

This safety data sheet was created pursuant to the requirements of:
UK REACH Regulations (SI 2019/758 as amended)

Supersedes date 13-May-2022

Revision date 21-Jul-2025

Revision Number 11.02

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

1.1. Product identifier

Product Code(s)	22895
Safety data sheet number	22895
Product Name	NITRIC ACID 65 -69% SOL
Index No	007-004-00-1
EC Number	231-714-2
CAS No	7697-37-2***
Synonyms	NITRIC ACID 65 -69% SOL, NITRIC ACID 69% SOL, NITRIC ACID 69% SOL BSF, NITRIC ACID 68% SOL, NITRIC ACID 68.5% SOL, NITRIC ACID 65/68% SOL, NITRIC ACID 69% SOL, NITRIC ACID 68.5% MIN, NITRIC ACID 68% SOL YRA, NITRIC ACID 69% SOL FR
Pure substance/mixture	Substance
Contains NITRIC ACID ...%	
Molecular weight	63.01

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

Recommended use	Chemical Food industry Chemical intermediate Metal surface treatment Manufacture of fertilizers Laboratory reagent pH control Industrial use Professional use For further information, see attached Exposure Scenario
------------------------	--

1.3. Details of the supplier of the safety data sheet

Supplier

Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

For further information, please contact

E-mail address SDS.EMEA@univarsolutions.com

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

1.4. Emergency telephone number

Emergency Telephone

SGS - +32 (0)3 575 55 55 (24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Oxidising liquids***	Category 3*** - (H272)***
Corrosive to metals***	Category 1*** - (H290)***
Acute toxicity - Inhalation (Vapours)	Category 3 - (H331)
Skin corrosion/irritation	Category 1 Sub-category A - (H314)
Serious eye damage/eye irritation	Category 1 - (H318)

2.2. Label elements

Contains NITRIC ACID ...%



Signal word

Danger***

Hazard statements

H314 - Causes severe skin burns and eye damage

H331 - Toxic if inhaled***

H272 - May intensify fire; oxidiser***

H290 - May be corrosive to metals***

Precautionary statements

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

P260 - Do not breathe dust/fume/gas/mist/vapours/spray

P273 - Avoid release to the environment

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P310 - Immediately call a POISON CENTER or doctor

P391 - Collect spillage***

Additional information

Acquisition, possession or use by the general public is restricted.

2.3. Other hazards

In contact with some metals can generate hydrogen gas, which can form explosive mixtures with air.

SECTION 3: Composition/information on ingredients

3.1 Substances***

Chemical name	Weight-%	EC No (EU Index No)	UK REACH registration number	Classification according to GB CLP (SI 2020/1567 as amended)	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)

NITRIC ACID ...% 7697-37-2	65 - 69%	231-714-2	-	Skin Corr. 1A (H314) Ox. Liq. 2 (H272) Met. Corr. 1 (H290) Eye Dam. 1 (H318) Acute Tox. 3 (H331)	Ox. Liq. 2 :: C>=99% Ox. Liq. 3 :: 70%<=C<99% Skin Corr. 1B (H314) :: 5%<=C<20% Skin Corr. 1A (H314) :: C>=20%	-	-
-------------------------------	----------	-----------	---	--	---	---	---

Full text of H- and EUH-phrases: see section 16

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (UK REACH Article 59)

SECTION 4: First aid measures**4.1. Description of first aid measures**

General advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.***
Inhalation	Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Immediate medical attention is required. Inhale Corticosteroid dose aerosol.***
Eye contact	Chemical burns must be treated promptly by a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical attention.***
Skin contact	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Chemical burns must be treated promptly by a physician. Immediate medical attention is required. IF ON CLOTHING: rinse immediately contaminated clothing and skin with plenty of water before removing clothes. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. Get immediate medical attention.***
Ingestion	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get immediate medical attention.***
Self-protection of the first aider	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Do not breathe vapour or mist.***

4.2. Most important symptoms and effects, both acute and delayed

Symptoms	Burning sensation. Coughing and/ or wheezing. Difficulty in breathing.***
Inhalation	Toxic if inhaled. Corrosive to the respiratory tract. Coughing and/or wheezing. Asthma. Difficulty in breathing.***
Eyes	Causes severe burns. Pain. Watering. Redness. Burning sensation. May cause redness and tearing of the eyes.***
Dermal	Causes severe burns. Pain. Blistering. Burning sensation. Irritating. Erythema (skin redness). Prolonged contact may cause redness and irritation.***
Ingestion	Can burn mouth, throat, and stomach

4.3. Indication of any immediate medical attention and special treatment needed

Note to doctors

In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Alcohol resistant foam. Carbon dioxide (CO₂). powder. Water spray or fog.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Dry chemical. Foam.***

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical These substances will accelerate burning when involved in a fire. Some may decompose explosively when heated or involved in a fire. May ignite combustibles (wood paper, oil, clothing, etc.). Runoff may create fire or explosion hazard. The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapours. May ignite combustibles (wood paper, oil, clothing, etc.). Oxidiser. Contact with metals may evolve flammable hydrogen gas.***

Hazardous combustion products Carbon oxides. Nitrogen oxides (NO_x).

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. Oxidiser. May ignite combustibles (wood paper, oil, clothing, etc.). Move containers from fire area if you can do it without risk. ALWAYS stay away from tanks engulfed in fire. Evacuate personnel to safe areas. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Move containers from fire area if you can do it without risk. Cool containers with flooding quantities of water until well after fire is out.***

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). See section 8 for more information. Stop leak if you can do it without risk. Use personal protective equipment as required. Attention! Corrosive material. Do not breathe vapour or mist. Avoid contact with skin, eyes and inhalation of vapours. Eliminate all ignition sources if safe to do so. In case of inadequate ventilation wear respiratory protection.***

Other information Keep combustibles (wood, paper, oil, etc) away from spilled material. DO NOT GET WATER INSIDE CONTAINERS. Ventilate the area. Refer to protective measures listed in Sections 7 and 8.***

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Should not be released into the environment. Do not allow to enter into soil/subsoil.***

6.3. Methods and material for containment and cleaning up

Methods for containment	Absorb with inert absorbent materials such as: Sand. DIATOMACEOUS EARTH (CALCINED). Dyke far ahead of spill; use dry sand to contain the flow of material. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Stop leak if you can do it without risk.***
Methods for cleaning up	Neutralise with soda ash (sodium carbonate) or lime over area of spill. Collect spillage in containers, seal securely and deliver for disposal according to local regulations. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. With clean shovel place material into clean, dry container and cover loosely; move containers from spill area. Flush area with flooding quantities of water. Prevent product from entering drains.***
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.
<u>6.4. Reference to other sections</u>	
Reference to other sections	See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling	Avoid spilling. Keep away from heat, sparks and open flame. Ensure that eyewash stations and safety showers are close to the workstation location. Avoid breathing vapours or mists. Ensure adequate ventilation. Use personal protection recommended in Section 8. Do not ingest. If swallowed then seek immediate medical assistance. Empty containers retain product residue and can be hazardous. Absorb spillage to prevent material damage.
General hygiene considerations	Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and immediately after handling the product. Wear suitable gloves and eye/face protection. Avoid contact with skin, eyes or clothing. Do not breathe vapour or mist. Remove contaminated clothing and protective equipment before entering eating areas.***

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep/store only in original container. Keep away from heat, sparks and open flame. Protect from light. Suitable container/equipment material: stainless steel. Aluminium. Polyvinyl chloride (PVC). Unsuitable container/equipment material: Carbon Steel. Store in accordance with local regulations. See section 10 for more information. Store in corrosive resistant container with a resistant inner liner. Keep containers upright. Keep in properly labelled containers. Bund storage facilities to prevent soil and water pollution in the event of spillage.
---------------------------	---

7.3. Specific end use(s)

Specific use(s)

See section 1 for more information.

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	United Kingdom
NITRIC ACID ...% 7697-37-2	STEL: 1 ppm STEL: 2.6 mg/m ³

Biological occupational exposure limits This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL) - Workers ***

Chemical name	Oral	Dermal	Inhalation
NITRIC ACID ...% 7697-37-2			2.6 mg/m ³ [5] [7] 2.6 mg/m ³ [5] [6]

[5] Local health effects.***
 [6] Long term.***
 [7] Short term.***

Derived No Effect Level (DNEL) - General Public ***

Chemical name	Oral	Dermal	Inhalation
NITRIC ACID ...% 7697-37-2			1.3 mg/m ³ [5] [7] 1.3 mg/m ³ [5] [6]

[5] Local health effects.***
 [6] Long term.***
 [7] Short term.***

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering controls Ensure adequate ventilation. Avoid breathing vapours. Ensure that eyewash stations and safety showers are close to the workstation location. Use engineering controls to keep exposures below the OEL or DNEL.

Personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). Use eye protection according to EN 166.***

Hand protection Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. Gloves must conform to standard EN 374.

Gloves			
Duration of contact	PPE - Glove material	Glove thickness	Break through time
Long term (repeated)	Chloroprene rubber (CR)	0.5 mm	8 hours
Long term (repeated)	Butyl rubber	0.7 mm	8 hours
Long term (repeated)	Viton™	0.35 mm	4-8 hours
Long term (repeated)	Neoprene gloves	0.35 mm	4-8 hours
Long term (repeated)	Polyvinyl chloride (PVC)	0.35 mm	1-4 hours

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Wear fire/flammable resistant/retardant clothing.***

Respiratory protection In case of inadequate ventilation wear respiratory protection.
Recommended filter type: Use respiratory equipment with combination filter, type B+E/P3.

General hygiene considerations Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and immediately after handling the product. Wear suitable gloves and eye/face protection. Avoid contact with skin, eyes or clothing. Do not breathe vapour or mist. Remove contaminated clothing and protective equipment before entering eating areas.***

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Liquid***
Colour	Colourless to pale yellow
Odour	Pungent. Acrid.
Odour threshold	0.29 ppm

Property	Values	Remarks • Method
Melting point / freezing point	< -38 - -39 °C	
Initial boiling point and boiling range	119.6 - 122 °C	
Flammability		No information available.
Flammability Limit in Air		No information available.
Upper flammability or explosive limits		
Lower flammability or explosive limits		
Flash point		No information available.
Autoignition temperature		No information available.
Decomposition temperature	83 °C	
pH	< 1	
pH (as aqueous solution)		No information available.
Kinematic viscosity		No information available.
Dynamic viscosity	0.75*** mPa s***	@ 25.0 °C.***
Water solubility	Miscible with water	
Solubility(ies)	Reactions with the following materials may generate heat: (Water)	
Partition coefficient	log Pow: -0.21	
Vapour pressure	9.4 hPa***	@ 20.0 °C.***
Relative density	1.410***	20.0 °C.***
Bulk density		No information available
Liquid Density	No information available	No information available
Relative vapour density	2.2	
Particle characteristics		No information available.
Particle Size	No information available	
Particle Size Distribution	No information available	
Explosive properties	No information available	
Oxidising properties	No information available	

9.2. Other information

Molecular weight	63.01
------------------	-------

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	Metals. Oxidiser.***
------------	----------------------

10.2. Chemical stability

Stability	May cause fire or explosion; strong oxidiser.***
-----------	--

Explosion data

Sensitivity to mechanical impact	None.
Sensitivity to static discharge	Yes.***

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Contact with water generates heat. Contact with metals may evolve flammable hydrogen gas. Contact with combustible material may cause fire.
------------------------------------	---

10.4. Conditions to avoid

Conditions to avoid Heat, flames and sparks. Heat, flames and sparks. Incompatible materials. Exposure to air or moisture over prolonged periods. Excessive heat.***

10.5. Incompatible materials

Incompatible materials Organic material. Combustible material. Hydrocarbons. Oxidising agent. Acids. Bases. Alkali. Strong reducing agents. Alcohols. Contact with metals may evolve flammable hydrogen gas. Combustible material. Metals. Brass. Galvanised metals. Copper. Zinc. Silver. Magnesium.***

10.6. Hazardous decomposition products

Hazardous decomposition products Nitrogen oxides (NOx).

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Information on likely routes of exposure**

Product Information	***
Inhalation	Toxic if inhaled. Inhalation of mists can cause corrosive action on mucous membranes.***
Eye contact	Causes serious eye damage. Causes eye burns.***
Skin contact	Causes severe burns.***
Ingestion	Causes corrosive burns of the mouth, gullet and gastrointestinal tract if swallowed.***

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Redness. Burning. May cause blindness. Coughing and/ or wheezing. Difficulty in breathing.***

Acute toxicity**Numerical measures of toxicity**

Component Information ***

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
NITRIC ACID ...%	-	-	2.65 mg/l

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Causes severe burns.***
Serious eye damage/eye irritation	Causes eye burns.***
Respiratory or skin sensitisation	Based on available data the classification criteria are not met.
Germ cell mutagenicity	Based on available data the classification criteria are not met.

Component Information
NITRIC ACID ...% (7697-37-2)

Method	Species	Results
OECD 473	in vitro	Negative

OECD Test No. 471: Bacterial Reverse Mutation Test	Ames Test	Negative
OECD Test No. 476: In Vitro Mammalian Cell Gene Mutation Tests using the Hprt and xprt genes	in vitro	Negative
	in vivo	Negative

Carcinogenicity Based on available data the classification criteria are not met.

Reproductive toxicity Based on available data the classification criteria are not met.

NITRIC ACID ...% (7697-37-2)

Method	Species	Results
OECD 422	Rat	NOAEL 1500 mg/kg

STOT - single exposure Based on available data the classification criteria are not met.

STOT - repeated exposure Based on available data the classification criteria are not met.

Component Information

NITRIC ACID ...% (7697-37-2)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD 422	Rat	Oral	1500 mg/kg bw/d	28 days	NOAEL
OECD Test No. 413: Sub-chronic Inhalation Toxicity: 90-day Study	Rat	Inhalation	> 2,15 ppm		NOAEC

Aspiration hazard Based on available data the classification criteria are not met.

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Substantial amounts of the product may lead to a local change in acidity in small water systems which may have adverse effects on aquatic organisms.

NITRIC ACID ...% (7697-37-2)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
	Oncorhynchus mykiss (rainbow trout)	LC50	3.7 mg/L	96 hours	
	Algae	NOEC	6.75 mg/L	10 days	
	Fish	LC50	> 100 mg/L	96 hours	
	Daphnia magna	LC50	180 mg/L	48 hours	
OECD Test No. 209: Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation)	activated sludge	EC50	> 1000 mg/L	3 hours	
	Algae	NOEC	6,75 mmol/l	10 days	
	Fish	NOEC	268 mg nitrate/l	30 days	

	Pimephales promelas	NOEC	157 mg nitrate/l	32 days	
	Lepomis macrochirus	LC50	12000 mg/L	96 hours	
	Fish	LC50	1559 mg/L	96 hours	
	Fish	LC50	1354 mg/L	96 hours	
	Gambusia affinis	LC50	6650 mg/L	96 hours	
	Daphnia magna	EC50	8609 mg/L	24 hours	
	Daphnia magna	EC50	490 mg/L	48 hours	
	Oncorhynchus mykiss (rainbow trout)	LC50	12.5 mg/L	96 hours	
	Water flea	EC50	4.6 mg/L	48 hours	

12.2. Persistence and degradability

Persistence and degradability The product contains inorganic substances which are not biodegradable.

12.3. Bioaccumulative potential

Bioaccumulation Not likely to bioaccumulate.

Component Information

Chemical name	Partition coefficient
NITRIC ACID ...%	-2.3***

12.4. Mobility in soil

Mobility in soil Soluble in water.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product does not contain any substance(s) classified as PBT or vPvB.

Chemical name	PBT and vPvB assessment
NITRIC ACID ...%	The substance is not PBT / vPvB

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

Waste from residues/unused products Should not be released into the environment. Dispose of in accordance with local regulations. Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority.***

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information**IATA**

- 14.1 UN number or ID number UN2031
 14.2 UN proper shipping name NITRIC ACID SOLUTION
 14.3 Transport hazard class(es) 8
 Subsidiary hazard class 5.1
 14.4 Packing group II
 14.5 Environmental hazards No

14.6 Special precautions for user

Special Provisions	A1
ERG Code	8L

IMDG

14.1 UN number or ID number	UN2031
14.2 UN proper shipping name	NITRIC ACID SOLUTION
14.3 Transport hazard class(es)	8
Subsidiary hazard class	5.1
14.4 Packing group	II
14.5 Environmental hazards	No
14.6 Special precautions for user	
Special Provisions	None
EmS-No	F-A, S-Q
14.7 Maritime transport in bulk according to IMO instruments	No information available

RID

14.1 UN number or ID number	UN2031
14.2 UN proper shipping name	NITRIC ACID SOLUTION
14.3 Transport hazard class(es)	8
Subsidiary hazard class	5.1
14.4 Packing group	II
14.5 Environmental hazards	No
14.6 Special precautions for user	
Special Provisions	None
Classification code	CO1

ADR

14.1 UN number or ID number	UN2031
14.2 UN proper shipping name	NITRIC ACID SOLUTION
14.3 Transport hazard class(es)	8
Subsidiary hazard class	5.1
14.4 Packing group	II
14.5 Environmental hazards	No
14.6 Special precautions for user	
Special Provisions	None
Classification code	CO1
Tunnel restriction code	(E)

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations**

Authorisations and/or restrictions on use:

This product contains one or more substances subject to restriction (UK REACH - Annex XVII).
 This product does not contain substances subject to authorisation (UK REACH - Annex XIV).***

Product restricted per REACH Annex XVII: 3

Persistent Organic Pollutants

Not applicable

Export Notification requirements

Not applicable

Dangerous substance category per COMAH Regulations 2015 (as amended)

H2 - ACUTE TOXIC

P8 - OXIDISING LIQUIDS AND SOLIDS***

Named dangerous substances per COMAH Regulations 2015 (as amended)

Not applicable

The Ozone-Depleting Substances Regulations 2015

Not applicable

The Biocidal Products Regulations 2001 (as amended)

Not applicable

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended)

Not applicable

Poisons Act 1972 (Explosive Precursors) Regulations (as Amended)

Chemical name	Poisons and Explosive Precursors
NITRIC ACID ...%	Explosive precursor, Regulated 3 % w/w

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECI	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AIIC	Contact supplier for inventory compliance status
NZIoC	Contact supplier for inventory compliance status

Legend:

TSCA	- United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL	- Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS	- European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS	- Japan Existing and New Chemical Substances
IECSC	- China Inventory of Existing Chemical Substances
KECL	- Korean Existing and Evaluated Chemical Substances
PICCS	- Philippines Inventory of Chemicals and Chemical Substances
AIIC	- Australian Inventory of Industrial Chemicals
NZIoC	- New Zealand Inventory of Chemicals

15.2. Chemical safety assessment

Chemical Safety Report A Chemical Safety Assessment has been carried out for this substance***

SECTION 16: Other information**Key or legend to abbreviations and acronyms used in the safety data sheet****Full text of H-Statements referred to under section 3**

H272 - May intensify fire; oxidiser
H290 - May be corrosive to metals
H314 - Causes severe skin burns and eye damage
H318 - Causes serious eye damage
H331 - Toxic if inhaled***

Legend

SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
+	Sensitisers		

Revision Note SDS sections updated 1 3 4 8 9 11

Classification procedure

Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
 European Chemicals Agency (ECHA) (ECHA_API)
 Environmental Protection Agency
 Acute Exposure Guideline Level(s) (AEGL(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 National Institute of Technology and Evaluation (NITE)
 Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 U.S. National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
 Organisation for Economic Co-operation and Development Screening Information Data Set
 World Health Organization

Prepared By Amy Whitfield

Supersedes date 13-May-2022

Revision date 21-Jul-2025

This material safety data sheet complies with the requirements of UK REACH Regulations (SI 2019/758 as amended)
 Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name	NITRIC ACID
Pure substance/mixture	Mixture
REACH registration number	01-2119487297-23-XXXX
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford GBR
Non-Emergency Telephone Number	+44 1274 267300 / +44 1274 267306
E-mail address	SDS.EMEA@univarsolutions.com

Section 1 - Title

Title	Manufacture of substance
Type	Worker
Main user group	Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies)	ERC1 - Manufacture of substances
Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC15 - Use as laboratory reagent
Sector(s) of use	SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites SU8 - Manufacture of bulk, large scale chemicals (including petroleum products) SU9 - Manufacture of fine chemicals SU17 - General manufacturing

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC1 - Manufacture of substances

Covers concentrations up to	70%
Remarks	As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

Conditions and measures related to external treatment of waste for disposal

Disposal	Dispose of waste product or used containers according to local regulations
-----------------	--

Control of worker exposure

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC15 - Use as laboratory reagent
Covers concentrations up to	70%

Physical form of product	Liquid
Vapour pressure	61 hPa
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers frequency up to 5 days per week
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Clear spills immediately Provide a good standard of controlled ventilation (5 to 10 air changes per hour) Automate activity where possible Ensure procedures and training for emergency decontamination and disposal are in place Pre-employment screening and appropriate health surveillance
Conditions and measures related to personal protection, hygiene and health evaluation	S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection In the case of vapour formation use a respirator with an approved filter
Organisational measures to prevent /limit releases, dispersion and exposure	Handle substance within a closed system The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text Dispose of waste in accordance with environmental legislation Ensure operatives are trained to minimise exposures Keep good industrial hygiene
Indoor/Outdoor use	Covers indoor and outdoor use

Section 3 - Exposure estimation

Environmental release category(ies) - ERC1 - Manufacture of substances

Predicted No Effect Concentration (PNEC)

Remarks As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

Derived No Effect Level (DNEL):

Worker - inhalative, long-term - local	2.6 mg/m ³
Worker - inhalative, short-term - local	2.6 mg/m ³
Consumer - inhalative, long-term - systemic	1.3 mg/m ³

Section 4 - Guidance to check compliance with the exposure scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name	NITRIC ACID
Pure substance/mixture	Mixture
REACH registration number	01-2119487297-23-XXXX
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford GBR
Non-Emergency Telephone Number	+44 1274 267300 / +44 1274 267306
E-mail address	SDS.EMEA@univarsolutions.com

Section 1 - Title

Title	Formulation & (re)packing of substances and mixtures
Type	Worker
Main user group	Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies)	ERC2 - Formulation of preparations (mixtures)
Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC15 - Use as laboratory reagent
Product category(ies)	PC12 - Fertilisers PC14 - Metal surface treatment products, including galvanic and electroplating products PC15 - Non-metal-surface treatment products PC20 - Products such as pH-regulators, flocculants, precipitants, neutralization agents PC35 - Washing and cleaning products (including solvent based products) PC37 - Water treatment chemicals
Sector(s) of use	SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites SU10 - Formulation [mixing] of preparations and/or re-packaging (excluding alloys)

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC2 - Formulation of preparations (mixtures)

Covers concentrations up to	100%
Remarks	As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

Conditions and measures related to external treatment of waste for disposal

Disposal	Dispose of waste product or used containers according to local regulations
-----------------	--

Control of worker exposure

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9 -
------------------------------	---

	Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC15 - Use as laboratory reagent
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	61 hPa
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers frequency up to 5 days per week
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Clear spills immediately Provide a good standard of controlled ventilation (5 to 10 air changes per hour) Automate activity where possible When not in use, keep containers tightly closed Ensure procedures and training for emergency decontamination and disposal are in place Pre-employment screening and appropriate health surveillance
Conditions and measures related to personal protection, hygiene and health evaluation	S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection In the case of vapour formation use a respirator with an approved filter
Organisational measures to prevent /limit releases, dispersion and exposure	Handle substance within a closed system The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text Dispose of waste in accordance with environmental legislation Keep good industrial hygiene
Indoor/Outdoor use	Covers indoor and outdoor use

Process category(ies)	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Covers concentrations up to	70%
Physical form of product	Liquid
Vapour pressure	61 hPa
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers frequency up to 5 days per week
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Clear spills immediately Provide a good standard of controlled ventilation (5 to 10 air changes per hour) Automate activity where possible When not in use, keep containers tightly closed Ensure procedures and training for emergency decontamination and disposal are in place Pre-employment screening and appropriate health surveillance
Conditions and measures related to personal protection, hygiene and health evaluation	S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection In the case of vapour formation use a respirator with an approved filter
Organisational measures to prevent /limit releases, dispersion and exposure	Handle substance within a closed system The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text Dispose of waste in accordance with environmental legislation Ensure operatives are trained to minimise exposures Keep good industrial hygiene
Indoor/Outdoor use	Covers indoor and outdoor use

Section 3 - Exposure estimation

Environmental release category(ies) - ERC2 - Formulation of preparations (mixtures)

**Predicted No Effect Concentration
(PNEC)**

Remarks As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

Derived No Effect Level (DNEL):

Worker - inhalative, long-term - local	2.6 mg/m ³
Worker - inhalative, short-term - local	2.6 mg/m ³
Consumer - inhalative, long-term - systemic	1.3 mg/m ³

Section 4 - Guidance to check compliance with the exposure scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name	NITRIC ACID
Pure substance/mixture	Mixture
REACH registration number	01-2119487297-23-XXXX
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford GBR
Non-Emergency Telephone Number	+44 1274 267300 / +44 1274 267306
E-mail address	SDS.EMEA@univarsolutions.com

Section 1 - Title

Title	Use as an intermediate
Type	Worker
Main user group	Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies)	ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)
Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC15 - Use as laboratory reagent
Product category(ies)	PC0 - Other Products PC19 - Intermediate PC21 - Laboratory chemicals
Sector(s) of use	SU0 - Other SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites SU9 - Manufacture of fine chemicals SU24 - Scientific research and development

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)

Covers concentrations up to	100%
Remarks	As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

Conditions and measures related to external treatment of waste for disposal

Disposal	Dispose of waste product or used containers according to local regulations
-----------------	--

Control of worker exposure

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including
------------------------------	---

	weighing) PROC15 - Use as laboratory reagent
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	61 hPa
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers frequency up to 5 days per week
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Clear spills immediately Provide a good standard of controlled ventilation (5 to 10 air changes per hour) Automate activity where possible When not in use, keep containers tightly closed Ensure procedures and training for emergency decontamination and disposal are in place Pre-employment screening and appropriate health surveillance
Conditions and measures related to personal protection, hygiene and health evaluation	S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection In the case of vapour formation use a respirator with an approved filter
Organisational measures to prevent /limit releases, dispersion and exposure	Handle substance within a closed system The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text Dispose of waste in accordance with environmental legislation Ensure operatives are trained to minimise exposures Keep good industrial hygiene
Indoor/Outdoor use	Covers indoor and outdoor use

Process category(ies)	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Covers concentrations up to	70%
Physical form of product	Liquid
Vapour pressure	61 hPa
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers frequency up to 5 days per week
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Clear spills immediately Provide a good standard of controlled ventilation (5 to 10 air changes per hour) Automate activity where possible When not in use, keep containers tightly closed Ensure procedures and training for emergency decontamination and disposal are in place Pre-employment screening and appropriate health surveillance
Conditions and measures related to personal protection, hygiene and health evaluation	S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection In the case of vapour formation use a respirator with an approved filter
Organisational measures to prevent /limit releases, dispersion and exposure	Handle substance within a closed system The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text Dispose of waste in accordance with environmental legislation Ensure operatives are trained to minimise exposures Keep good industrial hygiene
Indoor/Outdoor use	Covers indoor and outdoor use

Section 3 - Exposure estimation

Environmental release category(ies) - ERC6a - Industrial use resulting in manufacture of another substance (use of

intermediates)

Predicted No Effect Concentration (PNEC)

Remarks As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

Derived No Effect Level (DNEL):

Worker - inhalative, long-term - local	2.6 mg/m ³
Worker - inhalative, short-term - local	2.6 mg/m ³
Consumer - inhalative, long-term - systemic	1.3 mg/m ³

Section 4 - Guidance to check compliance with the exposure scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name	NITRIC ACID
Pure substance/mixture	Mixture
REACH registration number	01-2119487297-23-XXXX
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford GBR
Non-Emergency Telephone Number	+44 1274 267300 / +44 1274 267306
E-mail address	SDS.EMEA@univarsolutions.com

Section 1 - Title

Title	Industrial use
Type	Worker
Main user group	Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies)	ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles ERC6b - Industrial use of reactive processing aids
Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) PROC7 - Industrial spraying PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10 - Roller application or brushing PROC13 - Treatment of articles by dipping and pouring PROC15 - Use as laboratory reagent
Product category(ies)	PC14 - Metal surface treatment products, including galvanic and electroplating products PC15 - Non-metal-surface treatment products PC20 - Products such as pH-regulators, flocculants, precipitants, neutralization agents PC35 - Washing and cleaning products (including solvent based products) PC37 - Water treatment chemicals
Sector(s) of use	SU0 - Other SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites SU4 - Manufacture of food products SU6a - Manufacture of wood and wood products SU8 - Manufacture of bulk, large scale chemicals (including petroleum products) SU12 - Manufacture of plastics products, including compounding and conversion SU14 - Manufacture of basic metals, including alloys SU15 - Manufacture of fabricated metal products, except machinery and equipment SU16 - Manufacture of computer, electronic and optical products, electrical equipment SU17 - General manufacturing SU23 - Recycling

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles

- ERC6b - Industrial use of reactive processing aids

Covers concentrations up to

100%

Remarks

As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

Conditions and measures related to external treatment of waste for disposal

Disposal	Dispose of waste product or used containers according to local regulations
----------	--

Control of worker exposure

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) PROC7 - Industrial spraying PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC13 - Treatment of articles by dipping and pouring PROC15 - Use as laboratory reagent
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	61 hPa
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers frequency up to 5 days per week
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Clear spills immediately Provide a good standard of controlled ventilation (5 to 10 air changes per hour) Automate activity where possible When not in use, keep containers tightly closed Ensure procedures and training for emergency decontamination and disposal are in place Pre-employment screening and appropriate health surveillance
Conditions and measures related to personal protection, hygiene and health evaluation	S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection In the case of vapour formation use a respirator with an approved filter
Organisational measures to prevent /limit releases, dispersion and exposure	Handle substance within a closed system The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text Dispose of waste in accordance with environmental legislation Ensure operatives are trained to minimise exposures Keep good industrial hygiene
Indoor/Outdoor use	Covers indoor and outdoor use

Process category(ies)	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC10 - Roller application or brushing
Covers concentrations up to	70%
Physical form of product	Liquid
Vapour pressure	61 hPa
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers frequency up to 5 days per week
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Clear spills immediately Provide a good standard of controlled ventilation (5 to 10 air changes per hour) Automate activity where possible When not in use, keep containers tightly closed Ensure procedures and training for emergency decontamination and disposal are in place Pre-employment screening and appropriate health surveillance
Conditions and measures related to personal protection, hygiene and health evaluation	S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection In the case of vapour formation use a respirator with an approved filter
Organisational measures to prevent /limit releases, dispersion and exposure	Handle substance within a closed system The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

	Dispose of waste in accordance with environmental legislation Ensure operatives are trained to minimise exposures Keep good industrial hygiene
Indoor/Outdoor use	Covers indoor and outdoor use

Section 3 - Exposure estimation

Environmental release category(ies) - ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles
- ERC6b - Industrial use of reactive processing aids

Predicted No Effect Concentration (PNEC)

Remarks As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

Derived No Effect Level (DNEL):

Worker - inhalative, long-term - local	2.6 mg/m ³
Worker - inhalative, short-term - local	2.6 mg/m ³
Consumer - inhalative, long-term - systemic	1.3 mg/m ³

Section 4 - Guidance to check compliance with the exposure scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name	NITRIC ACID
Pure substance/mixture	Mixture
REACH registration number	01-2119487297-23-XXXX
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford GBR
Non-Emergency Telephone Number	+44 1274 267300 / +44 1274 267306
E-mail address	SDS.EMEA@univarsolutions.com

Section 1 - Title

Title	Professional use
Type	Worker
Main user group	Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies)	ERC8b - Wide dispersive indoor use of reactive substances in open systems ERC8e - Wide dispersive outdoor use of reactive substances in open systems
Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation) PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10 - Roller application or brushing PROC11 - Non industrial spraying PROC13 - Treatment of articles by dipping and pouring PROC15 - Use as laboratory reagent PROC19 - Hand-mixing with intimate contact and only PPE available
Product category(ies)	PC14 - Metal surface treatment products, including galvanic and electroplating products PC15 - Non-metal-surface treatment products PC20 - Products such as pH-regulators, flocculants, precipitants, neutralization agents PC21 - Laboratory chemicals PC35 - Washing and cleaning products (including solvent based products)
Sector(s) of use	SU4 - Manufacture of food products SU15 - Manufacture of fabricated metal products, except machinery and equipment SU16 - Manufacture of computer, electronic and optical products, electrical equipment SU17 - General manufacturing SU19 - Building and construction work SU22 - Professional uses SU23 - Recycling SU24 - Scientific research and development

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC8b - Wide dispersive indoor use of reactive substances in open systems
- ERC8e - Wide dispersive outdoor use of reactive substances in open systems

Covers concentrations up to	70%
Remarks	As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

Conditions and measures related to external treatment of waste for disposal

Disposal	Dispose of waste product or used containers according to local regulations
-----------------	--

Control of worker exposure	
Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation) PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10 - Roller application or brushing PROC11 - Non industrial spraying PROC13 - Treatment of articles by dipping and pouring PROC15 - Use as laboratory reagent PROC19 - Hand-mixing with intimate contact and only PPE available
Covers concentrations up to	70%
Physical form of product	Liquid
Vapour pressure	61 hPa
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers frequency up to 5 days per week
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance Clear spills immediately Provide a good standard of controlled ventilation (5 to 10 air changes per hour) Automate activity where possible
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable gloves tested to EN 374 Eye/face protection In case of inadequate ventilation wear respiratory protection Wear suitable coveralls to prevent exposure to the skin Avoid contact with eyes and skin Do not breathe dust/fume/gas/mist/vapours/spray
Organisational measures to prevent /limit releases, dispersion and exposure	Ensure operatives are trained to minimise exposures Ensure control measures are regularly inspected and maintained Dispose of waste in accordance with environmental legislation
Indoor/Outdoor use	Covers indoor and outdoor use

Section 3 - Exposure estimation

Environmental release category(ies) - ERC8b - Wide dispersive indoor use of reactive substances in open systems
- ERC8e - Wide dispersive outdoor use of reactive substances in open systems

Predicted No Effect Concentration (PNEC)

Remarks As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

Derived No Effect Level (DNEL):

Worker - inhalative, long-term - local	2.6 mg/m ³
Worker - inhalative, short-term - local	2.6 mg/m ³
Consumer - inhalative, long-term - systemic	1.3 mg/m ³

Section 4 - Guidance to check compliance with the exposure scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name	NITRIC ACID
Pure substance/mixture	Mixture
REACH registration number	01-2119487297-23-XXXX
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford GBR
Non-Emergency Telephone Number	+44 1274 267300 / +44 1274 267306
E-mail address	SDS.EMEA@univarsolutions.com

Section 1 - Title

Title	Consumer use
Type	Consumer
Main user group	Consumer uses: Private households (= general public = consumers)
Environmental release category(ies)	ERC8b - Wide dispersive indoor use of reactive substances in open systems ERC8e - Wide dispersive outdoor use of reactive substances in open systems
Product category(ies)	PC3 - Air care products PC12 - Fertilisers PC31 - Polishes and wax blends PC35 - Washing and cleaning products (including solvent based products)
Sector(s) of use	SU21 - Consumer uses

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC8b - Wide dispersive indoor use of reactive substances in open systems
- ERC8e - Wide dispersive outdoor use of reactive substances in open systems

Control of consumer exposure

Product categories [PC]	PC3 - Air care products PC21 - Laboratory chemicals PC31 - Polishes and wax blends PC35 - Washing and cleaning products (including solvent based products)
Covers concentrations up to	0%-3%

Section 3 - Exposure estimation

Environmental release category(ies) - ERC8b - Wide dispersive indoor use of reactive substances in open systems
- ERC8e - Wide dispersive outdoor use of reactive substances in open systems

Predicted No Effect Concentration (PNEC)

Remarks As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

Derived No Effect Level (DNEL):

Worker - inhalative, long-term - local	2.6 mg/m ³
Worker - inhalative, short-term - local	2.6 mg/m ³
Consumer - inhalative, long-term - systemic	1.3 mg/m ³

Section 4 - Guidance to check compliance with the exposure scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name	NITRIC ACID
Pure substance/mixture	Mixture
REACH registration number	01-2119487297-23-XXXX
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford GBR
Non-Emergency Telephone Number	+44 1274 267300 / +44 1274 267306
E-mail address	SDS.EMEA@univarsolutions.com

Section 1 - Title

Title	Industrial use
Type	Worker
Main user group	Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies)	ERC1 - Manufacture of substances ERC2 - Formulation of preparations (mixtures) ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates) ERC6b - Industrial use of reactive processing aids ERC7 - Industrial use of substances in closed systems
Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC13 - Treatment of articles by dipping and pouring PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising PROC15 - Use as laboratory reagent
Sector(s) of use	SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites SU8 - Manufacture of bulk, large scale chemicals (including petroleum products) SU9 - Manufacture of fine chemicals SU10 - Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU16 - Manufacture of computer, electronic and optical products, electrical equipment SU24 - Scientific research and development

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC1 - Manufacture of substances
 - ERC2 - Formulation of preparations (mixtures)
 - ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles
 - ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)
 - ERC6b - Industrial use of reactive processing aids
 - ERC7 - Industrial use of substances in closed systems

Conditions and measures related to external treatment of waste for disposal

Disposal	Dispose of waste product or used containers according to local regulations
----------	--

Control of worker exposure	
Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC13 - Treatment of articles by dipping and pouring PROC14 - Production of preparations or articles by tableting, compression, extrusion, peletising
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	61 hPa
Use frequency	Covers use up to 480 minutes Covers frequency up to 5 days per week
Technical conditions and measures to control dispersion from source towards the worker	Local exhaust ventilation - efficiency of at least 95%
Conditions and measures related to personal protection, hygiene and health evaluation	Avoid contact with eyes and skin S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection Wear a respirator providing a minimum efficiency of 95%
Organisational measures to prevent /limit releases, dispersion and exposure	Ensure control measures are regularly inspected and maintained Ensure operatives are trained to minimise exposures Supervision in place to check that the RMMs in place are being used correctly and OCs followed
Indoor/Outdoor use	Covers indoor and outdoor use

Process category(ies)	PROC15 - Use as laboratory reagent
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	61 hPa
Use frequency	Covers use up to 240 minutes Covers frequency up to 5 days per week
Technical conditions and measures to control dispersion from source towards the worker	Local exhaust ventilation - efficiency of at least 95%
Conditions and measures related to personal protection, hygiene and health evaluation	Avoid contact with eyes and skin S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection Wear a respirator providing a minimum efficiency of 95%
Organisational measures to prevent /limit releases, dispersion and exposure	Ensure control measures are regularly inspected and maintained Ensure operatives are trained to minimise exposures Supervision in place to check that the RMMs in place are being used correctly and OCs followed
Indoor/Outdoor use	Covers indoor and outdoor use

Section 3 - Exposure estimation

Environmental release category(ies) - ERC1 - Manufacture of substances
- ERC2 - Formulation of preparations (mixtures)
- ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles
- ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)
- ERC6b - Industrial use of reactive processing aids
- ERC7 - Industrial use of substances in closed systems

Predicted No Effect Concentration (PNEC)

Remarks As no environmental hazard was identified, no environmental-related exposure assessment

and risk characterisation was performed.

Derived No Effect Level (DNEL):

Worker - inhalative, long-term - local	2.6 mg/m ³
Worker - inhalative, short-term - local	2.6 mg/m ³
Consumer - inhalative, long-term - systemic	1.3 mg/m ³

Process category(ies)	Exposure route	predicted exposure level	Risk characterisation ratio (RCR)
PROC1 - Use in closed process, no likelihood of exposure	Worker - inhalative, long-term - local	0.026 mg/m ³	0.02
PROC2 - Use in closed, continuous process with occasional controlled exposure	Worker - inhalative, long-term - local	0.129 mg/m ³	0.1
PROC3 - Use in closed batch process (synthesis or formulation)	Worker - inhalative, long-term - local	0.322 mg/m ³	0.25
PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises	Worker - inhalative, long-term - local	0.258 mg/m ³	0.2
PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC13 - Treatment of articles by dipping and pouring PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising	Worker - inhalative, long-term - local	0.644 mg/m ³	0.5
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - inhalative, long-term - local	0.193 mg/m ³	0.15
PROC15 - Use as laboratory reagent	Worker - inhalative, long-term - local	0.928 mg/m ³	0.71

Section 4 - Guidance to check compliance with the exposure scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.