

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date: September 16, 2014

Revision: September 16, 2014

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

- **1.1 Product identifier**
- **Trade name:** **NIK Test L**
- **Article number:** A-800-6081
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
Modified Mecke's Reagent / Heroin Test Kit
- **1.3 Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:** Safariland, LLC
13386 International Parkway
Jacksonville, FL 32218
Customer Care (800) 347-1200
- **Distributor:** Arrowhead Forensics
11030 Strang Line Road
Lenexa, KS 66215
(913) 894-8388; www.arrowheadforensics.com
- **1.4 Emergency telephone number:**
ChemTel Inc.
(800)255-3924, +1 (813)248-0585



SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



T; Toxic

R25: Toxic if swallowed.



C; Corrosive

R35: Causes severe burns.

- **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

- **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

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- **Hazard pictograms**



GHS05

- **Signal word** Danger

- **Hazard-determining components of labelling:**

sulphuric acid

- **Hazard statements**

H314 Causes severe skin burns and eye damage.

- **Precautionary statements**

P280 Wear protective clothing / eye protection.

P264 Wash thoroughly after handling.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Hazard description:**

- **WHMIS-symbols:**

D1A - Very toxic material causing immediate and serious toxic effects

E - Corrosive material



- **NFPA ratings (scale 0 - 4)**



Health = 4

Fire = 0

Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = 4

Fire = 0

Reactivity = 0

- **HMIS Long Term Health Hazard Substances**

None of the ingredients is listed.

- **2.3 Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

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· vPvB: Not applicable.



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SECTION 3: Composition/information on ingredients

· 3.2 Mixtures

· **Description:** Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 7664-93-9	sulphuric acid	 C R35	50-100%
EINECS: 231-639-5		 Skin Corr. 1A, H314	
Index number: 016-020-00-8			

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

· 4.1 Description of first aid measures

· **General information:** Immediately remove any clothing soiled by the product.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:**

Immediately rinse with water.

If skin irritation is experienced, consult a doctor.

Seek immediate medical help for blistering or open wounds.

· **After eye contact:**

Remove contact lenses if worn, if possible.

Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

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

Strong caustic effect on skin and mucous membranes.

· Hazards

Danger of gastric perforation.

Danger of severe eye injury.

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

No further relevant information available.

SECTION 5: Firefighting measures

· 5.1 Extinguishing media

· **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.

· **For safety reasons unsuitable extinguishing agents:** None.

· 5.2 Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.

· 5.3 Advice for firefighters

· **Protective equipment:**

Wear self-contained respiratory protective device.

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Wear fully protective suit.

· **Additional information** No further relevant information available.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.

Ensure adequate ventilation

· 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.

· 6.3 Methods and material for containment and cleaning up:

Use limestone to neutralize and absorb spill.

Dispose contaminated material as waste according to item 13.

Send for recovery or disposal in suitable receptacles.

· 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

Prevent formation of aerosols.

Avoid splashes or spray in enclosed areas.

When diluting always pour product into water and not vice versa.

Use only in well ventilated areas.

· Information about fire - and explosion protection: No special measures required.

· 7.2 Conditions for safe storage, including any incompatibilities

· Storage:

· Requirements to be met by storerooms and receptacles: No special requirements.

· Information about storage in one common storage facility:

Store away from foodstuffs.

Do not store together with alkalis (caustic solutions).

Store away from metals.

· Further information about storage conditions: Store in cool, dry conditions in well sealed receptacles.

· 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

· Additional information about design of technical facilities: No further data; see item 7.

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· 8.1 Control parameters

· Ingredients with limit values that require monitoring at the workplace:

7664-93-9 sulphuric acid

IOELV (EU) Long-term value: 0,05 mg/m³PEL (USA) Long-term value: 1 mg/m³REL (USA) Long-term value: 1 mg/m³TLV (USA) Long-term value: 0,2* mg/m³
*as thoracic fractionEL (Canada) Long-term value: 0,2 mg/m³
ACGIH A2; IARC 1EV (Canada) Long-term value: 0,2 mg/m³

- **DNELs** No further relevant information available.
- **PNECs** No further relevant information available.
- **Additional information:** The lists valid during the making were used as basis.

· 8.2 Exposure controls

· Personal protective equipment:

· General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

· Respiratory protection:

Not required under normal conditions of use.

For spills, respiratory protection may be advisable.

Use suitable respiratory protective device when aerosol or mist is formed.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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- **Eye protection:**
Contact lenses should not be worn.



Safety glasses

- **Body protection:** Protective work clothing
- **Limitation and supervision of exposure into the environment**
No further relevant information available.
- **Risk management measures**
See Section 7 for additional information.
No further relevant information available.

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
 - Form: Fluid
 - Colour: Light yellow
- **Odour:** Odourless
- **Odour threshold:** Not determined.
- **pH-value:** Not determined.
- **Change in condition**
 - Melting point/Melting range: Not Determined.
 - Boiling point/Boiling range: Undetermined.
- **Flash point:** Not applicable.
- **Flammability (solid, gaseous):** Not applicable.
- **Auto/Self-ignition temperature:** Not determined.
- **Decomposition temperature:** Not determined.
- **Self-igniting:** Product is not self-igniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
 - Lower: Not determined.
 - Upper: Not determined.
- **Vapour pressure:** Not determined.
- **Density at 20 °C:** 1,79 g/cm³
- **Relative density** Not determined.
- **Vapour density** Not determined.
- **Evaporation rate** Not determined.

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- **Solubility in / Miscibility with water:** Fully miscible.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - Dynamic:** Not determined.
 - Kinematic:** Not determined.
- **Solvent content:**
 - Solids content:** 1,0 %
- **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**
Reacts with alkali (lyes).
Corrosive action on metals.
Reacts with metals forming hydrogen.
Toxic fumes may be released if heated above the decomposition point.
Heating occurs when water is added.
When diluting, always add acid to water, never vice versa.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
 - on the skin:** Strong caustic effect on skin and mucous membranes.
 - on the eye:** Strong caustic effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Toxic
Corrosive
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

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SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
 Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
 The product contains heavy metals. Avoid transfer into the environment. Specific preliminary treatments are necessary
 Do not allow product to reach ground water, water course or sewage system.
 Must not reach sewage water or drainage ditch undiluted or unneutralized.
 Danger to drinking water if even small quantities leak into the ground.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
 Must not be disposed together with household garbage. Do not allow product to reach sewage system.
 Dilute concentrate with water and neutralize afterwards with suitable alkali material (sodium hydroxide solution, lime). The formed neutral salts are relatively environment-friendly.
 The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- **14.1 UN-Number**
- **DOT, ADR, IMDG, IATA** UN1830
- **14.2 UN proper shipping name**
- **DOT** Sulfuric acid
- **ADR** 1830 SULPHURIC ACID
- **IMDG, IATA** SULPHURIC ACID

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- **14.3 Transport hazard class(es)**

- **DOT**



- **Class** 8 Corrosive substances.
- **Label** 8

- **ADR**



- **Class** 8 (C1) Corrosive substances.
- **Label** 8

- **IMDG, IATA**



- **Class** 8 Corrosive substances.
- **Label** 8
- **14.4 Packing group**
- **DOT, ADR, IMDG, IATA** II
- **14.5 Environmental hazards:**
- **Marine pollutant:** No
- **14.6 Special precautions for user** Warning: Corrosive substances.
- **Danger code (Kemler):** 80
- **EMS Number:** F-A,S-B
- **Segregation groups** Acids
- **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **Transport/Additional information:**

- **ADR**

- **Limited quantities (LQ)** 1L
- **Excepted quantities (EQ)** Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml
- **Transport category** 2
- **Tunnel restriction code** E

- **IMDG**

- **Limited quantities (LQ)** 1L
- **Excepted quantities (EQ)** Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

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· UN "Model Regulation":

UN1830, SULPHURIC ACID, 8, II

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SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**· **United States (USA)**· **SARA**· **Section 355 (extremely hazardous substances):**

7664-93-9 sulphuric acid

· **Section 313 (Specific toxic chemical listings):**

7664-93-9 sulphuric acid

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65 (California):**· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic Categories**· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

7664-93-9 sulphuric acid

A2

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **Canada**· **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 1%)**

7664-93-9 sulphuric acid

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· **Other regulations, limitations and prohibitive regulations**

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

· **Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients is listed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H314 Causes severe skin burns and eye damage.

R35 Causes severe burns.

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A

· **Sources**

SDS Prepared by:

ChemTel Inc.

1305 North Florida Avenue

Tampa, Florida USA 33602-2902

Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573

Website: www.chemtelinc.com

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- **1.1 Product identifier**
- **Trade name:** NIK Test L 2nd Ampoule
- **Article number:** A-800-6081
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
Modified Mecke's Reagent / Heroin Test Kit
- **1.3 Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:** Safariland, LLC
11386 International Parkway
Jacksonville, FL 32218
Customer Care (800) 347-1200
- **Distributor:** Arrowhead Forensics
11030 Strang Line Road
Lenexa, KS 66215
(913) 894-8388; www.arrowheadforensics.com
- **1.4 Emergency telephone number:**
ChemTel Inc.
(800)255-3924, +1 (813)248-0585



SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H412.



health hazard

Carc. 2 H351 Suspected of causing cancer.



corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.



Skin Sens. 1 H317 May cause an allergic skin reaction.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



C; Corrosive

R35: Causes severe burns.



Xn; Harmful

R40: Limited evidence of a carcinogenic effect.



Xi; Sensitising

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R43: May cause sensitisation by skin contact.

- **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

- **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

- **2.2 Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS05 GHS07 GHS08

- **Signal word** Danger

- **Hazard-determining components of labelling:**

sulphuric acid

formaldehyde

- **Hazard statements**

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H412.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H351 Suspected of causing cancer.

H412 Harmful to aquatic life with long lasting effects.

- **Precautionary statements**

P280 Wear protective clothing / eye protection.

P264 Wash thoroughly after handling.

P202 Do not handle until all safety precautions have been read and understood.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P302+P352 IF ON SKIN: Wash with plenty of water.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Hazard description:**

- **WHMIS-symbols:**

D2A - Very toxic material causing other toxic effects

E - Corrosive material



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· **NFPA ratings (scale 0 - 4)**

Health = 4
Fire = 0
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = *4
Fire = 0
Reactivity = 0

* - Indicates a long term health hazard from repeated or prolonged exposures.

· **HMIS Long Term Health Hazard Substances**

50-00-0 formaldehyde

· **2.3 Other hazards**· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**· **Description:** Mixture of substances listed below with nonhazardous additions.· **Dangerous components:**

CAS: 7664-93-9 EINECS: 231-639-5 Index number: 016-020-00-8	sulphuric acid C R35 Skin Corr. 1A, H314	50-100%
CAS: 50-00-0 EINECS: 200-001-8 Index number: 605-001-00-5	formaldehyde T R23/24/25; C R34; Xn R40; Xi R43 Carc. Cat. 3 Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331 Carc. 2, H351 Skin Corr. 1B, H314 Skin Sens. 1, H317	2,5%
CAS: 7783-00-8 EINECS: 231-974-7 Index number: 034-002-00-8	selenious acid T R23/25; N R50/53 R33 Acute Tox. 3, H301; Acute Tox. 3, H331 STOT RE 2, H373 Aquatic Acute 1, H400; Aquatic Chronic 1, H410	2,5%

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

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SECTION 4: First aid measures

· 4.1 Description of first aid measures

· General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· After skin contact:

Immediately rinse with water.

If skin irritation is experienced, consult a doctor.

Seek immediate medical help for blistering or open wounds.

· After eye contact:

Protect unharmed eye.

Remove contact lenses if worn, if possible.

Rinse opened eye for several minutes under running water. Then consult a doctor.

· After swallowing:

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

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

Allergic reactions

Strong caustic effect on skin and mucous membranes.

Dizziness

Coughing

Breathing difficulty

Nausea

· Hazards

Danger of gastric perforation.

Danger of severe eye injury.

Limited evidence of a carcinogenic effect.

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

Contains formaldehyde. May produce an allergic reaction.

Medical supervision for at least 48 hours.

SECTION 5: Firefighting measures

· 5.1 Extinguishing media

· **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.

· **For safety reasons unsuitable extinguishing agents:** None.

· 5.2 Special hazards arising from the substance or mixture

During heating or in case of fire poisonous gases are produced.

· 5.3 Advice for firefighters

· Protective equipment:

Wear self-contained respiratory protective device.

Wear fully protective suit.

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· **Additional information** No further relevant information available.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Use limestone to neutralize and absorb spill.
Send for recovery or disposal in suitable receptacles.
Dispose contaminated material as waste according to item 13.
Clean the affected area carefully; suitable cleaners are:
Warm water
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Prevent formation of aerosols.
Use only in well ventilated areas.
When diluting always pour product into water and not vice versa.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Avoid storage near extreme heat, ignition sources or open flame.
- **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from metals.
Do not store together with alkalis (caustic solutions).
Protect from humidity and water.
- **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

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· 8.1 Control parameters

· Ingredients with limit values that require monitoring at the workplace:

7664-93-9 sulphuric acid

IOELV (EU) Long-term value: 0,05 mg/m³PEL (USA) Long-term value: 1 mg/m³REL (USA) Long-term value: 1 mg/m³TLV (USA) Long-term value: 0,2* mg/m³
*as thoracic fractionEL (Canada) Long-term value: 0,2 mg/m³
ACGIH A2; IARC 1EV (Canada) Long-term value: 0,2 mg/m³

50-00-0 formaldehyde

PEL (USA) Short-term value: 2 ppm
Long-term value: 0,75 ppm
see 29 CFR 1910,1048(c)REL (USA) Long-term value: 0,016 ppm
Ceiling limit: 0,1* ppm
*15-min; See Pocket Guide App. ATLV (USA) Ceiling limit: 0,37 mg/m³, 0,3 ppm
(SEN) NIC-DSEN; RSENEL (Canada) Long-term value: 0,3 ppm
Ceiling limit: 1 ppm
ACGIH A2; IARC 1; SEV (Canada) Short-term value: 1,0 ppm
Ceiling limit 1,5 ppm

- **DNELs** No further relevant information available.
- **PNECs** No further relevant information available.
- **Additional information:** The lists valid during the making were used as basis.

· 8.2 Exposure controls

· Personal protective equipment:

· General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

· Respiratory protection:

Not required under normal conditions of use.

For spills, respiratory protection may be advisable.

Use suitable respiratory protective device when aerosol or mist is formed.

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- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**

Contact lenses should not be worn.



Safety glasses

- **Body protection:** Protective work clothing

- **Limitation and supervision of exposure into the environment**

No further relevant information available.

- **Risk management measures**

See Section 7 for additional information.

No further relevant information available.

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:	Liquid
Colour:	Colourless
Odour:	Acrid
Odour threshold:	Not determined.
pH-value at 20 °C:	< 1

- **Change in condition**

Melting point/Melting range:	Not Determined.
Boiling point/Boiling range:	212 °F / 100 °C

- **Flash point:** Not applicable.

- **Flammability (solid, gaseous):** Not applicable.

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- **Auto/Self-ignition temperature:** Not determined.
- **Decomposition temperature:** Not determined.
- **Self-igniting:** Product is not self-igniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
 - Lower:** Not determined.
 - Upper:** Not determined.
- **Vapour pressure:** Not determined.
- **Density at 20 °C:** 1,76 g/cm³
- **Relative density** Not determined.
- **Vapour density** Not determined.
- **Evaporation rate** Not determined.
- **Solubility in / Miscibility with water:** Soluble.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - Dynamic:** Not determined.
 - Kinematic:** Not determined.
- **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**
Reacts with alkali (lyes).
Corrosive action on metals.
Reacts with metals forming hydrogen.
Toxic fumes may be released if heated above the decomposition point.
Heating occurs when water is added.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** Sulphur oxides (SOx)

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SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**

- **Acute toxicity:**

- **LD/LC50 values relevant for classification:**

50-00-0 formaldehyde
Oral LD50 >200 mg/kg (rat)

- **Primary irritant effect:**

- **on the skin:** Strong caustic effect on skin and mucous membranes.

- **on the eye:** Strong caustic effect.

- **Sensitization:** Sensitization possible through skin contact.

- **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Corrosive

Irritant

Danger through skin adsorption.

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

May cause cancer.

- **Sensitisation:** Sensitization possible by skin contact.

- **Repeated dose toxicity:**

May cause damage to organs through prolonged or repeated exposure.

Repeated exposures may result in skin and/or respiratory sensitivity.

- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):**

Carc. 2

SECTION 12: Ecological information

- **12.1 Toxicity**

- **Aquatic toxicity:** No further relevant information available.

- **12.2 Persistence and degradability** No further relevant information available.

- **12.3 Bioaccumulative potential** No further relevant information available.

- **12.4 Mobility in soil** No further relevant information available.

- **Ecotoxicological effects:**

- **Remark:** After neutralization a reduction of the harming action may be recognized

- **Additional ecological information:**

- **General notes:**

Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water

Danger to drinking water if even small quantities leak into the ground.

Must not reach sewage water or drainage ditch undiluted or unneutralized.

Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.

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Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**

- **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system. Dilute concentrate with water and neutralize afterwards with suitable alkali material (sodium hydroxide solution, lime). The formed neutral salts are relatively environment-friendly.

Can be disposed of with household garbage with prior chemical-physical or biological treatment following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- **14.1 UN-Number**

- **DOT, ADR, IMDG, IATA**

UN1830

- **14.2 UN proper shipping name**

- **DOT**

Sulfuric acid

- **ADR**

1830 SULPHURIC ACID

- **IMDG, IATA**

SULPHURIC ACID

- **14.3 Transport hazard class(es)**

- **DOT**



- **Class**

8 Corrosive substances.

- **Label**

8

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· ADR



- Class 8 (C1) Corrosive substances.
- Label 8

· IMDG, IATA



- Class 8 Corrosive substances.
- Label 8
- 14.4 Packing group
- DOT, ADR, IMDG, IATA II
- 14.5 Environmental hazards:
- Marine pollutant: No
- 14.6 Special precautions for user Warning: Corrosive substances.
- Danger code (Kemler): 80
- EMS Number: F-A,S-B
- Segregation groups Acids
- 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.
- Transport/Additional information:

· ADR

- Limited quantities (LQ) 1L
- Excepted quantities (EQ) Code: E2
- Maximum net quantity per inner packaging: 30 ml
- Maximum net quantity per outer packaging: 500 ml
- Transport category 2
- Tunnel restriction code E
- UN "Model Regulation": UN1830, SULPHURIC ACID, 8, II

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- United States (USA)
- SARA

· Section 355 (extremely hazardous substances):

7664-93-9	sulphuric acid
50-00-0	formaldehyde
7783-00-8	selenious acid

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- **Section 313 (Specific toxic chemical listings):**

7664-93-9 sulphuric acid

50-00-0 formaldehyde

- **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

- **Proposition 65 (California):**

- **Chemicals known to cause cancer:**

50-00-0 formaldehyde

- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

- **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

- **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

- **Carcinogenic Categories**

- **EPA (Environmental Protection Agency)**

50-00-0 formaldehyde

B1

7783-00-8 selenious acid

D

- **IARC (International Agency for Research on Cancer)**

50-00-0 formaldehyde

1

7783-00-8 selenious acid

3

- **TLV (Threshold Limit Value established by ACGIH)**

7664-93-9 sulphuric acid

A2

50-00-0 formaldehyde

A2

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**

50-00-0 formaldehyde

- **Canada**

- **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

- **Canadian Ingredient Disclosure list (limit 0.1%)**

50-00-0 formaldehyde

- **Canadian Ingredient Disclosure list (limit 1%)**

7664-93-9 sulphuric acid

- **Other regulations, limitations and prohibitive regulations**

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

- **Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients is listed.

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· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases

- H301 Toxic if swallowed.
- H311 Toxic in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- H331 Toxic if inhaled.
- H351 Suspected of causing cancer.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
- R23/25 Toxic by inhalation and if swallowed.
- R33 Danger of cumulative effects.
- R34 Causes burns.
- R35 Causes severe burns.
- R40 Limited evidence of a carcinogenic effect.
- R43 May cause sensitisation by skin contact.
- R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals
 ACGIH: American Conference of Governmental Industrial Hygienists
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 NFPA: National Fire Protection Association (USA)
 HMIS: Hazardous Materials Identification System (USA)
 WHMIS: Workplace Hazardous Materials Information System (Canada)
 DNEL: Derived No-Effect Level (REACH)
 PNEC: Predicted No-Effect Concentration (REACH)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 Acute Tox. 3: Acute toxicity, Hazard Category 3
 Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
 Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
 Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
 Carc. 2: Carcinogenicity, Hazard Category 2
 STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2
 Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1
 Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1
 Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

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· Sources

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