

SPI Supplies Division

Structure Probe, Inc.

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Manufacturer's CAGE: 1P573

Safety Data Sheet

Date Effective: December 14, 2018

SPI Catalog # CS015

Colloidal Silver Shaft Coating,

Section 1.1: Identification

Chemical Name/Synonyms Silver Conductive Paint

Product or Trade Name Colloidal Silver Shaft Coating, CS015

CAS #'s 7440-22-4; 123-86-4; 108-65-6

Chemical Formula..... Mixture

Section 1.2: Relevant Uses/Restrictions

Mounting and grounding of specimens for scanning electron microscopy and other applications calling for physical and electrical connections.

Section 1.3: Supplier of the Safety Data Sheet

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Manufacturer's CAGE: 1P573

Section 1.4: Emergency telephone number

Emergencies

Contacting CHEMTREC:

24 Hour Emergency Use Only #'s...

Worldwide phone: 1-(703)-741-5970

Toll-free phone: 1-(800)-424-9300 USA + Canada only

Section 2: Hazard Identification

UNITED STATES (US)

According to: OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance

OSHA HCS 2012 Flammable Liquids 3
Skin Irritation 2

Eye Mild Irritation 2B
Specific Target Organ toxicity Single Exposure 3: Narcotic Effects
Hazards Not Otherwise Classified – Health Hazards – Metal fume fever, and argyria,
a blue-gray discoloration of the skin, mucous membranes, and eyes.

2.2 Label elements

OSHA HCS 2012

Pictogram



Signal Word: WARNING

Hazard statements:

- H226 Flammable liquid and vapour
- H315 Causes skin irritation.
- H320 Causes eyes irritation
- H335 May cause respiratory irritation
- H336 May cause drowsiness or dizziness

Precautionary statements:

PREVENTION:

- P210 Keep away from heat, sparks, open flames and/or hot surfaces. –No smoking.
- P233 Keep container tightly closed.
- P235 Keep cool.
- P240 Ground and/or bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting/equipment.
- P242 Use only non-sparking tools
- P243 Take precautionary measures against static discharge.
- P261 Avoid breathing fume, mist, vapours and/or spray.
- P264 Wash thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

RESPONSE:

- P370 + P378 In case of fire: Use appropriate media for extinction.
- P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P302 + P353 IF ON SKIN: Rinse skin with water/ shower.
- P321 Specific treatment, see supplemental first aid information;
- P362 Take off contaminated clothing and wash before reuse.
- P332 + P313 If skin irritation occurs: Get medical advice/attention.
- 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.

STORAGE/DISPOSAL:

- P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
- P235 Keep cool.
- P405 Store locked up.

P501 Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other Hazards:

OSHA HCS 212

Heating above the melting point releases metallic oxides which may cause metal fume fever by inhalation. The symptoms are shivering, fever, malaise and muscular pain. Repeated exposure to silver can cause argyria/argyrosis, a grey-blue discoloration of the eyes, nose, throat, skin and internal organs. Under United States Regulations (29 CFR 1910.1200 – Hazard Communication Standard), this product is considered hazardous.

EU/EEC

According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 2015/530]

2.1 Classification of the substance

CLP Flammable Liquids 3 – H226

Specific Target Organ toxicity Single Exposure 3: Narcotic Effects – H336

Hazardous to the aquatic environment Chronic 2 – H411

2.2 Label elements

CLP

Pictogram



Signal Word: **WARNING**

Hazard statements:

H226 Flammable liquid and vapour

H336 May cause drowsiness or dizziness

H411 Toxic to aquatic life with long lasting effects

EUH066 - Repeated exposure may cause skin dryness or cracking.

Precautionary statements:

PREVENTION:

P233 Keep container tightly closed.

P235 Keep cool.

P240 Ground and/or bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P242 Use only non-sparking tools

P243 Take precautionary measures against static discharge.

P261 Avoid breathing fume, mist, vapours and/or spray.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

RESPONSE:

- P370 + P378 In case of fire: Use appropriate media for extinction.
 P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P312 Call a POISON CENTER or doctor/physician if you feel unwell.
 P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
 P391 Collect Spillage.

STORAGE/DISPOSAL:

- P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
 P235 Keep cool.
 P405 Store locked up.
 P501 Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other Hazards:

- CLP Heating above the melting point releases metallic oxides which may cause metal fume fever by inhalation. The symptoms are shivering, fever, malaise and muscular pain. Repeated exposure to silver can cause argyria/argyrosis, a grey-blue discoloration of the eyes, nose, throat, skin and internal organs.

According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.

Hazardous Material Information System USA

- Health
 Fire Hazard
 Reactivity
 Personal Protection

NFPA Rating (estimated)

- Health
 Flammability.....
 Reactivity

Section 3: Composition**3.1 Substances:**

* This material does not meet the criteria of a substance.

3.2 Mixtures:

CAS #	Chemical Name	Weight%	EC#
7440-22-4	Silver (metallic)	35-65	231-131-3
Additional information: OSHA HCS 2012: HNO3: Health Hazard – Metal fume fever, and argyria, a blue-gray discoloration of the skin, mucous membranes, and eyes.			
108-65-6	1-methoxy-2-propanol acetate	10-30	203-603-9
Additional information: Ingestion/Oral-Rat LD50 – 8532 mg/kg Skin-Rabbit LD50 = >5g/kg OSHA HCS 2012: Not classified EU CLP: Annex VI, Table 3.1: Flam. Liq. 3, H226			
123-86-4	Butyl acetate	10-30	204-658-1
Additional information: Ingestion/Oral-Rat LD50 – 10768 mg/kg Skin-Rabbit LD50 - >17600 mg/kg			

OSHA HCS 2012: Flam. Liq. 2; Skin Irrit.2; Eye Irrit. 2B
STOT SE 3: Narc.; STOT SE 3: Resp. Irrit. (Ihnl)
EU CLP: Annex VI, Table 3.1: Flam. Liq. 3, H226;
STOT SE 3: Narc., H336; EUH066

NDA Acrylic resin 5-10% NDA
Additional information: No additional data available.

Section 4: First Aid Measures

4.1 Description of first aid measures:

Inhalation:

Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. Get medical attention immediately.

Skin Contact:

Wash skin with soap and water. Remove and isolate contaminated clothing. If irritation develops and persists, get medical attention.

Eye Contact:

In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If eye irritation persists: Get medical advice/attention.

Ingestion:

Give two or more glasses of water immediately. Do NOT induce vomiting. Obtain medical attention immediately if ingested.

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

Refer to Section 11 – Toxicological Information.

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

Notes to physician: All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Section 5: Fire Fighting Measures

5.1 Extinguishing media:

Suitable Extinguishing Media:

Dry Chemical, CO₂, water foam, “alcohol” foam, water spray to cool fire-exposed containers and disperse vapor.

Unsuitable Extinguishing Media:

Do not use a direct stream of water.

5.2 Special hazards arising from the substance or mixture:

Unusual Fire and Explosion Hazards:

HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks, or flames.

Containers may explode when heated.

Many liquids are lighter than water.

Vapors may form explosive mixtures with air.

Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).
Vapors may travel to source of ignition and flash back.
Vapor explosion hazard indoors, outdoors, or in sewers.
Runoff to sewer may create fire or explosion hazard.

5.3 Hazardous combustion products:

Toxic decomposition products may form under fire conditions.

5.4 Advice for firefighters:

Structural firefighters' protective clothing will only provide limited protection.
Wear positive pressure self-contained breathing apparatus (SCBA).
Move containers from fire area if you can do it without risk.
LARGE FIRES: Cool containers with flooding quantities of water until well after fire is out.

Section 6: Accidental Release Measures

6.1 Personal precautions:

Caution: Victim may be a source of contamination.
Do not walk through spilled material.
Use appropriate Personal Protective Equipment (PPE).

Emergency Procedures:

As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions.
LARGE SPILL: Consider initial downwind evacuation for at least 300 meters (1000 feet).
ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
Keep unauthorized personnel away.
Stay upwind.
Keep out of low areas.
Ventilate closed spaces before entering.

6.2 Environmental precautions:

Prevent entry into waterways, sewers, basements or confined areas.

6.3 Methods and material for containment and cleaning up:

Stop leak if you can do it without risk.
Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers.
Use clean non-sparking tools to collect absorbed material.
A vapor suppressing foam may be used to reduce vapors.
All equipment used when handling the product must be grounded.
LARGE SPILLS: Dike far ahead of liquid spill for later disposal.
LARGE SPILLS: Water spray may reduce vapor, but may not prevent ignition in closed spaces.
Waste product may be refined to recover previous metal content.

6.4 Reference to other sections:

Refer to Section 8: Exposure Controls/Personal Protection and Section 13: Disposal Considerations.

Section 7: Handling and Storage

7.1 Precautions for safe handling:

Use only in well-ventilated areas.
Keep away from heat, sparks, and flame.

Do not use sparking tools.
Take precautionary measures against static charges.
All equipment used when handling the product must be grounded.
Wear appropriate personal protective equipment, avoid direct contact.
Avoid breathing fume, mist, vapors and/or spray.
Avoid contact with skin, eyes, and clothing.
Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.
Empty product containers, contaminated clothing and cleaning materials, etc. should be considered hazardous until decontaminated or properly disposed according to federal, state and local laws and regulations.

7.2 Conditions for safe storage, including any incompatibilities:

Store in a tightly closed container.
Store in a cool/low-temperature, well-ventilated place away from heat and ignition sources.

7.3 Specific end uses:

Mounting and grounding of specimens for scanning electron microscopy and other applications calling for physical and electrical connections.

This material is not being offered for clinical or diagnostic applications, agricultural uses or for human or animal consumption.

Section 8: Exposure Controls and Personal Protection

8.1 Control parameter and Personal Protection:

Workplace exposure limits:

n-Butyl Acetate	CAS # 123-86-4	
ACGIH:	TWA: 150 ppm	STEL: 200 ppm
NIOSH:	TWA: 150 ppm; 710 mg/m ³	STEL: 200 ppm; 950 mg/m ³
OSHA:	TWA: 150 ppm; 710 mg/m ³	
Silver	CAS # 7440-22-4	
ACGIH:	TWA: 0.1 mg/m ³ (dust and fume)	
NIOSH:	TWA: 0.01 mg/m ³ (dust)	
OSHA:	TWA: 0.01 mg/m ³	

Biological limit values: No additional data available.

8.2 Exposure controls:

8.2.1 Appropriate engineering controls:

Good general ventilation should be used.
Ventilation rates should be matched to conditions.
If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.
If exposure limits have not been established, maintain airborne levels to an acceptable level.
Use explosion-proof electrical/ventilating/lighting equipment.

8.2.2 Individual protection measures:

Respiratory:

Follow the OSHA respirator regulations found in 29 CFR 1910.134.
Use a NIOSH/MSHA approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face:

Wear safety goggles.

Skin/Body:

Wear appropriate gloves.

8.2.3 Environmental exposure controls:

Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways.
Follow best practice for site management and disposal of waste.

Additional Protection Measures:

An eyewash station and emergency shower must be available to the work station.

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties:

Appearance: Liquid; Gray paste

Odor: Mild fruity

Odor threshold: No data available

pH: No data available

Melting point/Freezing point: 259 – 284 °F (126.1 – 140 °C)

Boiling point/Boiling point range: No data available

Flash Point: 76 °F (24.4 °C)

Evaporation rate (n-butyl acetate = 1): <1

Flammability (solid, gas): No data available

Upper/lower flammability or explosive limits:

UEL: 10 %

LEL: 1.5 %

Vapor Pressure: 6 mmHg (torr) @ 20 °C (68 °F)

Vapor density (air = 1): >1

Relative density: 1.8 to 2 (water = 1)

Solubility: Appreciable; > 10%

Partition coefficient (n-octanol/water): No data available

Auto-ignition temperature: No data available

Decomposition temperature: No data available

Viscosity: No data available

Explosive properties: No data available

Oxidizing Properties: No data available

Volatiles: 30 to 40 %

9.2 Other information: No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity: No dangerous reaction known under conditions of normal use.

10.2 Chemical Stability: Stable under normal temperatures and pressures.

10.3 Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

10.4 Conditions to avoid: Keep away from heat, sparks, and flame.

10.5 Incompatible materials: Oxidizing agents, acids, potassium tert-butoxide, reducing agents.

10.6 Hazardous decomposition products: At high temperature, may include CO_x (carbon dioxide / carbon monoxide), water, nitrogen oxides, ethyl methacrylate, methyl acrylate.

Section 11: Toxicological Information

INFORMATION ON TOXICOLOGICAL EFFECTS:

Silver (35% to 65%)

CAS # 7440-22-4

Multi-dose toxicity:

Ingestion/Oral-Rat TDLo – 8400 mg/kg 28 days – Intermittent

Blood: **Changes in serum composition (e.g., TP, bilirubin cholesterol**

Blood: **Changes in erythrocyte (RBC) count;**

Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels: **Phosphatases**

1-Methoxy-2-propanol acetate (10 to 30 %)

CAS # 108-65-6

Acute Toxicity:

Ingestion/Oral-Rat LD50 – 8532 mg/kg

Skin – Rabbit LD50 – 5 g/kg

N-Butyl acetate (10 to 30 %)

CAS # 123-86-4

Acute Toxicity:

Ingestion / Oral-Rat LD50 – 10768 mg/kg

Behavioral: **Somnolence (general depressed activity);**

Lungs, Thorax, or Respiration: **Other changes;**

Liver: **Other changes;**

Skin – Rabbit LD50 - >17600 mg/kg;

Irritation:

Eye – Rabbit – 100 mg Moderate irritation;

Skin – Rabbit – 500 mg 24 hours Moderate irritation;

Multi-dose toxicity:

Inhalation – Rat TCLo – 1500 ppm 6 hours – 13 Weeks – Continuous;

Behavioral: **Somnolence (general depressed activity);**

Behavioral: **Food intake (animal);**

Nutritional and Gross Metabolic: Gross Metabolite Changes: **Weight loss or decreased weight gain;**

Inhalation – Rat TCLo – 1500 ppm 6 hours – 13 Weeks – Intermittent;

Behavioral: **Somnolence (general depressed activity);**

Nutritional and Gross Metabolic; Gross Metabolite Changes: **Weight loss or decreased weight gain;**

Reproductive:

Inhalation – Rat TClO – 1500 ppm (6-20 D preg);
Reproductive Effects: Effects on Embryo or Fetus: **Fetotoxicity (except death, e.g., stunted fetus);**
Inhalation – Rat TClO – 1500 ppm 7 hours (7-16D preg);
Reproductive Effects: Effects on Embryo or Fetus: **Fetotoxicity (except death, e.g., stunted fetus);**
Reproductive Effects: Specific Developmental Abnormalities: **Musculoskeletal system.**

11.1 Information on toxicological effects:

A. Acute toxicity:

EU/CLP – No data available.
OSHA HCS 2012 – No data available.

B. Skin corrosion/irritation:

EU/CLP – No data available.
OSHA HCS 2012 – Skin Irritation 2

C. Serious eye damage/irritation:

EU/CLP – No data available.
OSHA HCS 2012 – Eye Mild Irritation 2B

D. Respiratory or skin sensitization:

EU/CLP – No data available.
OSHA HCS 2012 – No data available.

E. Germ cell mutagenicity:

EU/CLP – No data available.
OSHA HCS 2012 – No data available.

F. Carcinogenicity:

EU/CLP – No data available.
OSHA HCS 2012 – No data available.

G. Reproductive toxicity:

EU/CLP- No data available.
OSHA HCS 2012 – No data available.

H. STOT-single exposure:

EU/CLP – Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects.
OSHA HCS 2012 – Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects.
Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract irritation.

I..STOT-repeated exposure: EU/CLP – No data available.

OSHA HCS 2012 – No data available.

J. Aspiration hazard:

EU/CLP – No data available.
OSHA HCS 2012 – No data available.

POTENTIAL HEALTH EFFECTS:

Inhalation:

Acute (Immediate):

May cause respiratory irritation.
May affect the central nervous system.
Symptoms may include dizziness, drowsiness, lethargy, coma, and death.

Chronic (Delayed):

No data available.

Skin:

Acute (Immediate):
Causes skin irritation.

Chronic (Delayed):
Repeated exposure may cause skin dryness or cracking.

Eye:

Acute (Immediate):
Causes eye irritation.

Chronic (Delayed):
No data available.

Ingestion:

Acute (Immediate):
May cause headache, drowsiness and unconsciousness.

Chronic (Delayed):
No data available.

Other:

Chronic (Delayed):
Repeated exposure to silver can cause argyria/argyrosis, a grey-blue discoloration of the eyes, nose, throat skin and internal organs.

11.2 Other information:

Heating above the melting point releases metallic oxides which may cause metal fume fever which is an influenza like illness. Symptoms include headache, metallic taste in the mouth, cough, thirst, throat irritation, shortness of breath, fever, sweating and pain in the limbs. This illness is not permanent and recovery usually occurs within 24-48 hours after onset.

Section 12: Ecological Information

12.1 Toxicity:

Silver (35% to 65%) CAS# 7440-22-4

Aquatic Toxicity-Fish:

96 Hour(s) LC50 Pimephales promelas (Fathead Minnow) 0.00213 mg/L
Comments: Influence of Water Quality Parameters on Silver Toxicity: Preliminary Result.

14 Day(s) NOEC Oryzias latipes (Japanese Medaka) 0.05 mg/L
Comments: Silver Nanoparticles Cause Oxidative Damage and Histological Changes in Medaka (Oryzias latipes) After 14 Days of Exposure.

Aquatic Toxicity – Crustacea:

7 Day(s) NOEC Water Flea 0.0011 mg/L
Comments: The Effects of Silver on Green Algae and Prospects for Trophic Transfer.

48 Hour(s) EC50 Water Flea 0.00024 mg/L
Comments: Metal Toxicity Tests

Aquatic Toxicity – Algae and Other Aquatic Plant(s):

96 Hours(s) EC50 Chroomonas sp. (Cryptomonad) 0.0014 mg/L
Comments: Silver Transport and Impact in Estuarine and Marine systems.

n-Butyl acetate CAS # 123-86-4

Aquatic Toxicity – Fish:

96 Hour(s) LC50 Pimephales promelas (Fathead Minnow) 18 mg/L

Comments: Acute Toxicities of Organic Chemicals to Fathead Minnows (Pimephales promelas), Vol. 1.

12.2 Persistence and degradability: Material data lacking.

12.3 Bio-accumulative potential: Material data lacking.

12.4 Mobility in soil: Material data lacking.

12.5 Results of PBT and vPvB assessment: No PBT and vPvB assessment has been conducted.

12.6 Other adverse effects: No studies have been found.

Section 13: Disposal Considerations

13.1 Waste treatment methods:

Product waste: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14: Transport Information

	14.1 UN Number	14.2 UN Proper Shipping Name	14.3 Transport Hazard Class(es)	14.4 Packing Group	14.5 Environmental Hazards
DOT:	UN1263	Paint related material	3	III	NDA
IATA:	UN1263	PAINT RELATED MATERIAL	3	III	NDA
IMDG:	UN1263	Paint related material	3	III	NDA

14.6 Special precautions for user: None specified.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code: Data lacking.

- NDA = No Data Available

Section 15: Regulatory Information

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

U.S. Government Regulations:

TSCA Active Inventory List:

CAS# 108-65-6 1Methoxy-2-propopanol acetate listed.

CAS# 123-86-4 n-Butyl alcohol is listed.

CAS# 7440-22-4 Silver is listed.

SARA Hazard Classifications:

Acute, Fire

US-OSHA-Process Safety Management – Highly Hazardous Chemicals.

- CAS# 123-86-4 n-Butyl acetate is not listed.
- CAS# 7440-22-4 Silver is not listed.
- CAS# 108-65-6 1-Methoxy-2-propanol acetate is not listed.

US-OSHA-Specifically Regulated Chemicals:

- CAS# 123-86-4 n-Butyl acetate is not listed.
- CAS# 7440-22-4 Silver is not listed.
- CAS# 108-65-6 1-Methoxy-2-propanol acetate is not listed.

US-CCA (Clean Air Act) – 1990 Hazardous Air Pollutants:

- CAS# 123-86-4 n-Butyl acetate is not listed.
- CAS# 7440-22-4 Silver is not listed.
- CAS# 108-65-6 1-Methoxy-2-propanol acetate is not listed.

US-CERCLA/SARA-Hazardous Substances and their Reportable Quantities:

- CAS# 123-86-4 n-Butyl acetate:
 - 5000 lb. final RQ (listed under Butyl acetate)
 - 2270 kg final RQ (listed under Butyl acetate)
- CAS# 7440-22-4 Silver:
 - 1000 lb. final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm):
 - 454 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm.)
- CAS# 108-65-6 1-Methoxy-2-propanol acetate:
 - Is not listed.

US-CERCLA/SARA – Radionuclides and Their Reportable Quantities:

- CAS# 123-86-4 n-Butyl acetate is not listed.
- CAS# 7440-22-4 Silver is not listed.
- CAS# 108-65-6 1-Methoxy-2-propanol acetate is not listed.

US-CERCLA/SARA – Section 302 Extremely Hazardous Substances EPCRA RQs:

- CAS# 123-86-4 n-Butyl acetate is not listed.
- CAS# 7440-22-4 Silver is not listed.
- CAS# 108-65-6 1-Methoxy-2-propanol acetate is not listed.

US CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs:

- CAS# 123-86-4 n-Butyl acetate is not listed.
- CAS# 7440-22-4 Silver is not listed.
- CAS# 108-65-6 1-Methoxy-2-propanol acetate is not listed.

US CERCLA/SARA – Section 313 – Emission Reporting:

- CAS# 123-86-4 n-Butyl acetate is not listed.
- CAS# 7440-22-4 Silver – 1.0% de minimis concentration
- CAS# 108-65-6 1-Methoxy-2-propanol acetate is not listed.

US CALIFORNIA Proposition 65 – Carcinogens List:

- CAS# 123-86-4 n-Butyl acetate is not listed.
- CAS# 7440-22-4 Silver is not listed.
- CAS# 108-65-6 1-Methoxy-2-propanol acetate is not listed.

US CALIFORNIA Proposition 65 – Developmental Toxicity:

- CAS# 123-86-4 n-Butyl acetate is not listed.
- CAS# 7440-22-4 Silver is not listed.
- CAS# 108-65-6 1-Methoxy-2-propanol acetate is not listed.

US CALIFORNIA Proposition 65 – Maximum Allowable dose Levels (MADL):

CAS# 123-86-4 n-Butyl acetate is not listed.
CAS# 7440-22-4 Silver is not listed.
CAS# 108-65-6 1-Methoxy-2-propanol acetate is not listed.

US CALIFORNIA Proposition 65 – No Significant Risk Levels (NSRL):

CAS# 123-86-4 n-Butyl acetate is not listed.
CAS# 7440-22-4 Silver is not listed.
CAS# 108-65-6 1-Methoxy-2-propanol acetate is not listed.

US CALIFORNIA Proposition 65 – Reproductive Toxicity – Female:

CAS# 123-86-4 n-Butyl acetate is not listed.
CAS# 7440-22-4 Silver is not listed.
CAS# 108-65-6 1-Methoxy-2-propanol acetate is not listed.

US CALIFORNIA Proposition 65 – Reproductive Toxicity – Male:

CAS# 123-86-4 n-Butyl acetate is not listed.
CAS# 7440-22-4 Silver is not listed.
CAS# 108-65-6 1-Methoxy-2-propanol acetate is not listed.

EU EINECS INVENTORY LISTING:

1-Methoxy-2-propanol acetate	CAS# 108-65-6	EC# 203-603-9
n-Butyl acetate	CAS# 123-86-4	EC# 204-658-1
Silver	CAS# 7440-22-4	EC# 231-101-3

15.2 Chemical Safety Assessment:

No Chemical Safety Assessment has been carried out.

Date of Preparation: 14 December 2018

Abbreviations and acronyms

IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
CMRG: Chemical Manufacturer's Recommended Guidelines
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
AIHA: American Industrial Hygiene Association
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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bio-accumulative and Toxicological
vPvB: very Persistent and very Bio-accumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety Health
ATE: Acute Toxicity Estimates
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
STEL: Short Term Exposure Limit
CEIL: Ceiling
TSCA: Toxic Substances Control Act (USA)
DSL: Domestic Substances List (Canada)
PICCS: Philippine Inventory of Chemicals and Chemical Substances
ENCS: Existing and New Chemical Substances (Japan)

AICS: Australian Inventory of Chemical Substances
IECSC: Inventory of Existing Chemical Substances in China
KECL: Korea Existing Chemicals List

Section 16: Other Information

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