

SAFETY DATA SHEET

SILVER PLATING SOLUTION

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

1.1. Product identifier

Product name SILVER PLATING SOLUTION
Product number 639

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

Identified uses Metal Cleaning agent

1.3. Details of the supplier of the safety data sheet

Supplier RKM (NUSHINE) LIMITED
 18 THE GREENWAY
 TYLERS GREEN
 BUCKS. HP10 8BX

01494 816711

Contact person N. Bhattacharya

1.4. Emergency telephone number

SECTION 2: Hazards identification

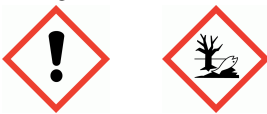
2.1. Classification of the substance or mixture

Classification

Physical hazards Not Classified
Health hazards Eye Irrit. 2 - H319
Environmental hazards Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410

2.2. Label elements

Pictogram



Signal word Warning

Hazard statements H319 Causes serious eye irritation.
 H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements P264 Wash contaminated skin thoroughly after handling.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337+P313 If eye irritation persists: Get medical advice/attention.
 P391 Collect spillage.
 P501 Dispose of contents/container in accordance with national regulations.

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

SILVER PLATING SOLUTION

2-(2 BUTOXY ETHOXYETHANOL)		1-5%
CAS number: 112-34-5		EC number: 203-961-6
Classification	Classification (67/548/EEC or 1999/45/EC)	
Eye Irrit. 2 - H319	Xi;R36.	
SULPHAMIC ACID		1-5%
CAS number: 5329-14-6		EC number: 226-218-8
Classification	Classification (67/548/EEC or 1999/45/EC)	
Skin Irrit. 2 - H315	Xi;R36/38 R52/53	
Eye Irrit. 2 - H319		
Aquatic Chronic 3 - H412		
SILVER SALT COMPOUND		1-5%
CAS number: 534-16-7		EC number: 208-590-3
M factor (Acute) = 1000	M factor (Chronic) = 100	
Classification	Classification (67/548/EEC or 1999/45/EC)	
Eye Dam. 1 - H318	Xi;R36.	
Aquatic Acute 1 - H400		
Aquatic Chronic 1 - H410		
LONG CHAIN FATTY ALCOHOL ETHOXYLATE		<1%
CAS number: 68439-54-3		
Classification	Classification (67/548/EEC or 1999/45/EC)	
Acute Tox. 4 - H302	Xn;R22. Xi;R41.	
Eye Irrit. 2 - H319		

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move affected person to fresh air at once. Get medical attention if any discomfort continues.
Ingestion	Never give anything by mouth to an unconscious person. Do not induce vomiting. Rinse mouth thoroughly with water. Give plenty of water to drink. Get medical attention if any discomfort continues.
Skin contact	Remove affected person from source of contamination. Get medical attention if irritation persists after washing.
Eye contact	Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

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

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Unlikely to occur

SILVER PLATING SOLUTION

Ingestion	May cause discomfort if swallowed.
Skin contact	Prolonged skin contact may cause redness and irritation.
Eye contact	May cause temporary eye irritation.

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

Notes for the doctor	Treat symptomatically.
-----------------------------	------------------------

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products None at ambient temperatures.

5.3. Advice for firefighters

Protective actions during firefighting No specific firefighting precautions known.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Stop leak if possible without risk. Absorb in vermiculite, dry sand or earth and place into containers. Flush contaminated area with plenty of water. Avoid the spillage or runoff entering drains, sewers or watercourses.

6.4. Reference to other sections

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid spilling. Avoid contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place. Keep only in the original container.

7.3. Specific end use(s)

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

2-(2 BUTOXY ETHOXYETHANOL)

Long-term exposure limit (8-hour TWA): WEL 10 ppm 67.5 mg/m³

Short-term exposure limit (15-minute): WEL 15 ppm 101.2 mg/m³

WEL = Workplace Exposure Limit

Ingredient comments OES = Occupational Exposure Standard. MEL = Maximum Exposure Limit.

SILVER PLATING SOLUTION

SILVER SALT COMPOUND (CAS: 534-16-7)

Ingredient comments	WEL = Workplace Exposure Limits
Biological limit values	0.01, 0.01, 0.01

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust ventilation.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles or face shield.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible.

Other skin and body protection

Wear appropriate clothing to prevent any possibility of skin contact.

Hygiene measures

Do not smoke in work area. Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Light brown.
Odour	Characteristic.
pH	2.10 - 2.30
Relative density	1.090 - 1.110 @ 20°C

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability Stable at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None Known

10.4. Conditions to avoid

Conditions to avoid Avoid excessive heat for prolonged periods of time.

SILVER PLATING SOLUTION

10.5. Incompatible materials

10.6. Hazardous decomposition products

Hazardous decomposition products No known hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects No information available.

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 250.0

Acute and chronic health hazards No specific health hazards known.

SECTION 12: Ecological Information

Ecotoxicity The product contains a substance which is very toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

12.1. Toxicity

Toxicity Very toxic to aquatic organisms.

Acute toxicity - fish LC₅₀, 96 hours: >200 mg/l, Fish

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: >200 mg/l, Daphnia magna

Acute toxicity - aquatic plants IC₅₀, 72 hours: >200 mg/l, Algae

12.2. Persistence and degradability

Persistence and degradability The surfactant(s) contained in this product complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. The product contains mainly inorganic substances which are not biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential Not expected to bioaccumulate

12.4. Mobility in soil

Mobility The product has poor water-solubility.

12.5. Results of PBT and vPvB assessment

12.6. Other adverse effects

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID) 3082

SILVER PLATING SOLUTION

UN No. (IMDG)	3082
UN No. (ICAO)	3082
UN No. (ADN)	3082

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Proper shipping name (IMDG)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Proper shipping name (ICAO)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Proper shipping name (ADN)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

14.3. Transport hazard class(es)

ADR/RID class	9
IMDG class	9
ICAO class/division	9
ADN class	9

Transport labels



14.4. Packing group

ADR/RID packing group	III
IMDG packing group	III
ADN packing group	III
ICAO packing group	III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant



14.6. Special precautions for user

Tunnel restriction code	(E)
-------------------------	-----

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations	The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).
----------------------	---

SILVER PLATING SOLUTION

Guidance Workplace Exposure Limits EH40.
Introduction to Local Exhaust Ventilation HS(G)37.
CHIP for everyone HSG228.
Approved Classification and Labelling Guide (Sixth edition) L131.

15.2. Chemical safety assessment

SECTION 16: Other information

General information This information is given in good faith and is based upon current available data. The suitability of this product for any particular use is not suggested. The user must determine if the product is correct for any particular application. This document is not a specification. Conforms to 1907/2006/EC

Revision date 02/09/2015

Revision 03

SDS number 639RK

Risk phrases in full Not classified.
R22 Harmful if swallowed.
R36 Irritating to eyes.
R36/38 Irritating to eyes and skin.
R41 Risk of serious damage to eyes.
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Hazard statements in full H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.