

Nitric acid**02650-1L**

Version 2.1

Revision Date 02/10/2023

Print Date 05/29/2023

SECTION 1. IDENTIFICATION

Product name : Nitric acid

Number : 000000020258

Product Use Description : Laboratory chemicals

Manufacturer or supplier's details : Honeywell Specialty Chemicals Seelze GmbH
Wunstorfer Straße 40
Seelze, 30926

For more information call : 1-800-368-0050
+1-231-726-3171(Monday-Friday, 9:00am-5:00pm)

In case of emergency call : **Medical: 1-800-498-5701 or +1-303-389-1414**
: **Transportation (CHEMTREC): 1-800-424-9300 or**
: **+1-703-527-3887**
:
: (24 hours/day, 7 days/week)

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Form : liquid

Color : light yellow

Odor : stinging

Classification of the substance or mixture

Classification of the substance or mixture : Oxidizing liquids, Category 3
Corrosive to metals, Category 1
Skin corrosion, Category 1A
Serious eye damage, Category 1
Acute toxicity, Category 3

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GHS Label elements, including precautionary statements

Symbol(s)

:



Signal word

: Danger

Hazard statements

: May intensify fire; oxidizer.
May be corrosive to metals.
Causes severe skin burns and eye damage.
Toxic if inhaled.

Precautionary statements

: **Prevention:**
Keep away from heat.
Keep/ Store away from clothing/ combustible materials.
Take any precaution to avoid mixing with combustibles.
Keep only in original container.
Wash skin thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.**Response:**IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER/ doctor.
Wash contaminated clothing before reuse.
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
Absorb spillage to prevent material damage.**Storage:**Store locked up.
Store in corrosive resistant container with a resistant inner liner.**Disposal:**

Dispose of contents/ container to an approved waste disposal

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plant.

Carcinogenicity

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTSFormula : HNO₃

Chemical nature : Mixture

Chemical name	CAS-No.	Concentration
Nitric acid	7697-37-2	>=50.00 - <70.00 %
Water	7732-18-5	>=30.00 - <50.00 %

SECTION 4. 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.

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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.

Notes to physician

Most important symptoms/effects, acute and delayed : No information available.

Indication of immediate medical attention and special treatment needed, if necessary : Treat symptomatically. Symptoms may be delayed.

SECTION 5. FIREFIGHTING MEASURES

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

Unsuitable extinguishing media : Dry sodium carbonate

Specific hazards during firefighting : Strong oxidizer.
Contact with metals liberates hydrogen gas.
Contact with combustible material may cause fire.
In case of fire hazardous decomposition products may be produced such as:
Nitrogen oxides (NO_x)

Special protective equipment for firefighters : Wear self-contained breathing apparatus and protective suit.
No unprotected exposed skin areas.

Further information : Prevent fire extinguishing water from contaminating surface water or the ground water system.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
The product itself does not burn.

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SECTION 6. ACCIDENTAL RELEASE MEASURES

- | | | |
|---|---|--|
| Personal precautions, protective equipment and emergency procedures | : | Wear personal protective equipment.
Immediately evacuate personnel to safe areas.
Keep people away from and upwind of spill/leak.
Remove all sources of ignition.
Ensure adequate ventilation.
Do not swallow.
Do not breathe vapours or spray mist.
Do not get in eyes, on skin, or on clothing. |
| Environmental precautions | : | Prevent further leakage or spillage if safe to do so.
Discharge into the environment must be avoided.
Do not flush into surface water or sanitary sewer system.
Prevent product from entering drains.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains. |
| 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. |

SECTION 7. HANDLING AND STORAGE**Handling**

- | | | |
|-------------------------------|---|---|
| Precautions for safe handling | : | Wear personal protective equipment.
Use only in well-ventilated areas.
Keep container tightly closed.
When diluting, add acids to water, never the other way around.
On dilution or dissolving in water, considerable heating always occurs.
Do not smoke. |
|-------------------------------|---|---|

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Do not swallow.
Do not breathe vapours or spray mist.
Do not get in eyes, on skin, or on clothing.

Advice on protection against fire and explosion : Keep away from combustible material.
Risk of fire or explosion on contact with many common organic compounds.
Contact with metals liberates hydrogen gas.

Storage

Conditions for safe storage, including any incompatibilities : Keep containers tightly closed in a dry, cool and well-ventilated place.
Store in upright position only.
Store away from incompatible substances.
Protect from atmospheric moisture and water.
Do not store near combustible materials.
Protect from physical damage.

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

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.
Legal requirements are to be considered in regard of the selection, use and care of personal protective equipment.
Do not breathe vapours or spray mist.
Do not get in eyes, on skin, or on clothing.

Engineering measures : Use with local exhaust ventilation.

Eye protection : Wear as appropriate:
Safety goggles
Face-shield

Hand protection : Impervious gloves
Gloves must be inspected prior to use.
Replace when worn.

Skin and body protection : Complete suit protecting against chemicals

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- Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.
- Hygiene measures : When using, do not eat, drink or smoke.
Wash hands before breaks and immediately after handling the product.
Keep working clothes separately.
Remove and wash contaminated clothing before re-use.
Do not swallow.
Do not breathe vapours or spray mist.
Do not get in eyes, on skin, or on clothing.

Exposure Guidelines

Components	CAS-No.	Value	Control parameters	Update	Basis
Nitric acid	7697-37-2	TWA : Time weighted average	5 mg/m ³ (2 ppm)	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended
Nitric acid	7697-37-2	REL : Recommended exposure limit (REL):	5 mg/m ³ (2 ppm)	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards, as amended
Nitric acid	7697-37-2	STEL : Short term exposure limit	10 mg/m ³ (4 ppm)	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended
Nitric acid	7697-37-2	STEL : Short term exposure limit	10 mg/m ³ (4 ppm)	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards, as amended

SAFETY DATA SHEET

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Nitric acid	7697-37-2	PEL : Permissible exposure limit	5 mg/m3 (2 ppm)	02 2006	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended
Nitric acid	7697-37-2	TWA : Time weighted average	(2 ppm)	2008	ACGIH:US. ACGIH Threshold Limit Values, as amended
Nitric acid	7697-37-2	STEL : Short term exposure limit	(4 ppm)	2008	ACGIH:US. ACGIH Threshold Limit Values, as amended
Nitric acid	7697-37-2	STEL : Short term exposure limit	(0.025 ppm)	01 2022	ACGIHLIS_P:US. ACGIH Notice of Intended Changes (NIC) to Threshold Limit Values, as amended
Further information	:	Form of exposure : Inhalable fraction and vapor.			

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: liquid
Color	: light yellow
Odor	: stinging
Odor threshold	: Note: No data available
pH	: Note: acidic

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Melting point/range	: -38 °C
Boiling point/boiling range	: 122 °C at 1,013 hPa
Flash point	: Note: Not applicable
Evaporation rate	: Note: No data available
Flammability	: Not applicable
Lower explosion limit	: Note: Not applicable
Upper explosion limit	: Note: Not applicable
Vapor pressure	: 9 hPa at 20 °C(68 °F)
Vapor density	: Note: No data available
Density	: ca. 1.420 g/cm ³ at 20 °C
Water solubility	: Note: completely miscible
Partition coefficient: n-octanol/water	: Note: No data available
Ignition temperature	: Note: Not applicable
Auto-ignition temperature	: Note: not auto-flammable
Viscosity, dynamic	: Note: No data available
Viscosity, kinematic	: Note: No data available

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Oxidizing properties	: The substance or mixture is classified as oxidizing with the category 3.
Molecular weight	: 63.01 g/mol
Bulk density	: Note: Not applicable
Corrosivity	: Note: Corrosive to metals

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: May intensify fire; oxidizer.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Gives off hydrogen by reaction with metals. Hazardous polymerisation does not occur.
Conditions to avoid	: Keep away from heat. Keep away from combustible material. Keep away from reducing agents. Protect from moisture.
Incompatible materials	: Bases Metals Flammable materials Organic materials
Hazardous decomposition products	: In case of fire hazardous decomposition products may be produced such as: Nitrogen oxides (NO _x)

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	: Note: No data available
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Acute inhalation toxicity	: Acute toxicity estimate: 4.35 mg/l , vapour Exposure time: 4 h Method: Calculation method
Acute dermal toxicity	: Note: No data available
Skin irritation	: Result: Causes severe burns.
Eye irritation	: Result: Risk of serious damage to eyes.
Sensitisation	: Note: No data available
Further information	: Note: Causes severe burns. Risk of serious damage to the lungs (by inhalation). Symptoms of poisoning may appear several hours later.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity effects**

Toxicity to fish : Note: No data available

Toxicity to daphnia and other aquatic invertebrates : Note: No data available

Toxicity to algae : Note: No data available

Elimination information (persistence and degradability)

Biodegradability : Note: Not applicable

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Further information on ecology**Ecotoxicology Assessment**

Results of PBT assessment

Not applicable

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

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods : Observe all Federal, State, and Local Environmental regulations.

SECTION 14. TRANSPORT INFORMATION

DOT	UN/ID No.	: UN 2031
	Proper shipping name	: Nitric acid
	Class	: 8
	Packing group	: II
	Hazard Labels	: 8 (5.1)
IATA	UN/ID No.	: UN 2031
	Description of the goods	: Nitric acid
	Class	: 8
	Packaging group	: II
	Hazard Labels	: 8 (5.1)
	Packing instruction (cargo aircraft)	: 855
IMDG	UN/ID No.	: UN 2031
	Description of the goods	: Nitric acid
	Class	: 8
	Packaging group	: II
	Hazard Labels	: 8 (5.1)
	EmS Number	: F-A, S-Q
	Marine pollutant	: no
IMDG Code segregation group (SGG1) – ACIDS,		

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SECTION 15. REGULATORY INFORMATION**Inventories**

US. Toxic Substances Control Act : On TSCA Inventory

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

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL) : 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

National regulatory information

US. EPA CERCLA Hazardous Substances (40 CFR 302) : The following component(s) of this product is/are subject to release reporting under 40 CFR 302 when release exceeds the Reportable Quantity (RQ):

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	Reportable quantity: 1000 lbs	
	: Nitric acid	7697-37-2
SARA 302 Components	: The following components are subject to reporting levels established by SARA Title III, Section 302:	
	: Nitric acid	7697-37-2
SARA 313 Components	: The following components are subject to reporting levels established by SARA Title III, Section 313:	
	: Nitric acid	7697-37-2
SARA 311/312 Hazards	: Acute Health Hazard	
CERCLA Reportable Quantity	: 1449 lbs	
California Prop. 65	: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.	
Massachusetts RTK	: Nitric acid	7697-37-2
New Jersey RTK	: Nitric acid	7697-37-2
Pennsylvania RTK	: Nitric acid	7697-37-2

SECTION 16. OTHER INFORMATION

	HMIS III	NFPA
Health hazard	: 3	4
Flammability	: 1	0
Physical Hazard	: 0	
Instability	:	0
Special hazard	:	OX

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Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

Further information

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. Final determination of suitability of any material is the sole responsibility of the user. This information should not constitute a guarantee for any specific product properties.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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Prepared by Honeywell Performance Materials and Technologies Product Stewardship Group