

# Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

## Bismuth Nitrate 0.05N in 2N Nitric Acid

Version number: GHS 2.0  
Replaces version of: 2023-02-09 (GHS 1)

Revision: 2023-02-14

### SECTION 1: Identification

#### 1.1 Product identifier

Trade name **Bismuth Nitrate 0.05N in 2N Nitric Acid**  
Product code(s) BN6906SS

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

Relevant identified uses laboratory and analytical use  
Uses advised against Do not use for squirting or spraying. Do not use for products which come into direct contact with the skin.

#### 1.3 Details of the supplier of the safety data sheet

AquaPhoenix Scientific, Inc  
860 Gitts Run Road  
Hanover PA 17331  
United States

Telephone: (717)632-1291  
e-mail: info@aquaphoenixsci.com

#### 1.4 Emergency telephone number

Emergency information service ChemTel Inc. (800)255-3924 (North America)  
+1 (813)248-0585 (International)

### SECTION 2: Hazard(s) identification

#### 2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Section	Hazard class	Category	Hazard class and category	Hazard statement
A.1I	acute toxicity (inhal.)	4	Acute Tox. 4	H332
A.2	skin corrosion/irritation	1	Skin Corr. 1	H314
A.3	serious eye damage/eye irritation	1	Eye Dam. 1	H318
B.16	substance or mixture corrosive to metals	1	Met. Corr. 1	H290

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis.

#### 2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

- Signal word danger

- Pictograms

GHS05, GHS07



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### - Hazard statements

H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.  
H332 Harmful if inhaled.

### - Precautionary statements

P234 Keep only in original container.  
P260 Do not breathe dusts or mists.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear eye protection/face protection.  
P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.  
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
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.  
P310 Immediately call a poison center/doctor.  
P321 Specific treatment (see on this label).  
P363 Wash contaminated clothing before reuse.  
P390 Absorb spillage to prevent material damage.  
P405 Store locked up.  
P406 Store in corrosive resistant container with a resistant inner liner.  
P501 Dispose of contents/container to industrial combustion plant.

- Hazardous ingredients for labelling nitric acid, bismuth nitrate pentahydrate

## 2.3 Other hazards

Hazards not otherwise classified

Corrosive to the respiratory tract.

Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance in a concentration of  $\geq 0,1\%$ .

Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of  $\geq 0,1\%$ .

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Not relevant (mixture)

### 3.2 Mixtures

Description of the mixture

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms
water	CAS No 7732-18-5	$\geq 80$		
nitric acid	CAS No 7697-37-2	17 – 18	Acute Tox. 3 / H331 Skin Corr. 1B / H314 Eye Dam. 1 / H318 Ox. Liq. 3 / H272 Met. Corr. 1 / H290 EUH071	
bismuth nitrate pentahydrate	CAS No 10035-06-0	3 – 4	Eye Dam. 1 / H318 Ox. Sol. 2 / H272 HNOC001 HNOC003	

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For full text of abbreviations: see SECTION 16.

### SECTION 4: First-aid measures

#### 4.1 Description of first-aid measures

##### General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

##### Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.

##### Following skin contact

Wash with plenty of soap and water.

##### Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

##### Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

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

Symptoms and effects are not known to date.

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

none

### SECTION 5: Fire-fighting measures

#### 5.1 Extinguishing media

##### Suitable extinguishing media

Water spray, Alcohol resistant foam, BC-powder, Carbon dioxide (CO<sub>2</sub>)

##### Unsuitable extinguishing media

Water jet

#### 5.2 Special hazards arising from the substance or mixture

Substance or mixture corrosive to metals.

##### Hazardous combustion products

Nitrogen oxides (NO<sub>x</sub>)

#### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Coordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

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### SECTION 6: Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

#### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

#### 6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

#### 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas.

- Handling of incompatible substances or mixtures

- Keep away from

Caustic solutions

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

#### 7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

- Corrosive conditions

Store in corrosive resistant container with a resistant inner liner.

Control of the effects

Protect against external exposure, such as

frost

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- Ventilation requirements  
Keep any substance that emits harmful vapors or gases in a place that allows these to be permanently extracted.
- Packaging compatibilities  
Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used.

### 7.3 Specific end use(s)

See section 16 for a general overview.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)											
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m <sup>3</sup> ]	STEL [ppm]	STEL [mg/m <sup>3</sup> ]	Ceiling-C [ppm]	Ceiling-C [mg/m <sup>3</sup> ]	Notation	Source
US	nitric acid	7697-37-2	PEL (CA)	2	5	4	10				Cal/ OSHA PEL
US	nitric acid	7697-37-2	REL	2 (10 h)	5 (10 h)	4	10				NIOSH REL
US	nitric acid	7697-37-2	TLV®	2		4					ACGIH® 2023
US	nitric acid	7697-37-2	PEL	2	5						29 CFR 1910.1000

#### Notation

Ceiling-C  
STEL

ceiling value is a limit value above which exposure should not occur  
short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA

time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours  
time-weighted average (unless otherwise specified)

### 8.2 Exposure controls

#### Appropriate engineering controls

General ventilation.

#### Individual protection measures (personal protective equipment)

##### Eye/face protection

Wear eye/face protection.

##### Skin protection

##### - Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

##### - Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

##### Respiratory protection

In case of inadequate ventilation wear respiratory protection.

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### Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

Physical state	liquid
Color	not determined
Particle	not relevant (liquid)
Odor	characteristic

#### Other safety parameters

pH (value)	<2 (acid)
Melting point/freezing point	not determined
Initial boiling point and boiling range	>600 °C at 1,020 hPa
Flash point	not determined
Evaporation rate	not determined
Flammability (solid, gas)	not relevant, (fluid)
Vapor pressure	not determined
Density	not determined
Vapor density	this information is not available
Relative density	information on this property is not available

#### Solubility(ies)

- Water solubility	miscible in any proportion
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#### Partition coefficient

- n-octanol/water (log KOW)	this information is not available
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Auto-ignition temperature	not determined
Viscosity	not determined
Explosive properties	none
Oxidizing properties	none

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### 9.2 Other information

Solvent content	96.64 %
Solid content	3.45 %

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". Substance or mixture corrosive to metals.

### 10.2 Chemical stability

See below "Conditions to avoid".

### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

### 10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

### 10.5 Incompatible materials

There is no additional information.

### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Test data are not available for the complete mixture.

#### Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

#### Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

#### Acute toxicity

Harmful if inhaled.

#### - Acute toxicity estimate (ATE)

Inhalation: vapor 15.02 mg/l/4h

Acute toxicity estimate (ATE) of components of the mixture			
Name of substance	CAS No	Exposure route	ATE
nitric acid	7697-37-2	inhalation: vapor	>2.65 mg/l/4h

#### Skin corrosion/irritation

Causes severe skin burns and eye damage.

#### Serious eye damage/eye irritation

Causes serious eye damage.

#### Respiratory or skin sensitization

Shall not be classified as a respiratory or skin sensitizer.

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### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

### Carcinogenicity

Shall not be classified as carcinogenic.

### Reproductive toxicity

Shall not be classified as a reproductive toxicant.

### Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

### Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

### Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

### Other information

Corrosive to the respiratory tract.

## SECTION 12: Ecological information

### 12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

### 12.2 Persistence and degradability

Data are not available.

### 12.3 Bioaccumulative potential

Data are not available.

### 12.4 Mobility in soil

Data are not available.

### 12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB. Does not contain a PBT-/vPvB-substance in a concentration of  $\geq 0,1\%$ .

### 12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of  $\geq 0,1\%$ .

### 12.7 Other adverse effects

Data are not available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

#### Waste treatment of containers/packages

Only packagings which are approved (e.g. acc. to DOT) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

### Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.



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### SECTION 14: Transport information

#### 14.1 UN number

DOT	UN 3264
IMDG-Code	UN 3264
ICAO-TI	UN 3264

#### 14.2 UN proper shipping name

DOT	Corrosive liquid, acidic, inorganic, n.o.s.
IMDG-Code	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
ICAO-TI	Corrosive liquid, acidic, inorganic, n.o.s.
Technical name (hazardous ingredients)	nitric acid, bismuth nitrate pentahydrate

#### 14.3 Transport hazard class(es)

DOT	8
IMDG-Code	8
ICAO-TI	8

#### 14.4 Packing group

DOT	II
IMDG-Code	II
ICAO-TI	II

#### 14.5 Environmental hazards

non-environmentally hazardous acc. to the dangerous goods regulations

#### 14.6 Special precautions for user


There is no additional information.

#### 14.7 Transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

### Information for each of the UN Model Regulations

#### Transport of dangerous goods by road or rail (49 CFR US DOT) - Additional information

Particulars in the shipper's declaration	UN3264, Corrosive liquid, acidic, inorganic, n.o.s., (contains: nitric acid, bismuth nitrate pentahydrate), 8, II
Reportable quantity (RQ)	5,669 lbs (2,574 kg) (nitric acid)
Danger label(s)	8
	
Special provisions (SP)	386, B2, IB2, T11, TP2, TP27
ERG No	154

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### International Maritime Dangerous Goods Code (IMDG) - Additional information

Marine pollutant -

Danger label(s) 8



Special provisions (SP) 274

Excepted quantities (EQ) E2

Limited quantities (LQ) 1 L

EmS F-A, S-B

Stowage category B

Segregation group 1 - Acids

### International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Danger label(s) 8



Special provisions (SP) A3

Excepted quantities (EQ) E2

Limited quantities (LQ) 0,5 L

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations specific for the product in question

#### National regulations (United States)

**Toxic Substance Control Act (TSCA)** all ingredients are listed as "ACTIVE"

#### Superfund Amendment and Reauthorization Act (SARA TITLE III)

- The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

#### The List of Extremely Hazardous Substances and Their Threshold Planning Quantities

Name of substance	CAS No	Notes	Reportable quantity (pounds)	Threshold planning quantity (pounds)
nitric acid	7697-37-2		1,000	1000

- Specific Toxic Chemical Listings (EPCRA Section 313)

#### Toxics Release Inventory: Specific Toxic Chemical Listings

Name of substance	CAS No	Remarks	Effective date
nitric acid	7697-37-2		1986-12-31

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### Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

- List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

Name of substance	CAS No	Remarks	Statutory code	Final RQ pounds (Kg)
nitric acid	7697-37-2		1	1000 (454)

#### Legend

1 "1" indicates that the statutory source is section 311(b)(2) of the Clean Water Act

### Clean Air Act

Name of substance	CAS No	Type of registration	Basis for listing	Threshold quantity (lbs)
nitric acid	7697-37-2	Toxic substance	b	15000

#### Legend

b On EHS list, vapor pressure 10 mmHg or greater.

### Right to Know Hazardous Substance List

- Hazardous Substance List (NJ-RTK)

Name of substance	CAS No	Remarks	Classifications
nitric acid	7697-37-2		CO R2

#### Legend

CO Corrosive  
R2 Reactive - Second Degree

### California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

none of the ingredients are listed

### Industry or sector specific available guidance(s)

#### NPCA-HMIS® III

Hazardous Materials Identification System. American Coatings Association.

Category	Rating	Description
Chronic	/	none
Health	3	major injury likely unless prompt action is taken and medical treatment is given
Flammability	0	material that will not burn under typical fire conditions
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive
Personal protection	-	

#### NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

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Category	Degree of hazard	Description
Flammability	0	material that will not burn under typical fire conditions
Health	3	material that, under emergency conditions, can cause serious or permanent injury
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

### National inventories

Country	Inventory	Status
AU	AIIC	all ingredients are listed
CA	DSL	all ingredients are listed
CN	IECSC	all ingredients are listed
EU	ECSI	all ingredients are listed
EU	REACH Reg.	all ingredients are listed
JP	CSCL-ENCS	all ingredients are listed
JP	ISHA-ENCS	not all ingredients are listed
KR	KECI	all ingredients are listed
MX	INSQ	not all ingredients are listed
NZ	NZIoC	all ingredients are listed
PH	PICCS	all ingredients are listed
TR	CICR	not all ingredients are listed
TW	TCSI	all ingredients are listed
US	TSCA	all ingredients are listed as "ACTIVE"

#### Legend

AIIC	Australian Inventory of Industrial Chemicals
CICR	Chemical Inventory and Control Regulation
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
DSL	Domestic Substances List (DSL)
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
INSQ	National Inventory of Chemical Substances
ISHA-ENCS	Inventory of Existing and New Chemical Substances (ISHA-ENCS)
KECI	Korea Existing Chemicals Inventory
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS)
REACH Reg.	REACH registered substances
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

### 15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

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### SECTION 16: Other information, including date of preparation or last revision

#### Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
2.1		Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200): change in the listing (table)	yes
2.2		- Pictograms: change in the listing (table)	yes
2.2		- Hazard statements: change in the listing (table)	yes
2.2		- Precautionary statements: change in the listing (table)	yes
2.3		Hazards not otherwise classified: change in the listing (table)	yes
3.2		Description of the mixture: change in the listing (table)	yes
5.2	Special hazards arising from the substance or mixture	Special hazards arising from the substance or mixture: Substance or mixture corrosive to metals.	yes
7.2		Managing of associated risks	yes
7.2		- Corrosive conditions: Store in corrosive resistant container with a resistant inner liner.	yes
7.2		- Ventilation requirements: Keep any substance that emits harmful vapors or gases in a place that allows these to be permanently extracted.	yes
9.2	Solvent content: 96.6 %	Solvent content: 96.64 %	yes
10.1	Reactivity: Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".	Reactivity: Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". Substance or mixture corrosive to metals.	yes
11.1	Acute toxicity: Shall not be classified as acutely toxic.GHS of the United Nations, annex 4: May be harmful if inhaled.	Acute toxicity: Harmful if inhaled.	yes
11.1		- Acute toxicity estimate (ATE): change in the listing (table)	yes
14.1	DOT: UN 3389	DOT: UN 3264	yes
14.1	IMDG-Code: UN 3389	IMDG-Code: UN 3264	yes
14.1		ICAO-TI: UN 3264	yes
14.2	DOT: Toxic by inhalation liquid, corrosive, n.o.s.	DOT: Corrosive liquid, acidic, inorganic, n.o.s.	yes

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Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
14.2	IMDG-Code: TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S.	IMDG-Code: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.	yes
14.2		ICAO-TI: Corrosive liquid, acidic, inorganic, n.o.s.	yes
14.2		Technical name (hazardous ingredients): nitric acid, bismuth nitrate pentahydrate	yes
14.3	DOT: 6.1 (8)	DOT: 8	yes
14.3	IMDG-Code: 6.1 (8)	IMDG-Code: 8	yes
14.3		ICAO-TI: 8	yes
14.4	DOT: I	DOT: II	yes
14.4	IMDG-Code: I	IMDG-Code: II	yes
14.4		ICAO-TI: II	yes
14.7	Particulars in the shipper's declaration: UN3389, Toxic by inhalation liquid, corrosive, n.o.s., 6.1 (8), I	Particulars in the shipper's declaration: UN3264, Corrosive liquid, acidic, inorganic, n.o.s., (contains: nitric acid, bismuth nitrate pentahydrate), 8, II	yes
14.7	Reportable quantity (RQ): 8,235 lbs (3,738 kg) (nitric acid)	Reportable quantity (RQ): 5,669 lbs (2,574 kg) (nitric acid)	yes
14.7	Danger label(s): 6.1+8	Danger label(s): 8	yes
14.7		Danger label(s): change in the listing (table)	yes
14.7	Special provisions (SP): 1, B9, B14, B30, T22, TP2, TP13, TP27, TP38, TP44	Special provisions (SP): 386, B2, IB2, T11, TP2, TP27	yes
14.7	Danger label(s): 6.1+8	Danger label(s): 8	yes
14.7		Danger label(s): change in the listing (table)	yes
14.7	Excepted quantities (EQ): E0	Excepted quantities (EQ): E2	yes
14.7	Limited quantities (LQ): 0	Limited quantities (LQ): 1 L	yes
14.7	Stowage category: D	Stowage category: B	yes
14.7		Segregation group: 1 - Acids	yes
14.7	International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information: Carriage prohibited.	International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information	yes
14.7		Danger label(s): 8	yes

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Replaces version of: 2023-02-09 (GHS 1)

Revision: 2023-02-14

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
14.7		Danger label(s): change in the listing (table)	yes
14.7		Special provisions (SP): A3	yes
14.7		Excepted quantities (EQ): E2	yes
14.7		Limited quantities (LQ): 0,5 L	yes
15.1		National inventories: change in the listing (table)	yes
16		Abbreviations and acronyms: change in the listing (table)	yes
16		List of relevant phrases (code and full text as stated in section 2 and 3): change in the listing (table)	yes

### Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
29 CFR 1910.1000	29 CFR 1910.1000, Tables Z-1, Z-2, Z-3 - Occupational Safety and Health Standards: Toxic and Hazardous Substances (permissible exposure limits)
49 CFR US DOT	49 CFR U.S. Department of Transportation
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Acute Tox.	Acute toxicity
ATE	Acute Toxicity Estimate
Cal/OSHA PEL	California Division of Occupational Safety and Health (Cal/OSHA): Permissible Exposure Limits (PELs)
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
DGR	Dangerous Goods Regulations (see IATA/DGR)
DOT	Department of Transportation (USA)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
ERG No	Emergency Response Guidebook - Number
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)

# Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

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Abbr.	Descriptions of used abbreviations
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
Met. Corr.	Substance or mixture corrosive to metals
NIOSH REL	National Institute for Occupational Safety and Health (NIOSH): Recommended Exposure Limits (RELs)
NLP	No-Longer Polymer
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)
Ox. Liq.	Oxidizing liquid
Ox. Sol.	Oxidizing solid
PBT	Persistent, Bioaccumulative and Toxic
PEL	Permissible exposure limit
ppm	Parts per million
RTECS	Registry of Toxic Effects of Chemical Substances (database of NIOSH with toxicological information)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STEL	Short-term exposure limit
TLV®	Threshold Limit Values
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative

### Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

### Classification procedure

Physical and chemical properties: The classification is based on tested mixture.

Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

### List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H272	May intensify fire; oxidizer.
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.



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Code	Text
H331	Toxic if inhaled.
H332	Harmful if inhaled.

### Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.