Nitric acid

84385-6X1L

Version 2.9 Revision Date 06.11.2025 Supersedes 1

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

1.1. Product identifier

Product name	:	Nitric acid
SDS-number	:	000000020258
Type of product	:	Mixture
Remarks	:	SDS according to Art. 31 of Regulation (EC) 1907/2006.

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

Use of the Substance/Mixture	:	Laboratory chemicals
Uses advised against	:	none

1.3. Details of the supplier of the safety data sheet

Company	:	Honeywell Specialty Chemicals Seelze GmbH Wunstorfer Straße 40 30926 Seelze Germany	Solstice Advanced Materials US, Inc. 115 Tabor Road Morris Plains, NJ 07950-2546 USA
Telephone	:	(49) 5137-999 0	
For further information, please contact:	:	SafetyDataSheet@solstice.com	

1.4. Emergency telephone number

Emergency telephone number	:	+1-703-527-3887 (ChemTrec-Transport) +1 303-739-1378 (Medical)
	:	Poison Control Center: United Kingdom: (+44) 844 892 0111

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Oxidizing liquids Category 3
H272 May intensify fire; oxidizer.
Corrosive to metals Category 1
H290 May be corrosive to metals.
Acute toxicity Category 3 - Inhalation
H331 Toxic if inhaled.
Skin corrosion Category 1A
H314 Causes severe skin burns and eye damage.

2.2. Label elements

REGULATION (EC) No 1272/2008

Hazard pictograms	:		
Signal word	:	Danger	
Hazard statements	:	H272	May intensify fire; oxidizer.
		H290	May be corrosive to metals.
		H314	Causes severe skin burns and eye damage.
		H331	Toxic if inhaled.
		EUH071	Corrosive to the respiratory tract.
Precautionary statements	:	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
		P234	Keep only in original container.
		P260	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
		P280	Wear protective gloves/protective clothing/eye protection/face protection.
		P284	Wear respiratory protection.
		P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
		P302 + P352	IF ON SKIN: Wash with plenty of water.
		P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
		P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
		P308 + P313	IF exposed or concerned: Get medical

advice/ attention.

Hazardous components which must be listed on the label : nitric acid

2.3. Other hazards

Contact with combustible material may cause fire. Explosive when mixed with combustible material.
Results of PBT and vPvB assessment, see chapter 12.5.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Chemical name	CAS-No. Index-No. EC-No.	Classification 1272/2008	Concentration	Remarks
nitric acid	7697-37-2 007-030-00-3 231-714-2	Ox. Liq. 3; H272 Acute Tox. 3; H331; Inhalation Met. Corr. 1; H290 Skin Corr. 1A; H314 EUH071	>= 65 % - <= 70 %	ATE(inhalative vapour): 2,65 mg/l Skin Corr. 1B; H314:5 - < 20 % Skin Corr. 1A; H314:>= 20 % Ox. Liq. 3; H272:>= 65 % Skin Corr. 1B; H314:5 - < 20 % Ox. Liq. 3; H272:>= 65 % Skin Corr. 1A; H314:>= 20 %

Remaining components of this product are non-hazardous and/or are present at concentrations below reportable limits.

Occupational Exposure Limit(s), if available, are listed in Section 8.
For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice:
First aider needs to protect himself. Move out of dangerous area. Immediately take off contaminated clothing and rinse body with plenty of water.

Inhalation:
Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present. Call a physician immediately.

Skin contact:
Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Call a physician immediately.

Eye contact:
Protect unharmed eye. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.

Ingestion:
Do NOT induce vomiting. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person. Call a physician immediately.

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

No data available

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

Health injuries may be delayed. Medical supervision for minimum 48 hours.

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

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:
Water spray
Foam
Carbon dioxide (CO2)
Dry powder

Extinguishing media which shall not be used for safety reasons:
Dry sodium carbonate
High volume water jet

5.2. Special hazards arising from the substance or mixture

Heating will cause pressure rise with risk of bursting
Some risk may be expected of corrosive and toxic decomposition products.
Fire may cause evolution of:
Nitrogen oxides (NOx)
Cool closed containers exposed to fire with water spray.
In fires, the product supports combustion.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit.
No unprotected exposed skin areas.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.The product itself does not burn.Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Keep people away from and upwind of spill/leak. Wear personal protective equipment. Unprotected persons must be kept away.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Suppress (knock down) gases/vapours/mists with a water spray jet.

6.3. Methods and materials for containment and cleaning up

Dilute with plenty of water.
Use chemical neutralising agents
Neutralise with the following product(s):
lime
Never neutralise with the following products:
soda ash
Soak up with inert absorbent material.
Do not pick up with the help of saw-dust or other combustible substances.
Pick for disposal in tightly closed containers
Personal protection through wearing a tightly closed chemical protection suit and a self-contained breathing apparatus.

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:
Exhaust ventilation at the object is necessary. Use only acid resistant equipment. Keep limited supplies at workplace. Always have on hand a first-aid kit, together with proper instructions.

Advice on protection against fire and explosion:
Keep away from combustible material.

Hygiene measures:
Separate rooms are required for washing, showering and changing clothes. Contaminated work clothing should not be allowed out of the workplace. Take off all contaminated clothing immediately. Wash hands before breaks and at the end of workday. When using do not eat or drink.

7.2. Conditions for safe storage, including any incompatibilities

Further information on storage conditions:
Store in original container. Keep in a dry, cool and well-ventilated place. Do not leave vessels/containers open Avoid product residues in/on containers. Store in a place accessible by authorized persons only.

Advice on common storage:
Do not store with combustible materials.

7.3. Specific end use(s)

no additional data available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits:

Components	Basis / Value type	Value / Form of exposure	Exceeding Factor	Remarks
nitric acid	EH40 WEL STEL	2,6 mg/m3 1 ppm	15 minutes	
nitric acid	EU ELV STEL	2,6 mg/m3 1 ppm		Indicative
nitric acid	EU SCOELS STEL	2,6 mg/m3 1 ppm	15 minutes	

EH40 WEL - UK. EH40 Workplace Exposure Limits (WELs), as amended
STEL - Short term exposure limit

DNEL/ PNEC-Values

Component	End-use/impact	Exposure duration	Value	Exposure routes	Remarks
nitric acid	Workers / Long-term local effects		2,6 mg/m3	Inhalation	
nitric acid	Workers / Acute local effects		2,6 mg/m3	Inhalation	
nitric acid	Consumers / Long-term local effects		1,3 mg/m3	Inhalation	
nitric acid	Consumers /		1,3 mg/m3	Inhalation	

	Acute local effects				

No PNEC data available.

8.2. Exposure controls

Occupational exposure controls

The Personal Protective Equipment must be in accordance with EN standards:respirator EN 136, 140, 149; safety glasses EN 166; protective suit: EN 340, 463, 468, 943-1, 943-2; gloves EN 374, 511; safety shoes EN-ISO 20345.

Engineering measures
Use with local exhaust ventilation.

Personal protective equipment
Respiratory protection:
In the case of vapour formation use a respirator with an approved filter.

Hand protection:
Glove material: Viton®
Break through time: > 60 min
Glove thickness: 0,7 mm
Vitoject® 890
Gloves must be inspected prior to use.
Replace when worn.
Remarks:Supplementary note: The specifications are based on information and tests from similar substances by analogy.
Due to varying conditions (e.g.temperature or other strains) it must be considered that the usage of a chemical protective glove in practice may be much shorter than the permeation time determined in accordance with EN 374.
Since actual conditions of practical use often deviate from standardised conditions according EN 374 the glove manufacturer reccomends to use the chemical protective glove in practice not longer than 50% of the recomended permeation time.
Manufacturer´s directions for use should be observed because of great diversity of types .
Suitable gloves tested according EN 374 are supplied e.g. from KCL GmbH, D-36124 Eichenzell, Vertrieb@kcl.de

Eye protection:
Safety goggles

Skin and body protection:
Complete suit protecting against chemicals

Environmental exposure controls

Handle in accordance with local environmental regulations and good industrial practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

(a) Physical state	:	liquid
(b) Colour	:	light yellow
(c) Odour	:	stinging
(d) Melting point/freezing point	:	-38 °C
(e) Boiling point/boiling range	:	122 °C at 1.013 hPa
(f) Flammability	:	Not applicable
(g) Lower and upper explosion limit	:	Lower explosion limit Not applicable
	:	Upper explosion limit Not applicable
(h) Flash point	:	Not applicable
(i) Auto-ignition temperature	:	Not applicable not auto-flammable
(j) Decomposition temperature	:	No decomposition if used as directed. Fire or intense heat may cause violent rupture of packages.
(k) pH	:	acidic
(l) Viscosity, kinematic	:	No data available

(m) Solubility(ies)	:	Water solubility: completely miscible
(n) Partition coefficient: n-octanol/water	:	No data available
(o) Vapour pressure	:	9 hPa at 20 °C
(p) Density and / or relative density	:	ca. 1,420 g/cm3 at 20 °C
(q) Bulk density	:	Not applicable
(q) Relative vapour density	:	No data available
(r) Particle characteristics	:	No data available

9.2 Other Information

Polymer characteristics	:	No data available
Corrosive to metals	:	Corrosive to metals
Evaporation rate	:	No data available
Viscosity, dynamic	:	2 mPa.s at 20 °C

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions.

10.2. Chemical stability

No decomposition if used as directed.
Fire or intense heat may cause violent rupture of packages.

10.3. Possibility of hazardous reactions

Gives off hydrogen by reaction with metals.

10.4. Conditions to avoid

Protect from heat/overheating.
Protect from moisture.

10.5. Incompatible materials

Bases
Metals
Flammable materials
Organic materials

10.6. Hazardous decomposition products

Nitrous gases

SECTION 11: Toxicological information

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

(a) Acute toxicity

Acute oral toxicity:
No data available

Acute dermal toxicity:
No data available

Acute inhalation toxicity:
Acute toxicity estimate
Value: 3,84 mg/l
Exposure time: 4 h
Method: Calculation method

Acute toxicity (other routes of administration):
No data available

(b) Skin corrosion/irritation:
Classification based on Annex VI of regulation 1272/2008/EC.

(c) Serious eye damage/eye irritation:
Classification based on Annex VI of regulation 1272/2008/EC.

(d) Respiratory or skin sensitisation:
No data available

(h) STOT-single exposure:
No data available

(i) STOT - repeated exposure:
No data available

(j) Aspiration hazard:
No data available

11.2. Information on other hazards

Endocrine disrupting properties
No data available

Other information:
Causes severe burns.
Risk of serious damage to the lungs (by inhalation).
Symptoms of poisoning may appear several hours later.

SECTION 12: Ecological information

12.1. Toxicity

Toxicity to fish:
No data available

Toxicity to aquatic plants:
No data available

Toxicity to aquatic invertebrates:
No data available

12.2. Persistence and degradability

Biodegradability:
Not applicable

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

Not applicable

12.6. Endocrine disrupting properties

No data available

12.7. Other adverse effects

The methods for determining biodegradability are not applicable to inorganic substances.
Neutralisation will reduce ecotoxic effects.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product:
Dispose according to legal requirements.

Packaging:
Legal requirements are to be considered in regard of reuse or disposal of used packaging materials

Further information:
Provisions relating to waste:
EC Directive 2006/12/EC; 2008/98/EEC
Regulation No. 1013/2006
For personal protection see section 8.

SECTION 14: Transport information

14.1 UN number or ID number

ADR/RID:2031 IMDG:2031 IATA:2031

14.2 UN proper shipping name
ADR/RID:NITRIC ACID
IMDG:NITRIC ACID
IATA:Nitric acid

14.3 Transport hazard class(es)
ADR/RID:8 (5.1) IMDG: 8 (5.1) IATA: 8 (5.1)

14.4 Packaging group
ADR/RID:II IMDG: II IATA: II

14.5 Environmental hazards
ADR/RID:no Marine pollutant: no

14.6 Special precautions for user
IMDG Code segregation group (SGG1) – ACIDS,

14.7 Maritime transport in bulk according to IMO instruments
No data available

SECTION 15: Regulatory information

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

Basis	Value	Remarks
Directive 2012/18/EC Listed in Regulation : P8: Oxidizing liquids and solids Number in Regulation: 1.2.8	**Quantity**: 50.000 kg **Quantity**: 200.000 kg	
Directive 2012/18/EC Listed in Regulation : H2: ACUTE TOXIC	**Quantity**: 50.000 kg **Quantity**: 200.000 kg	
Substances of very high concern (SVHC)		This product does not contain substances of very high concern according to Regulation (EC) No Article 57 above the respective regulatory 1907/2006 (REACH), concentration limit of ≥ 0.1 % (w/w).
Regulation (EU) 2019/1148 on the marketing and use of explosives		Contains components listed in

precursors		

VOC:
Directive 2010/75/EU of 24 November 2010 on industrial and livestock rearing emissions (integrated pollution prevention and control), 0 %

VOC:
Directive 2004/42/EC, 0 %

Other inventory information

USA. List of Active Substances on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory, as amended
On TSCA Inventory

Australia. Inventory of Industrial Chemicals (AIIC), as amended
On the inventory, or in compliance with the inventory

Canada. Domestic Substances List (DSL), as amended
All components of this product are on the Canadian DSL

Japan. Kashin-Hou Law List
On the inventory, or in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI)
On the inventory, or in compliance with the inventory

Philippines. Inventory of Chemicals and Chemical Substances (PICCS)
On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC)
On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand
On the inventory, or in compliance with the inventory

Taiwan Chemical Substance Inventory (TCSI)
On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment

A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

Text of H-statements referred to under heading 3

nitric acid	:	H272	May intensify fire; oxidizer.
		H331	Toxic if inhaled.
		H290	May be corrosive to metals.
		H314	Causes severe skin burns and eye damage.
		EUH071	Corrosive to the respiratory tract.

Further information

All directives and regulations refer to amended versions.
Vertical lines in the left hand margin indicate a relevant amendment from the previous version.

Abbreviations:
EC European Community
CAS Chemical Abstracts Service
DNEL Derived no effect level
PNEC Predicted no effect level
vPvB Very persistent and very biaccumulative substance
PBT Persistent, bioaccmulative und toxic substance

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