

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878

Sika® Frostproofer and Hardener



Revision Date: 11.03.2026

Version 4.1

Print Date 12.03.2026

Date of last issue: 21.07.2025

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

1.1 Product identifier

Trade name : Sika® Frostproofer and Hardener

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

Product use : Additive for cementous products

1.3 Details of the supplier of the safety data sheet

Company name of supplier : Sika Ireland Ltd
Sika House
Ballymun Industrial Estate
Dublin 11
Telephone : +353 1862 0709
E-mail address of person : EHS@UK.Sika.com
responsible for the SDS

1.4 Emergency telephone number

National Poisons Information Centre (NPIC) (01) 809 2166
(available 8am - 10pm every day)

Sika Ireland (01) 862 0709 (available during office hours)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4

H302: Harmful if swallowed.

Serious eye damage, Category 1

H318: Causes serious eye damage.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Danger

Hazard statements :

H302
H318

Harmful if swallowed.
Causes serious eye damage.

Precautionary statements : **Prevention:**

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P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear eye protection/ face protection.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

Disposal:

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

Hazardous components which must be listed on the label:

nitric acid, calcium potassium salt, hydrate

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: 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.

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.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
nitric acid, calcium potassium salt, hydrate	Not Assigned 480-110-7 01-0000020060-90-XXXX	Acute Tox. 4; H302 Eye Dam. 1; H318	>= 20 - < 25

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nitric acid, ammonium calcium salt	15245-12-2 239-289-5 01-2119493947-16-XXXX	Acute Tox. 4; H302 Eye Dam. 1; H318 Acute toxicity estimate Acute oral toxicity: 301,04 mg/kg	$\geq 2,5 - < 3$
2,2'-iminodiethanol	111-42-2 203-868-0 603-071-00-1 01-2119488930-28-XXXX	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT RE 2; H373 Repr. 2; H361fd	$\geq 0,1 - < 0,5$
Substances with a workplace exposure limit :			
2,2',2''-nitrilotriethanol Contains: 2-aminoethanol $\leq 0,2 \%$	102-71-6 203-049-8 01-2119486482-31-XXXX		$\geq 1 - < 2,5$

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 : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Continue rinsing eyes during transport to hospital.
Remove contact lenses.
Keep eye wide open while rinsing.
- 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 : Gastrointestinal discomfort

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Excessive lachrymation
See Section 11 for more detailed information on health effects and symptoms.

Risks : irritant effects

Harmful if swallowed.
Causes serious eye damage.

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 : Try to prevent the material from entering drains or water courses.
If the product contaminates rivers and lakes or drains inform respective authorities.
No special environmental precautions required.

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).

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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.
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 areas and containers : Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed 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 *
2,2',2''-nitrilotriethanol	102-71-6	OELV - 8 hrs (TWA)	5 mg/m ³	IE OEL
2,2'-iminodiethanol	111-42-2	OELV - 8 hrs (TWA) (Inhalable fraction and va-	1 mg/m ³	IE OEL

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

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
nitric acid, ammonium calcium salt	Workers	Skin contact		13,9 mg/m ³
	Workers	Inhalation		24,5 mg/m ³
	Consumers	Ingestion		8,33 mg/m ³
	Consumers	Inhalation		6,3 mg/m ³

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
nitric acid, ammonium calcium salt	Fresh water	0,45 mg/l
	Marine water	0,045 mg/l

8.2 Exposure controls

Appropriate engineering controls

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

Individual protection measures, such as personal protective equipment (PPE)

- 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 additionally 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 sufficient to keep the concentrations under the occupational exposure limits then respiration protection measures must be used.

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Environmental exposure controls

General advice : Try to prevent the material from entering drains or water courses.
If the product contaminates rivers and lakes or drains inform respective authorities.
No special environmental precautions required.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : liquid
Colour : colourless
Odour : odourless

Melting point/ range / Freezing point : No data available

Boiling point/boiling range : No data available

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 : ca. 93 °C
Method: closed cup

Auto-ignition temperature : No data available

Decomposition temperature : No data available

pH : 9 - 11 (20 °C)
Concentration: 100 %

Viscosity

Viscosity, kinematic : > 7 mm²/s (40 °C)

Solubility(ies)

Water solubility : No data available

Partition coefficient: n-octanol/water : No data available

Vapour pressure : 23 hPa

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Density : ca. 1,2 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

Harmful if swallowed.

Components:

nitric acid, ammonium calcium salt:

Acute oral toxicity : LD50 Oral (Rat): > 301 mg/kg

Acute toxicity estimate: 301,04 mg/kg
Method: Calculation method

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Acute dermal toxicity : LD50 Dermal (Rat): > 2.001 mg/kg

Skin corrosion/irritation

Not classified due to lack of data.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation

Skin sensitisation

Not classified due to lack of data.

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 hazard

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.

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SECTION 12: Ecological information

12.1 Toxicity

Components:

nitric acid, ammonium calcium salt:

Toxicity to fish : LC50 (Fish): 447 mg/l
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): > 100 mg/l
aquatic invertebrates Exposure time: 48 h

2,2'-iminodiethanol:

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 55 mg/l
aquatic invertebrates Exposure time: 48 h

Toxicity to algae/aquatic : EC50 (Pseudokirchneriella subcapitata (green algae)): 75 mg/l
plants Exposure time: 72 h

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 : 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.

12.7 Other adverse effects

Product:

Additional ecological infor- : There is no data available for this product.

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mation

Components:

nitric acid, calcium potassium salt, hydrate:

Additional ecological information : There is no data available for this product.

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.

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

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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) : Not applicable
Schedules of Toxic Chemicals and Precursors

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 65: nitric acid, ammonium calcium salt

Number on list 75

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : None of the components are listed (=> 0.1 %).

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Regulation (EU) No 2024/590 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 : Not applicable

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of dangerous chemicals

Regulation (EU) 2019/1148 on the marketing and use of explosives precursors

This product is regulated by Regulation (EU) 2019/1148: : nitric acid, ammonium calcium salt (ANNEX II)
all suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point.

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 : Ordinance on the Incentive Tax on Volatile Organic Compounds (OVOC)
no VOC duties

Directive 2010/75/EU of 24 November 2010 on industrial and livestock rearing emissions (integrated pollution prevention and control)
Not applicable

If other regulatory information applies that is not already provided elsewhere in the Safety Data Sheet, then it is described in this subsection.

Health, safety and environmental regulation/legislation specific for the substance or mixture: : Environmental Protection Act 1990 & Subsidiary Regulations
Health and Safety at Work Act 1974 & Subsidiary Regulations
Control of Substances Hazardous to Health Regulations (COSHH)
May be subject to the Control of Major Accident Hazards Regulations (COMAH), and amendments.

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

H302 : Harmful if swallowed.
H315 : Causes skin irritation.
H318 : Causes serious eye damage.
H361fd : Suspected of damaging fertility. Suspected of damaging the unborn child.
H373 : May cause damage to organs through prolonged or repeated exposure.

Full text of other abbreviations

Acute Tox. : Acute toxicity

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Eye Dam.	: Serious eye damage
Repr.	: Reproductive toxicity
Skin Irrit.	: Skin irritation
STOT RE	: Specific target organ toxicity - repeated exposure
IE OEL	: Ireland. List of Chemical Agents and Carcinogens with Occupational Exposure Limit Values - Code of Practice, Schedule 1 and 2
IE OEL / OELV - 8 hrs (TWA)	: Occupational exposure limit value (8-hour reference period)
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:

Acute Tox. 4	H302
Eye Dam. 1	H318

Classification procedure:

Calculation method
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 !

IE / EN

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