NIK Test L Ampoule 1

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)
Issue date: 2/14/2025 Version: 1.0

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Trade name : NIK Test L Ampoule 1
Product code : 160-120 (1004772)

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Forensics

1.4. Supplier's details

Manufacturer
Safariland, LLC
11386 International Parkway
Jacksonville, Florida 32218
T Customer Care (800) 347-1200

1.5. Emergency phone number

Emergency number : For Hazardous Materials or Dangerous Goods Incident Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night: 1-800-424-9300 (Toll Free, USA) / 703-527-3887 (Virginia, USA)
CCN 6410

SECTION 2 Hazard identification

2.1. Classification of the substance or mixture

GHS US classification

Corrosive to metals, Category 1	H290	May be corrosive to metals.
Skin corrosion/irritation, Category 1A	H314	Causes severe skin burns and eye damage.
Serious eye damage/eye irritation, Category 1	H318	Causes serious eye damage.
Carcinogenicity, Category 1A	H350	May cause cancer (if inhaled).
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335	May cause respiratory irritation.

Full text of H-statements: see section 16

2.2. Label elements

GHS US labelling

Hazard pictograms (GHS US) :

Signal word (GHS US) : Danger
Hazard statements (GHS US) : May be corrosive to metals
Causes severe skin burns and eye damage
May cause respiratory irritation
May cause cancer (if inhaled).
Precautionary statements (GHS US) : Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.

Keep only in original packaging.
Do not breathe dusts or mists.
Wash hands, forearms and face thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective clothing, eye and face protection.
If swallowed: rinse mouth. Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
Wash contaminated clothing before reuse.
Call a poison center or doctor if you feel unwell.
If inhaled: Remove person to fresh air and keep 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 or doctor.
If exposed or concerned: Get medical advice/attention.
Absorb spillage to prevent material damage.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
sulphuric acid … %	CAS-No.: 7664-93-9	95	Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318 Carc. 1A, H350 STOT SE 3, H335

Full text of hazard classes and H-statements : see section 16

SECTION 4 First-aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : If you feel unwell, seek medical advice. First aider: Pay attention to self-protection. Never give anything by mouth to an unconscious person. Give artificial respiration if necessary. Induce artificial respiration with mask fitted with one-way valve or other suitable device but not mouth-to-mouth.

First-aid measures after inhalation	:	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If the victim is unconscious : Lay in a stable manner on victim's side. Induce artificial respiration with mask fitted with one-way valve or other suitable device; not mouth-to-mouth. Call a physician immediately.
First-aid measures after skin contact	:	Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Immediately call a POISON CENTER/doctor. Wash contaminated clothing before reuse.
First-aid measures after eye contact	:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately transport the casualty to an eye doctor / hospital. Continue rinsing during the transport with isotonic saline solution, alternatively with water.
First-aid measures after ingestion	:	Rinse mouth out with water. Do NOT induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Call a physician immediately.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation	:	May cause respiratory irritation. May cause cancer by inhalation.
Symptoms/effects after skin contact	:	Causes severe burns. Blisters.
Symptoms/effects after eye contact	:	Causes serious eye damage. Stinging, redness, itching, tears, blurred vision, swelling.
Symptoms/effects after ingestion	:	Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.
Most Important Symptoms/Effects	:	Causes severe skin burns and eye damage. May cause respiratory irritation.
Chronic symptoms	:	May cause cancer.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment	:	IF exposed or concerned: Get medical advice/attention.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	:	Dry chemical, CO2, alcohol-resistant foam or waterspray.
Unsuitable extinguishing media	:	Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire	:	Toxic fumes may be released. Sulfur oxide.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	:	Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection. Move containers from fire area if it can be done without personal risk. Prevent fire fighting water from entering the environment.
Protection during firefighting	:	Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	:	Do not breathe dust/fume/gas/mist/vapours/spray. Do not take actions involving personal risks. Absorb spillage to prevent material damage. Notify authorities if product enters sewers or public waters.

For non-emergency personnel

Protective equipment	:	Wear recommended personal protective equipment.
Emergency procedures	:	Evacuate the danger area. If outdoors, move to an area upwind of the danger area. If possible without taking personal risks, remove ignition sources. Ventilate spillage area. Prevent other non-emergency personnel from entering the danger area.

For emergency responders

Protective equipment	:	Wear the recommended personal protective equipment. Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	:	Evacuate unnecessary personnel. Ventilate area. Remove all sources of ignition. Stop leak if safe to do so. Keep away from combustible material. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.
Environmental precautions	:	Do not let the product reach soil, drains, sewers, or surface and ground water.

6.2. Methods and materials for containment and cleaning up

For containment	:	Contain with non-combustible inert absorbent.
Methods for cleaning up	:	Take up in non-combustible inert absorbent and place into container for disposal. Contaminated absorbent material may pose the same hazard as the spilt product. Decontaminate surfaces and equipment with water and detergent. Until a sufficient level of dilution is achieved, the decontamination water may pose the same hazards as the product. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.
Other information	:	Dispose of materials or solid residues at an authorized site.

For further information refer to section 8: "Exposure controls/personal protection",For further information refer to section 13

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Use only outdoors or in a well-ventilated area. Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Ground/bond container and receiving equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge.
Hygiene measures	:	Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash contaminated clothing before reuse.
Additional hazards when processed	:	May be corrosive to metals.

7.2. Conditions for safe storage, including incompatibilities

Storage conditions	:	Store locked up. Keep cool. Protect from sunlight. Keep away from ignition sources. Store away from other materials. Store in a well-ventilated place. Keep container tightly closed.
Incompatible products	:	Oxidizing agents. Alkalis.
Incompatible materials	:	Metals.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

sulphuric acid … % (7664-93-9)

USA - ACGIH - Occupational Exposure Limits

Local name	Sulfuric acid
ACGIH OEL TWA	0.2 mg/m³ (T - Thoracic particulate matter)
Remark (ACGIH)	TLV® Basis: Pulm func. Notations: A2 (Suspected Human Carcinogen. Classification refers to sulfuric acid contained in strong inorganic acid mists)
Regulatory reference	ACGIH 2024

sulphuric acid … % (7664-93-9)	
USA - OSHA - Occupational Exposure Limits	
Local name	Sulfuric acid
OSHA PEL TWA	1 mg/m³
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
USA - NIOSH - Occupational Exposure Limits	
Local name	Sulfuric acid
NIOSH REL 10h TWA	1 mg/m³
Regulatory reference (US-NIOSH)	OSHA Annotated Table Z-1 (NIOSH Pocket Guide to Chemical Hazards (NPG))

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station. Use general ventilation, local exhaust ventilation, or process enclosure to keep the airborne concentrations below the permissible exposure limits. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Environmental exposure controls : Avoid release to the environment. Take measures to reduce or limit air emissions and releases to soil and the aquatic environment.

8.3. Individual protection measures, such as personal protective equipment

Personal protective equipment:

Personal protective equipment should be chosen according to national standards and in discussion with the supplier of the protective equipment. Wear recommended personal protective equipment.

Materials for protective clothing:
Wear protective clothing. Body protection should be chosen depending on activity and possible exposure

Hand protection:
Protective gloves

Eye protection:
Chemical goggles or safety glasses. Wear safety glasses which protect from splashes

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state : Liquid

Colour : Light yellow

Odour : Odorless

Odour threshold	:	No data available
pH	:	No data available
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Flammability (solid, gas)	:	No data available.
Vapour pressure	:	No data available
Relative vapour density at 20°C	:	No data available
Relative density	:	No data available
Density	:	1.79 g/cm³ @ 20 °C / 68 °F
Solubility	:	Miscible with water.
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	Not applicable
Explosive limits	:	No data available
Particle characteristics	:	No data available

sulphuric acid … %	
Particle characteristics	No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

Percent Solids : 1 %

SECTION 10 Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

Heating occurs when water is added.

10.4. Conditions to avoid

Incompatible materials.

10.5. Incompatible materials

May be corrosive to metals. Oxidizing agents. Alkalis.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition generates: Sulfur oxide.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	:	Not classified
Acute toxicity (dermal)	:	Not classified
Acute toxicity (inhalation)	:	Not classified

sulphuric acid … % (7664-93-9)	
LD50 oral rat	2140 mg/kg bodyweight
LC50 Inhalation - Rat	0.375 mg/l air
ATE US (oral)	2140 mg/kg bodyweight

Skin corrosion/irritation : Causes severe skin burns.

sulphuric acid … % (7664-93-9)	
pH	0.3

Serious eye damage/irritation : Causes serious eye damage.

sulphuric acid … % (7664-93-9)	
pH	0.3

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : May cause cancer (if inhaled).

sulphuric acid … % (7664-93-9)	
IARC group	1 - Carcinogenic to humans
National Toxicity Program (NTP) Status	Known Human Carcinogens

Reproductive toxicity : Not classified

STOT-single exposure : May cause respiratory irritation.

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

NIK Test L Ampoule 1	
Viscosity, kinematic	Not applicable

sulphuric acid … % (7664-93-9)	
Viscosity, kinematic	12.228 mm²/s

Symptoms/effects after inhalation : May cause respiratory irritation. May cause cancer by inhalation.

Symptoms/effects after skin contact : Causes severe burns. Blisters.

Symptoms/effects after eye contact : Causes serious eye damage. Stinging, redness, itching, tears, blurred vision, swelling.

Symptoms/effects after ingestion : Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

Most Important Symptoms/Effects : Causes severe skin burns and eye damage. May cause respiratory irritation.

Chronic symptoms : May cause cancer.

SECTION 12 Ecological information

12.1. Ecotoxicity

Ecology - general : Before neutralisation, the product may represent a danger to aquatic organisms.

Hazardous to the aquatic environment, short–term (acute) : Not classified

Hazardous to the aquatic environment, long–term (chronic) : Not classified

sulphuric acid … % (7664-93-9)	
LC50 - Fish [1]	16 – 28 mg/l

sulphuric acid … % (7664-93-9)	
EC50 - Crustacea [1]	> 100 mg/l
EC50 72h - Algae [1]	> 100 mg/l
ErC50 algae	> 100 mg/l
NOEC (chronic)	0.15 mg/l
NOEC chronic fish	0.31 mg/l
NOEC chronic crustacea	0.15 mg/l

12.2. Persistence and degradability

NIK Test L Ampoule 1	
Persistence and degradability	Not established.

sulphuric acid … % (7664-93-9)	
Persistence and degradability	Inorganic compound.

12.3. Bioaccumulative potential

sulphuric acid … % (7664-93-9)	
Partition coefficient n-octanol/water (Log Pow)	-2.2

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Ozone : Not classified
Fluorinated greenhouse gases : No

SECTION 13 Disposal considerations

Regional waste regulation : Disposal must be done according to official regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector’s sorting instructions.
Sewage disposal recommendations : Disposal must be done according to official regulations.
Product/Packaging disposal recommendations : Comply with applicable regulations for solid waste disposal. Dispose of this material and its container at hazardous or special waste collection point. Refer to all applicable national, international and local regulations or provisions.
Ecological waste information : Avoid release to the environment.

SECTION 14 Transport information

In accordance with DOT / IMDG / IATA

14.1. UN Number

UN-No. (DOT) : UN1830
UN-No. (IMDG) : 1830
UN-No. (IATA) : 1830

14.2. UN Proper Shipping Name

Proper Shipping Name (DOT) : Sulfuric acid
Proper Shipping Name (IMDG) : SULPHURIC ACID

Proper Shipping Name (IATA) : Sulphuric acid

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT) : 8

Hazard labels (DOT) : 8

IMDG

Transport hazard class(es) (IMDG) : 8

Danger labels (IMDG) : 8

IATA

Transport hazard class(es) (IATA) : 8

Danger labels (IATA) : 8

14.4. Packing group

Packing group (DOT) : II

Packing group (IMDG) : II

Packing group (IATA) : II

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT

UN-No. (DOT) : UN1830

DOT Special Provisions (49 CFR 172.102)	:	A3 - For combination packagings, if glass inner packagings (including ampoules) are used, they must be packed with absorbent material in tightly closed metal receptacles before packing in outer packagings. A7 - Steel packagings must be corrosion-resistant or have protection against corrosion. B3 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks and DOT 57 portable tanks are not authorized. B83 - Bottom outlets are prohibited on tank car tanks transporting sulfuric acid in concentrations over 65.25 percent. B84 - Packagings must be protected with non-metallic linings impervious to the lading or have a suitable corrosion allowance for sulfuric acid or spent sulfuric acid in concentration up to 65.25 percent. IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. N34 - Aluminum construction materials are not authorized for any part of a packaging which is normally in contact with the hazardous material. T8 - 4 178.274(d)(2) Normal..... Prohibited TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.
DOT Packaging Exceptions (49 CFR 173.xxx)	:	154
DOT Packaging Non Bulk (49 CFR 173.xxx)	:	202
DOT Packaging Bulk (49 CFR 173.xxx)	:	242
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	1 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	30 L
DOT Vessel Stowage Location	:	C - The material must be stowed ‘‘on deck only’’ on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other	:	14 - For metal drums, stowage permitted under deck on cargo vessels,53 - Stow ‘‘separated from’’ alkaline compounds,58 - Stow ‘‘separated from’’ cyanides

IMDG

Limited quantities (IMDG)	:	1 L
Excepted quantities (IMDG)	:	E2
Packing instructions (IMDG)	:	P001
IBC packing instructions (IMDG)	:	IBC02
IBC special provisions (IMDG)	:	B20
Tank instructions (IMDG)	:	T8
Tank special provisions (IMDG)	:	TP2
EmS-No. (Fire)	:	F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	:	S-B - SPILLAGE SCHEDULE Bravo - CORROSIVE SUBSTANCES
Stowage category (IMDG)	:	C
Stowage and handling (IMDG)	:	SW15
Segregation (IMDG)	:	SGG1, SG36, SG49
Properties and observations (IMDG)	:	Colourless, oily liquid, mixture over 1.41 up to 1.84 relative density. In the presence of moisture, highly corrosive to most metals. Causes burns to skin, eyes and mucous membranes.

IATA

PCA Excepted quantities (IATA)	:	E2
PCA Limited quantities (IATA)	:	Y840
PCA limited quantity max net quantity (IATA)	:	0.5L
PCA packing instructions (IATA)	:	851
PCA max net quantity (IATA)	:	1L

CAO packing instructions (IATA) : 855
CAO max net quantity (IATA) : 30L
ERG code (IATA) : 8L

SECTION 15 Regulatory information

15.1. Federal regulations

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
sulphuric acid … %	7664-93-9	Present	Active	

sulphuric acid … % (7664-93-9)	
Not subject to reporting requirements of the United States SARA Section 313 Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	1000 lb
RQ (Reportable quantity, section 304 of EPA's List of Lists)	1000 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	1000 lb

15.2. International regulations

CANADA

sulphuric acid … % (7664-93-9)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

sulphuric acid … % (7664-93-9)
Listed on IARC (International Agency for Research on Cancer) Listed as carcinogen on NTP (National Toxicology Program) Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16 Other Information

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)
Issue date : 2/14/2025

Full text of hazard classes and H-statements	
H290	May be corrosive to metals
H314	Causes severe skin burns and eye damage

Full text of hazard classes and H-statements	
H318	Causes serious eye damage
H335	May cause respiratory irritation
H350	May cause cancer.

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

NIK Test L Ampoule 2

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)
Issue date: 2/14/2025 Version: 1.0

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Trade name : NIK Test L Ampoule 2
Product code : 160-121 (1004773)

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Forensics

1.4. Supplier's details

Manufacturer
Safariland, LLC
11386 International Parkway
Jacksonville, Florida 32218
T Customer Care (800) 347-1200

1.5. Emergency phone number

Emergency number : For Hazardous Materials or Dangerous Goods Incident Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night: 1-800-424-9300 (Toll Free, USA) / 703-527-3887 (Virginia, USA)
CCN 6410

SECTION 2 Hazard identification

2.1. Classification of the substance or mixture

GHS US classification

Corrosive to metals, Category 1	H290	May be corrosive to metals.
Skin corrosion/irritation, Category 1A	H314	Causes severe skin burns and eye damage.
Serious eye damage/eye irritation, Category 1	H318	Causes serious eye damage.
Carcinogenicity, Category 1A	H350	May cause cancer.
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335	May cause respiratory irritation.

Full text of H-statements: see section 16

2.2. Label elements

GHS US labelling

Hazard pictograms (GHS US) :

Signal word (GHS US) : Danger
Hazard statements (GHS US) : May be corrosive to metals
Causes severe skin burns and eye damage
May cause respiratory irritation
May cause cancer.
Precautionary statements (GHS US) : Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.

Keep only in original packaging.
Do not breathe dusts or mists.
Wash hands, forearms and face thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective clothing, eye and face protection.
If swallowed: rinse mouth. Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
Call a poison center or doctor if you feel unwell.
Wash contaminated clothing before reuse.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
If exposed or concerned: Get medical advice/attention.
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 or doctor.
Absorb spillage to prevent material damage.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
sulphuric acid … %	CAS-No.: 7664-93-9	94.525	Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318 Carc. 1A, H350 STOT SE 3, H335

Full text of hazard classes and H-statements : see section 16

SECTION 4 First-aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : If you feel unwell, seek medical advice. First aider: Pay attention to self-protection. Never give anything by mouth to an unconscious person. Give artificial respiration if necessary. Induce artificial respiration with mask fitted with one-way valve or other suitable device but not mouth-to-mouth.

First-aid measures after inhalation	:	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If the victim is unconscious : Lay in a stable manner on victim's side. Induce artificial respiration with mask fitted with one-way valve or other suitable device; not mouth-to-mouth. Call a physician immediately.
First-aid measures after skin contact	:	Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Immediately call a POISON CENTER/doctor. Wash contaminated clothing before reuse.
First-aid measures after eye contact	:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately transport the casualty to an eye doctor / hospital. Continue rinsing during the transport with isotonic saline solution, alternatively with water.
First-aid measures after ingestion	:	Rinse mouth out with water. Do NOT induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Call a physician immediately.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation	:	May cause respiratory irritation. May cause cancer by inhalation.
Symptoms/effects after skin contact	:	Causes severe burns. Blisters.
Symptoms/effects after eye contact	:	Causes serious eye damage. Stinging, redness, itching, tears, blurred vision, swelling.
Symptoms/effects after ingestion	:	Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.
Most Important Symptoms/Effects	:	Causes severe skin burns and eye damage. Inhalation may cause asthmatic reactions.
Chronic symptoms	:	May cause cancer.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment	:	IF exposed or concerned: Get medical advice/attention.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	:	Dry chemical, CO2, alcohol-resistant foam or waterspray.
Unsuitable extinguishing media	:	Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire	:	Toxic fumes may be released. Sulfur oxide.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	:	Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection. Move containers from fire area if it can be done without personal risk. Prevent fire fighting water from entering the environment.
Protection during firefighting	:	Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	:	Do not breathe dust/fume/gas/mist/vapours/spray. Do not take actions involving personal risks. Absorb spillage to prevent material damage. Notify authorities if product enters sewers or public waters.

For non-emergency personnel

Protective equipment	:	Wear recommended personal protective equipment.
Emergency procedures	:	Evacuate the danger area. If outdoors, move to an area upwind of the danger area. If possible without taking personal risks, remove ignition sources. Ventilate spillage area. Prevent other non-emergency personnel from entering the danger area.

For emergency responders

Protective equipment	:	Wear the recommended personal protective equipment. Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	:	Evacuate unnecessary personnel. Ventilate area. Remove all sources of ignition. Stop leak if safe to do so. Keep away from combustible material. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.
Environmental precautions	:	Do not let the product reach soil, drains, sewers, or surface and ground water.

6.2. Methods and materials for containment and cleaning up

For containment	:	Contain with non-combustible inert absorbent.
Methods for cleaning up	:	Take up in non-combustible inert absorbent and place into container for disposal. Contaminated absorbent material may pose the same hazard as the spilt product. Decontaminate surfaces and equipment with water and detergent. Until a sufficient level of dilution is achieved, the decontamination water may pose the same hazards as the product. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.
Other information	:	Dispose of materials or solid residues at an authorized site.

For further information refer to section 8: "Exposure controls/personal protection",For further information refer to section 13

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Use only outdoors or in a well-ventilated area. Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Ground/bond container and receiving equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge.
Hygiene measures	:	Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash contaminated clothing before reuse.
Additional hazards when processed	:	May be corrosive to metals.

7.2. Conditions for safe storage, including incompatibilities

Technical measures	:	Ground/bond container and receiving equipment.
Storage conditions	:	Store locked up. Keep cool. Protect from sunlight. Keep away from ignition sources. Store away from other materials. Store in a well-ventilated place. Keep container tightly closed.
Incompatible products	:	Oxidizing agents. Alkalis.
Incompatible materials	:	Metals.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

sulphuric acid … % (7664-93-9)

USA - ACGIH - Occupational Exposure Limits

Local name	Sulfuric acid
ACGIH OEL TWA	0.2 mg/m³ (T - Thoracic particulate matter)
Remark (ACGIH)	TLV® Basis: Pulm func. Notations: A2 (Suspected Human Carcinogen. Classification refers to sulfuric acid contained in strong inorganic acid mists)

sulphuric acid … % (7664-93-9)	
Regulatory reference	ACGIH 2024
USA - OSHA - Occupational Exposure Limits	
Local name	Sulfuric acid
OSHA PEL TWA	1 mg/m³
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
USA - NIOSH - Occupational Exposure Limits	
Local name	Sulfuric acid
NIOSH REL 10h TWA	1 mg/m³
Regulatory reference (US-NIOSH)	OSHA Annotated Table Z-1 (NIOSH Pocket Guide to Chemical Hazards (NPG))

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station. Use general ventilation, local exhaust ventilation, or process enclosure to keep the airborne concentrations below the permissible exposure limits. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Environmental exposure controls : Avoid release to the environment. Take measures to reduce or limit air emissions and releases to soil and the aquatic environment.

8.3. Individual protection measures, such as personal protective equipment

Personal protective equipment:

Personal protective equipment should be chosen according to national standards and in discussion with the supplier of the protective equipment. Wear recommended personal protective equipment.

Materials for protective clothing:
Wear protective clothing. Body protection should be chosen depending on activity and possible exposure
Hand protection:
Protective gloves
Eye protection:
Chemical goggles or safety glasses. Wear safety glasses which protect from splashes
Skin and body protection:
Wear suitable protective clothing
Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state : Liquid

Colour	:	No data available
Odour	:	No data available
Odour threshold	:	No data available
pH	:	No data available
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Flammability (solid, gas)	:	No data available.
Vapour pressure	:	No data available
Relative vapour density at 20°C	:	No data available
Relative density	:	No data available
Solubility	:	No data available
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	Not applicable
Explosive limits	:	No data available
Particle characteristics	:	No data available

sulphuric acid … %	
Particle characteristics	No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

Heating occurs when water is added.

10.4. Conditions to avoid

Incompatible materials.

10.5. Incompatible materials

May be corrosive to metals. Oxidizing agents. Alkalis.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition generates: Sulfur oxide.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	:	Not classified
Acute toxicity (dermal)	:	Not classified

Acute toxicity (inhalation) : Not classified

sulphuric acid … % (7664-93-9)	
LD50 oral rat	2140 mg/kg bodyweight
LC50 Inhalation - Rat	0.375 mg/l air
ATE US (oral)	2140 mg/kg bodyweight

Skin corrosion/irritation : Causes severe skin burns.

sulphuric acid … % (7664-93-9)	
pH	0.3

Serious eye damage/irritation : Causes serious eye damage.

sulphuric acid … % (7664-93-9)	
pH	0.3

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : May cause cancer.

sulphuric acid … % (7664-93-9)	
IARC group	1 - Carcinogenic to humans
National Toxicity Program (NTP) Status	Known Human Carcinogens

Reproductive toxicity : Not classified

STOT-single exposure : May cause respiratory irritation.

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

NIK Test L Ampoule 2	
Viscosity, kinematic	Not applicable

sulphuric acid … % (7664-93-9)	
Viscosity, kinematic	12.228 mm²/s

Symptoms/effects after inhalation : May cause respiratory irritation. May cause cancer by inhalation.

Symptoms/effects after skin contact : Causes severe burns. Blisters.

Symptoms/effects after eye contact : Causes serious eye damage. Stinging, redness, itching, tears, blurred vision, swelling.

Symptoms/effects after ingestion : Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

Most Important Symptoms/Effects : Causes severe skin burns and eye damage. Inhalation may cause asthmatic reactions.

Chronic symptoms : May cause cancer.

SECTION 12 Ecological information

12.1. Ecotoxicity

Ecology - general : Before neutralisation, the product may represent a danger to aquatic organisms.

Hazardous to the aquatic environment, short–term (acute) : Not classified

Hazardous to the aquatic environment, long–term (chronic) : Not classified

sulphuric acid … % (7664-93-9)	
LC50 - Fish [1]	16 – 28 mg/l

sulphuric acid … % (7664-93-9)	
EC50 - Crustacea [1]	> 100 mg/l
EC50 72h - Algae [1]	> 100 mg/l
ErC50 algae	> 100 mg/l
NOEC (chronic)	0.15 mg/l
NOEC chronic fish	0.31 mg/l
NOEC chronic crustacea	0.15 mg/l

12.2. Persistence and degradability

NIK Test L Ampoule 2	
Persistence and degradability	Not established.

sulphuric acid … % (7664-93-9)	
Persistence and degradability	Inorganic compound.

12.3. Bioaccumulative potential

sulphuric acid … % (7664-93-9)	
Partition coefficient n-octanol/water (Log Pow)	-2.2

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Ozone : Not classified
Fluorinated greenhouse gases : No

SECTION 13 Disposal considerations

Regional waste regulation : Disposal must be done according to official regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations : Disposal must be done according to official regulations.
Product/Packaging disposal recommendations : Comply with applicable regulations for solid waste disposal. Dispose of this material and its container at hazardous or special waste collection point. Refer to all applicable national, international and local regulations or provisions.
Ecological waste information : Avoid release to the environment.

SECTION 14 Transport information

In accordance with DOT / IMDG / IATA

14.1. UN Number

UN-No. (DOT) : UN1830
UN-No. (IMDG) : 1830
UN-No. (IATA) : 1830

14.2. UN Proper Shipping Name

Proper Shipping Name (DOT) : Sulfuric acid
Proper Shipping Name (IMDG) : SULPHURIC ACID

Proper Shipping Name (IATA) : Sulphuric acid

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT) : 8

Hazard labels (DOT) : 8

IMDG

Transport hazard class(es) (IMDG) : 8

Danger labels (IMDG) : 8

IATA

Transport hazard class(es) (IATA) : 8

Danger labels (IATA) : 8

14.4. Packing group

Packing group (DOT) : II

Packing group (IMDG) : II

Packing group (IATA) : II

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT

UN-No. (DOT) : UN1830

DOT Special Provisions (49 CFR 172.102)	:	A3 - For combination packagings, if glass inner packagings (including ampoules) are used, they must be packed with absorbent material in tightly closed metal receptacles before packing in outer packagings. A7 - Steel packagings must be corrosion-resistant or have protection against corrosion. B3 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks and DOT 57 portable tanks are not authorized. B83 - Bottom outlets are prohibited on tank car tanks transporting sulfuric acid in concentrations over 65.25 percent. B84 - Packagings must be protected with non-metallic linings impervious to the lading or have a suitable corrosion allowance for sulfuric acid or spent sulfuric acid in concentration up to 65.25 percent. IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. N34 - Aluminum construction materials are not authorized for any part of a packaging which is normally in contact with the hazardous material. T8 - 4 178.274(d)(2) Normal..... Prohibited TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.
DOT Packaging Exceptions (49 CFR 173.xxx)	:	154
DOT Packaging Non Bulk (49 CFR 173.xxx)	:	202
DOT Packaging Bulk (49 CFR 173.xxx)	:	242
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	1 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	30 L
DOT Vessel Stowage Location	:	C - The material must be stowed ‘‘on deck only’’ on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other	:	14 - For metal drums, stowage permitted under deck on cargo vessels,53 - Stow ‘‘separated from’’ alkaline compounds,58 - Stow ‘‘separated from’’ cyanides

IMDG

Limited quantities (IMDG)	:	1 L
Excepted quantities (IMDG)	:	E2
Packing instructions (IMDG)	:	P001
IBC packing instructions (IMDG)	:	IBC02
IBC special provisions (IMDG)	:	B20
Tank instructions (IMDG)	:	T8
Tank special provisions (IMDG)	:	TP2
EmS-No. (Fire)	:	F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	:	S-B - SPILLAGE SCHEDULE Bravo - CORROSIVE SUBSTANCES
Stowage category (IMDG)	:	C
Stowage and handling (IMDG)	:	SW15
Segregation (IMDG)	:	SGG1, SG36, SG49
Properties and observations (IMDG)	:	Colourless, oily liquid, mixture over 1.41 up to 1.84 relative density. In the presence of moisture, highly corrosive to most metals. Causes burns to skin, eyes and mucous membranes.

IATA

PCA Excepted quantities (IATA)	:	E2
PCA Limited quantities (IATA)	:	Y840
PCA limited quantity max net quantity (IATA)	:	0.5L
PCA packing instructions (IATA)	:	851
PCA max net quantity (IATA)	:	1L

CAO packing instructions (IATA) : 855
CAO max net quantity (IATA) : 30L
ERG code (IATA) : 8L

SECTION 15 Regulatory information

15.1. Federal regulations

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
sulphuric acid … %	7664-93-9	Present	Active	

sulphuric acid … % (7664-93-9)	
Not subject to reporting requirements of the United States SARA Section 313 Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	1000 lb
RQ (Reportable quantity, section 304 of EPA's List of Lists)	1000 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	1000 lb

15.2. International regulations

CANADA

sulphuric acid … % (7664-93-9)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

sulphuric acid … % (7664-93-9)
Listed on IARC (International Agency for Research on Cancer) Listed as carcinogen on NTP (National Toxicology Program) Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16 Other Information

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)
Issue date : 2/14/2025

Full text of hazard classes and H-statements	
H290	May be corrosive to metals
H314	Causes severe skin burns and eye damage

Full text of hazard classes and H-statements	
H318	Causes serious eye damage
H335	May cause respiratory irritation
H350	May cause cancer.

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.