

**Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1. Product identifier**

**Product Name/Catalog ID** SS-50100

**Product Description** 10 µg/mL 109Silver  
Contains Nitric acid

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

**Recommended Use** Laboratory chemicals

**Uses advised against** No information available

**1.3. Details of the supplier of the safety data sheet****Company**

Teknolab  
P.O. Box 33  
1411 Kolbotn  
Norway  
Tel: + 47 66 81 34 70  
Fax: + 47 66 81 34 71  
Web: www.spectrascan.no

**1.4. Emergency telephone number**

Chemtrec 1-800-424-9300 (North America)  
Chemtrec +1 703-741-5970 (International)

Europe	See above
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**Section 2: HAZARDS IDENTIFICATION****2.1. Classification of the substance or mixture**

REGULATION (EC) No 1272/2008

**Classification according to EU Directives 67/548/EEC or 1999/45/EC****Symbol(s)**

C - Corrosive

**R-code(s)**

C;R34

**GHS**

<b>Skin corrosion/irritation</b>	Category 1 Sub-category B - (H314)
<b>Chronic aquatic toxicity</b>	Category 3 - (H412)

For the full text of the R phrases mentioned in this Section, see Section 16

**2.2. Label Elements**

**Product identifier**  
Contains Nitric acid



**Signal word**  
Danger

#### Hazard statements

H314 - Causes severe skin burns and eye damage  
H412 - Harmful to aquatic life with long lasting effects

#### Precautionary Statements - EU (§28, 1272/2008)

P260 - Do not breathe dust/fume/gas/mist/vapors/spray  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
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  
P310 - Immediately call a POISON CENTER or doctor/physician

#### 2.3. Other information

Other hazards Harmful to aquatic life  
Inhalation of vapors in high concentration may cause irritation of respiratory system  
Aspiration may cause pulmonary edema and pneumonitis

### Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

Chemical Name	EC No	CAS No	Weight-%	Classification according to Directive 67/548/EEC or 1999/45/EC	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Reg
Nitric acid	EEC No. Present	7697-37-2	5	C; R35 O; R8	(EUH071) Skin Corr. 1A (H314) Ox. Liq. 2 (H272)	No data avail

For the full text of the R phrases mentioned in this Section, see Section 16

For the full text of the H-Statements mentioned in this Section, see Section 16

### Section 4: FIRST AID MEASURES

#### 4.1. Description of first-aid measures

<b>General Advice</b>	Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.
<b>Inhalation</b>	Call a physician or Poison Control Center immediately. Move to fresh air. If breathing is difficult, give oxygen. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.
<b>Skin Contact</b>	Immediate medical attention is required. Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.
<b>Eye Contact</b>	Immediate medical attention is required. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area.
<b>Ingestion</b>	Immediate medical attention is required. Do NOT induce vomiting. Clean mouth with water

and afterwards drink plenty of water. Never give anything by mouth to an unconscious person.

**Protection of First-aiders** Use personal protective equipment. Avoid contact with skin, eyes and clothing.

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

**Most Important Symptoms and Effects** Burn. Difficulty breathing.

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

**Notes to Physician** Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure

### **Section 5: FIRE FIGHTING MEASURES**

#### **5.1. Extinguishing media**

**Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media**

No information available

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

Thermal decomposition can lead to release of irritating gases and vapors

#### **5.3. Advice for firefighters**

Wear self-contained breathing apparatus and protective suit. Use personal protective equipment.

### **Section 6: ACCIDENTAL RELEASE MEASURES**

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

**Personal Precautions**

Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Use personal protective equipment. Do not get in eyes, on skin, or on clothing.

**Advice for emergency responders**

Ensure adequate ventilation.

#### **6.2. Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system. Prevent product from entering drains.

#### **6.3. Methods and materials for containment and cleaning up**

**Methods for Containment** Prevent further leakage or spillage if safe to do so.

**Methods for Cleaning Up** Take up mechanically and collect in suitable container for disposal.

#### **6.4. Reference to other sections**

See Section 12: ECOLOGICAL INFORMATION.

### **Section 7: HANDLING AND STORAGE**

**7.1. Precautions for Safe Handling****Technical measures/Precautions**

Ensure adequate ventilation.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice. Wear suitable gloves and eye/face protection. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing before re-use. Contaminated work clothing should not be allowed out of the workplace. Provide regular cleaning of equipment, work area and clothing.

**7.2. Conditions for safe storage, including any incompatibilities****Technical measures/Precautions**

Keep container tightly closed in a dry and well-ventilated place.

**Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1. Control parameters****Exposure Limits**

Chemical Name	EU	The United Kingdom	France	Spain	Germany	
Nitric acid 7697-37-2	STEL 1 ppm STEL 2.6 mg/m³	STEL: 1 ppm STEL: 2.6 mg/m³	STEL: 1 ppm STEL: 2.6 mg/m³	STEL: 1 ppm STEL: 2.6 mg/m³	TWA: 1 ppm TWA: 2.6 mg/m³	
Component	Italy	Portugal	The Netherlands	Finland	Denmark	
Nitric acid 7697-37-2 ( 5 )	STEL: 1 ppm STEL: 2.6 mg/m³	STEL: 4 ppm TWA: 2 ppm	STEL: 1.3 mg/m³	TWA: 0.5 ppm TWA: 1.3 mg/m³ STEL: 1 ppm STEL: 2.6 mg/m³		
Chemical Name	Sweden	Austria	Switzerland	Poland	Norway	Ireland
Nitric acid 7697-37-2	LLV: 2 ppm LLV: 5 mg/m³ STV: 5 ppm STV: 13 mg/m³	STEL 1 ppm STEL 2.6 mg/m³	STEL: 2 ppm STEL: 5 mg/m³ TWA: 2 ppm TWA: 5 mg/m³	STEL: 2.6 mg/m³ TWA: 1.4 mg/m³	TWA: 2 ppm TWA: 5 mg/m³ STEL: 2 ppm STEL: 5 mg/m³	STEL: 1 ppm STEL: 2.6 mg/m³

**Derived No Effect Level (DNEL)** No information available

**Predicted No Effect Concentration (PNEC)** No information available.

**8.2. Exposure controls**

**Engineering Measures** Ensure adequate ventilation, especially in confined areas.

**Personal protective equipment****Eye/Face Protection**

Tightly fitting safety goggles.

**Hand Protection**

Impervious gloves.

**Skin and Body Protection**

Impervious clothing. Boots. Chemical resistant apron.

**Respiratory Protection**

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

**Environmental Exposure Controls** Prevent product from entering drains.

**Section 9: PHYSICAL AND CHEMICAL PROPERTIES****Information on basic physical and chemical properties****Physical state**

Liquid

**Appearance**

clear / colorless

**Odor**

Odorless

**Property****Values****pH VALUE**

No data available

**Melting Point/Range**

No data available

Boiling Point/Range	100 °C
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Vapor Pressure	No data available
Vapor density	No data available
Relative Density	No data available
Specific Gravity	No data available
Water Solubility	Miscible
Partition coefficient: n-octanol/water	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive Properties	No information available
Oxidizing Properties	No information available
<u>Other information</u>	
VOC Content	No information available

## Section 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

No data available.

### 10.2. Chemical Stability

Stable under normal conditions.

#### Explosion Data

Sensitivity to Mechanical Impact    None.

Sensitivity to Static Discharge        None.

### 10.3. Possibility of Hazardous Reactions

#### **Hazardous Polymerization**

Hazardous polymerization does not occur.

#### **Hazardous Reactions**

None under normal processing.

### 10.4. Conditions to Avoid

None known.

### 10.5. Incompatible materials

Reducing agent

### 10.6. Hazardous Decomposition Products

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

## Section 11: TOXICOLOGY INFORMATION

### 11.1. Information on toxicological effects

#### Acute Toxicity

##### Product Information

The product causes burns of eyes, skin and mucous membranes.

##### Inhalation

Causes burns. Corrosive to respiratory system. Inhaled corrosive substances can lead to a toxic edema of the lungs. Contact with moist mucous membranes of the respiratory system can cause caustic condition resulting in burns. Aspiration may cause pulmonary edema and pneumonitis.

##### Eye Contact

Causes burns.

##### Skin Contact

Causes burns.

##### Ingestion

Can burn mouth, throat, and stomach.

The following values are calculated based on chapter 3.1 of the GHS document

**ATEmix (inhalation-dust/mist)** 436.00 mg/l

**ATEmix (inhalation-vapor)** 1,340.00 mg/l

##### Unknown acute toxicity

0 % of the mixture consists of ingredient(s) of unknown toxicity.

##### Skin corrosion/irritation

No information available.

##### Eye damage/irritation

No information available.

##### Sensitization

No information available.

##### Mutagenic Effects

No information available.

##### Carcinogenic effects

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##### Reproductive Toxicity

No information available.

##### STOT - single exposure

No information available.

##### STOT - repeated exposure

No information available.

##### Target Organ Effects

Skin, Eyes, Respiratory system.

##### Aspiration hazard

No information available.

## Section 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

Harmful to aquatic life with long lasting effects

Contains 0 % of components with unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Nitric acid		72: 96 h Gambusia affinis mg/L LC50	

### 12.2. Persistence and degradability

No information available.

### 12.3. Bioaccumulative potential

No information available.

Chemical Name	Partition coefficient
Nitric acid	-2.3

#### 12.4. Mobility in soil

##### **Mobility in soil**

No information available.

#### 12.5. Results of PBT and vPvB assessment

No information available.

#### 12.6. Other adverse effects.

### Section 13: DISPOSAL CONSIDERATIONS

#### 13.1. Waste treatment methods

<b>Waste from Residues/Unused Products</b>	Dispose of in accordance with federal, state and local regulations.
<b>Contaminated Packaging</b>	Do not re-use empty containers.
<b>Other Information</b>	According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

### Section 14: TRANSPORT INFORMATION

#### IMDG

<b>14.1. UN-No</b>	UN3264
<b>14.2. Proper shipping name</b>	Corrosive liquid, acidic, inorganic, n.o.s
<b>14.3. Hazard Class</b>	8
<b>14.4. Packing Group</b>	III
<b>Description</b>	Not applicable
<b>14.5. Marine Pollutant</b>	None
<b>14.6. Special Provisions</b>	None
<b>14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	No information available

#### RID

<b>14.1. UN-No</b>	UN3264
<b>14.2. Proper shipping name</b>	Corrosive liquid, acidic, inorganic, n.o.s
<b>14.3. Hazard Class</b>	8
<b>14.4. Packing Group</b>	III
<b>Description</b>	Not applicable
<b>14.5. Environmental hazard</b>	None
<b>14.6. Special Provisions</b>	None

#### ADR

<b>14.1. UN-No</b>	UN3264
<b>14.2. Proper shipping name</b>	Corrosive liquid, acidic, inorganic, n.o.s
<b>14.3. Hazard Class</b>	8
<b>14.4. Packing Group</b>	III
<b>Description</b>	Not applicable
<b>14.5. Environmental hazard</b>	None
<b>14.6. Special Provisions</b>	None

**ICAO**

14.1. UN-No	UN3264
14.2. Proper Shipping Name	Corrosive liquid, acidic, inorganic, n.o.s
14.3. Hazard Class	8
14.4. Packing Group	III
Description	Not applicable
14.5. Environmental hazard	None
14.6. Special Provisions	None

**IATA-DGR**

14.1. UN-No	UN3264
14.2. Proper shipping name	Corrosive liquid, acidic, inorganic, n.o.s
14.3. Hazard Class	8
14.4. Packing Group	III
Description	Not applicable
14.5. Environmental hazard	None
14.6. Special Provisions	None

**Section 15: REGULATORY INFORMATION****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****European Union**

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

**International Inventories**

**All of the components in the product are on the following Inventory lists:** U.S.A. (TSCA), Europe (EINECS/ELINCS/NLP), Canada (DSL/NDSL), Philippines (PICCS), Japan (ENCS), China (IECSC), Australia (AICS), Korea (ECL).

TSCA	Complies
EINECS/ELINCS	Complies
DSL/NDSL	Complies
PICCS	Complies
ENCS	Complies
IECSC	Complies
AICS	Complies
KECL	Complies

**Legend**

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**15.2. Chemical Safety Assessment**

No information available

**Section 16: OTHER INFORMATION****Full text of R-phrases referred to under sections 2 and 3**

R35 - Causes severe burns

R8 - Contact with combustible material may cause fire

R34 - Causes burns

**Full text of H-Statements referred to under section 3**

H314 - Causes severe skin burns and eye damage

H272 - May intensify fire; oxidizer



**Revision Date** 05-Jan-2016

**Reason for Revision** Not applicable.

**This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006**

**Disclaimer**

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**End of Safety Data Sheet**