318 Skin Sens. 1A; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 EUH071 M-Factor (Acute aquatic toxicity): 100 M-Factor (Chronic aquatic toxicity): 100 specific concentration limit Skin Sens. 1A; H317 >= 0,0015 % Acute toxicity estimate Acute oral toxicity: 125 mg/kg Acute inhalation toxicity (dust/mist): 0,27 mg/l Acute dermal toxicity: 311 mg/kg	>= 0,0025 - < 0,025
Substances with a workplace exposure limit :			
Titanium dioxide (> 10 µm)	13463-67-7 236-675-5 01-2119489379-17-XXXX		>= 10 - < 20
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). :			
Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	9036-19-5 Not Assigned	Acute Tox. 4; H302 Eye Dam. 1; H318 Aquatic Chronic 2; H411	>= 0,1 - < 0,25

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Move out of dangerous area.

Consult a physician.
Show this safety data sheet to the doctor in attendance.

If inhaled : Move to fresh air.
Consult a physician after significant exposure.

In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
If symptoms persist, call a physician.

In case of eye contact : Remove contact lenses.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Do not induce vomiting without medical advice.
Rinse mouth with water.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Allergic reactions
See Section 11 for more detailed information on health effects and symptoms.

Risks : May cause an allergic skin reaction.

sensitising effects

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : In case of fire, use water/water spray/water jet/carbon dioxide/sand/foam/alcohol resistant foam/chemical powder for extinction.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products : No hazardous combustion products are known

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

Further information : Standard procedure for chemical fires.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Deny access to unprotected persons.

6.2 Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Avoid exceeding the given occupational exposure limits (see section 8).
Do not get in eyes, on skin, or on clothing.
For personal protection see section 8.
Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Smoking, eating and drinking should be prohibited in the application area.
Follow standard hygiene measures when handling chemical products

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage : Keep container tightly closed in a dry and well-ventilated

areas and containers : place. Containers which are opened must be carefully re-sealed and kept upright to prevent leakage. Store in accordance with local regulations.

Further information on storage stability : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s) : Consult most current local Product Data Sheet prior to any use.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters *	Basis *
Titanium dioxide (> 10 µm)	13463-67-7	TWA	5 mg/m3	FOR-2011-12-06-1358
ethanediol	107-21-1	STEL	40 ppm 104 mg/m3	2000/39/EC
	Further information: Identifies the possibility of significant uptake through the skin, Indicative			
		TWA	20 ppm 52 mg/m3	2000/39/EC
		TWA (Dust)	20 ppm 52 mg/m3	FOR-2011-12-06-1358
	Further information: The limit value is based on the calculation of the sum of gas and particles (aerosols) of the dust., The EU has set an indicative limit value and/or a remark for this substance, Chemicals that can be absorbed through the skin.			
		STEL	40 ppm 104 mg/m3	FOR-2011-12-06-1358
	Further information: Short Term Value is a value for the average concentration of a chemical in the breathing zone of a worker not to be exceeded in a specified reference period.The reference period is 15 minutes if no other reference periods are given., The EU has set an indicative limit value and/or a remark for this substance, Chemicals that can be absorbed through the skin.			

*The above mentioned values are in accordance with the legislation in effect at the date of the release of this safety data sheet.

8.2 Exposure controls

Engineering measures

Maintain air concentrations below occupational exposure standards.
Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection : Safety glasses with side-shields conforming to EN166

Eye wash bottle with pure water

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard must be worn at all times when handling chemical products. Reference number EN 374. Follow manufacturer specifications.
Suitable for short time use or protection against splashes:
Butyl rubber/nitrile rubber gloves (> 0,1 mm)
Contaminated gloves should be removed.
Suitable for permanent exposure:
Viton gloves (0.4 mm),
breakthrough time >30 min.

Skin and body protection : Protective clothing (e.g. Safety shoes acc. to EN ISO 20345, long-sleeved working clothing, long trousers). Rubber aprons and protective boots are additionaly recommended for mixing and stirring work.

Respiratory protection : In case of inadequate ventilation wear respiratory protection. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
organic vapor filter (Type A)
A1: < 1000 ppm; A2: < 5000 ppm; A3: < 10000 ppm
Ensure adequate ventilation. This can be achieved by local exhaust extraction or by general ventilation. (EN 689 - Methods for determining inhalation exposure). This applies in particular to the mixing / stirring area. In case this is not sufficent to keep the concentrations under the occupational exposure limits then respiration protection measures must be used.

Environmental exposure controls

General advice : Do not flush into surface water or sanitary sewer system.
If the product contaminates rivers and lakes or drains inform respective authorities.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	liquid
Colour	:	white
Odour	:	odourless
Melting point/ range / Freezing point	:	No data available
Boiling point/boiling range	:	193 - 205 °C

Flammability (solid, gas)	:	No data available

Upper/lower flammability or explosive limits

Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Flash point	:	> 200 °C Method: closed cup
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
pH	:	10 Concentration: 100 %

Viscosity

Viscosity, dynamic	:	9.000 mPa.s (20 °C)
Viscosity, kinematic	:	No data available

Solubility(ies)

Water solubility	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Vapour pressure	:	23 hPa
Density	:	1,41 g/cm3 (20 °C)
Relative vapour density	:	No data available
Particle characteristics	:	No data available

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

The product is chemically stable.

10.3 Possibility of hazardous reactions

Hazardous reactions : No hazards to be specially mentioned.

10.4 Conditions to avoid

Conditions to avoid : No data available

10.5 Incompatible materials

Materials to avoid : No data available

10.6 Hazardous decomposition products

: No hazardous decomposition products are known.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Not classified due to lack of data.

Components:

pyrithione zinc:

Acute oral toxicity : Acute toxicity estimate: 221 mg/kg
Method: Acute toxicity estimate according to Regulation (EC) No. 1272/2008

Acute inhalation toxicity : Acute toxicity estimate: 0,14 mg/l
Test atmosphere: dust/mist
Method: Acute toxicity estimate according to Regulation (EC) No. 1272/2008

2-octyl-2H-isothiazole-3-one (OIT):

Acute oral toxicity : Acute toxicity estimate: 125 mg/kg

Method: Acute toxicity estimate according to Regulation (EC) No. 1272/2008

Acute inhalation toxicity : Acute toxicity estimate: 0,27 mg/l
Test atmosphere: dust/mist
Method: Acute toxicity estimate according to Regulation (EC) No. 1272/2008

Acute dermal toxicity : Acute toxicity estimate: 311 mg/kg
Method: Acute toxicity estimate according to Regulation (EC) No. 1272/2008

Skin corrosion/irritation
Not classified due to lack of data.

Serious eye damage/eye irritation
Not classified due to lack of data.

Respiratory or skin sensitisation

Skin sensitisation
May cause an allergic skin reaction.

Respiratory sensitisation
Not classified due to lack of data.

Germ cell mutagenicity
Not classified due to lack of data.

Carcinogenicity
Not classified due to lack of data.

Reproductive toxicity
Not classified due to lack of data.

STOT - single exposure
Not classified due to lack of data.

STOT - repeated exposure
Not classified due to lack of data.

Aspiration toxicity
Not classified due to lack of data.

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 12: Ecological information

12.1 Toxicity

Components:

pyrithione zinc:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 0,0026 mg/l Exposure time: 96 h
M-Factor (Acute aquatic toxicity)	:	1.000
M-Factor (Chronic aquatic toxicity)	:	10

terbutryn:

M-Factor (Acute aquatic toxicity)	:	100
M-Factor (Chronic aquatic toxicity)	:	100

2-octyl-2H-isothiazole-3-one (OIT):

M-Factor (Acute aquatic toxicity)	:	100
M-Factor (Chronic aquatic toxicity)	:	100

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment	:	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

12.6 Endocrine disrupting properties

Product:

Assessment	:	This substance/mixture contains components considered to have endocrine disrupting properties for environment , according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

12.7 Other adverse effects

Product:

Additional ecological information	:	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product	:	The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
Waste Code	:	7051

SECTION 14: Transport information

14.1 UN number or ID number

ADR	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good
IATA	:	Not regulated as a dangerous good

14.2 UN proper shipping name

ADR	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good

IATA	:	Not regulated as a dangerous good

14.3 Transport hazard class(es)

ADR	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good
IATA	:	Not regulated as a dangerous good

14.4 Packing group

ADR	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good
IATA (Cargo)	:	Not regulated as a dangerous good
IATA (Passenger)	:	Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

International Chemical Weapons Convention (CWC) Schedules of Toxic Chemicals and Precursors	:	Not applicable
REACH Information:		All substances contained in our Products are - registered by our upstream suppliers, and/or - registered by us, and/or - excluded from the regulation, and/or - exempted from the registration.
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	:	Conditions of restriction for the following entries should be considered: Number on list 3 Number on list 75:
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-

REACH - List of substances subject to authorisation (Annex XIV)	:	Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-
Regulation (EC) on substances that deplete the ozone layer	:	Not applicable
Regulation (EU) 2019/1021 on persistent organic pollutants (recast)	:	Not applicable
Regulation (EU) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals	:	Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.
Not applicable

Volatile organic compounds	:	Law on the incentive tax for volatile organic compounds (VOCV) no VOC duties Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control) Volatile organic compounds (VOC) content: 0,29% w/w
Product registration number	:	669685

Other regulations:

Note the Working Environment Act § 4-1 and § 4-2 on requirements for the employer to protect pregnant employees against discomfort and injury as a result of the work situation and the working environment.

Note the regulation on organization, leadership and participation, chapter 12 on the work of children and young people.

15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier.

SECTION 16: Other information

Full text of H-Statements

H301	:	Toxic if swallowed.
H302	:	Harmful if swallowed.
H311	:	Toxic in contact with skin.
H314	:	Causes severe skin burns and eye damage.
H317	:	May cause an allergic skin reaction.
H318	:	Causes serious eye damage.
H330	:	Fatal if inhaled.
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.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.
H411	:	Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Eye Dam.	:	Serious eye damage
Repr.	:	Reproductive toxicity
Skin Corr.	:	Skin corrosion
Skin Sens.	:	Skin sensitisation
STOT RE	:	Specific target organ toxicity - repeated exposure
2000/39/EC	:	Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
FOR-2011-12-06-1358	:	Norway. Occupational Exposure limits
2000/39/EC / TWA	:	Limit Value - eight hours
2000/39/EC / STEL	:	Short term exposure limit
FOR-2011-12-06-1358 / TWA	:	Long term exposure limit
FOR-2011-12-06-1358 / STEL	:	Short term exposure limit
ADR	:	European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS	:	Chemical Abstracts Service
DNEL	:	Derived no-effect level
EC50	:	Half maximal effective concentration
GHS	:	Globally Harmonized System
IATA	:	International Air Transport Association
IMDG	:	International Maritime Code for Dangerous Goods
LD50	:	Median lethal dosis (the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals)
LC50	:	Median lethal concentration (concentrations of the chemical in air that kills 50% of the test animals during the observation period)

MARPOL	:	International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978
OEL	:	Occupational Exposure Limit
PBT	:	Persistent, bioaccumulative and toxic
PNEC	:	Predicted no effect concentration
REACH	:	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency
SVHC	:	Substances of Very High Concern
vPvB	:	Very persistent and very bioaccumulative

Further information

Classification of the mixture:		**Classification procedure:**
Skin Sens. 1	H317	Calculation method
Aquatic Chronic 3	H412	Calculation method

The information contained in this Safety Data Sheet corresponds to our level of knowledge at the time of publication. All warranties are excluded. Our most current General Sales Conditions shall apply. Please consult the product data sheet prior to any use and processing.

Changes as compared to previous version !

NO / EN