

SAFETY DATA SHEET

Revision Date 13-Jul-2018

Revision Number 1

1. Identification**Product Name** Amberlyst® 15(H), ion exchange resin**Cat No. :** 44079**Synonyms** No information available**Recommended Use** Laboratory chemicals.
Uses advised against Food, drug, pesticide or biocidal product use**Details of the supplier of the safety data sheet****Company**

Alfa Aesar
Thermo Fisher Scientific Chemicals, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Tel: 800-343-0660
Fax: 800-322-4757
Email: tech@alfa.com
www.alfa.com

Emergency Telephone Number

During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660.
After normal business hours, call Carechem 24 at (866) 928-0789.

2. Hazard(s) identification**Classification**

Classification under 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Based on available data, the classification criteria are not met

Label Elements

None required

Hazards not otherwise classified (HNOC)

None identified

3. Composition/Information on Ingredients

Component	CAS-No	Weight %
Benzenesulfonic acid, ethenyl-, polymer with diethenylbenzene	39389-20-3	100.00

4. First-aid measures

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.
Inhalation	Move to fresh air. Get medical attention immediately if symptoms occur.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.
Most important symptoms and effects	None reasonably foreseeable.
Notes to Physician	Treat symptomatically

5. Fire-fighting measures

Unsuitable Extinguishing Media	No information available
Flash Point	No information available
Method -	No information available
Autoignition Temperature	No information available
Explosion Limits	
Upper	No data available
Lower	No data available
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available

Specific Hazards Arising from the Chemical

Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products

None known

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health
0

Flammability
0

Instability
0

Physical hazards
-

6. Accidental release measures

Personal Precautions	Ensure adequate ventilation. Use personal protective equipment. Avoid dust formation.
Environmental Precautions	Should not be released into the environment. See Section 12 for additional ecological information.

Methods for Containment and Clean Up	Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.
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7. Handling and storage

Handling	Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Avoid ingestion and inhalation. Avoid dust formation.
Storage	Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls / personal protection

Exposure Guidelines	This product does not contain any hazardous materials with occupational exposure
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limits established by the region specific regulatory bodies.

Engineering Measures None under normal use conditions.

Personal Protective Equipment

Eye/face Protection Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection No protective equipment is needed under normal use conditions.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State	Solid Beads
Appearance	Light brown
Odor	Odorless
Odor Threshold	No information available
pH	No information available
Melting Point/Range	No data available
Boiling Point/Range	No information available
Flash Point	No information available
Evaporation Rate	Not applicable
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	Not applicable
Specific Gravity	1.25 g/cm ³
Solubility	No information available
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available
Decomposition Temperature	No information available
Viscosity	Not applicable
Molecular Formula	Styrene-DVB; Strongly acidic macroreticular resin

10. Stability and reactivity

Reactive Hazard None known, based on information available

Stability Stable under normal conditions.

Conditions to Avoid Incompatible products.

Incompatible Materials Strong oxidizing agents

Hazardous Decomposition Products None under normal use conditions

Hazardous Polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

11. Toxicological information

Acute Toxicity

Oral LD50 Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.
Dermal LD50 Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.
Mist LC50 Based on ATE data, the classification criteria are not met. ATE > 5 mg/l.

Component Information

Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation No information available

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Benzenesulfonic acid, ethenyl-, polymer with diethenylbenzene	39389-20-3	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure None known

STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects, both acute and delayed No information available

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

Do not empty into drains.

Persistence and Degradability Insoluble in water

Bioaccumulation/ Accumulation No information available.

Mobility Is not likely mobile in the environment due its low water solubility.

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT Not regulated

TDG Not regulated
IATA Not regulated
IMDG/IMO Not regulated

15. Regulatory information

All of the components in the product are on the following Inventory lists: X = listed

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Benzenesulfonic acid, ethenyl-, polymer with diethenylbenzene	X	X	-	-	-		X	X	X	X	X

Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313 Not applicable

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA Occupational Safety and Health Administration
Not applicable

CERCLA Not applicable

California Proposition 65 This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations Not applicable

U.S. Department of Transportation

Reportable Quantity (RQ): N
 DOT Marine Pollutant N
 DOT Severe Marine Pollutant N

U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

16. Other information

Prepared By Health, Safety and Environmental Department
Email: tech@alfa.com
www.alfa.com

Revision Date 13-Jul-2018

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Revision Summary SDS authoring systems update, replaces ChemGes SDS No. 39389-20-3.

Disclaimer

The information provided in this Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text

End of SDS

SILVER METAL SAFETY DATA SHEET

SECTION 1. IDENTIFICATION

Product Identity: Silver Metal.

Trade Names and Synonyms: Argentum; TADANAC® Silver; C.I. 77820.

Manufacturer:

Teck Metals Ltd.
Trail Operations
Trail, British Columbia
V1R 4L8
Emergency Telephone: 250-364-4214

Supplier:

In U.S.:
Teck American Metal Sales
Incorporated
501 North Riverpoint Blvd, Suite 300
Spokane, WA
USA, 99202

Preparer:

Teck Metals Ltd.
Suite 3300 – 550 Burrard Street
Vancouver, British Columbia
V6C 0B3

Other than U.S.:

Teck Metals Ltd.
#1700 – 11 King Street West
Toronto, Ontario
M5H 4C7

Date of Last Review: July 20, 2015.

Date of Last Edit: July 20, 2015.

Product Use: Silver is used in the manufacture of photographic film, coins, electronics, tableware, mirrors, jewelry, ornaments, special batteries and vessels and equipment used to manufacture medicinal chemicals, process foods and beverages, and handle organic acids; for electroplating; as a catalyst in hydrogenation and oxidation processes, and as an ingredient in dental alloys.

SECTION 2. HAZARDS IDENTIFICATION

CLASSIFICATION:

NOTE: In the form in which it is sold this product is not regulated as a Hazardous Product in the U.S. or Canada. This Safety Data Sheet is provided for information purposes only.

Health	Physical	Environmental
Acute Toxicity (Oral, Inhalation) – Does not meet criteria Skin Corrosion/Irritation – Does not meet criteria Eye Damage/Eye Irritation – Does not meet criteria Respiratory or Skin Sensitization – Does not meet criteria Mutagenicity – Does not meet criteria Carcinogenicity – Does not meet criteria Reproductive Toxicity – Does not meet criteria Specific Target Organ Toxicity: Acute Exposure – Does not meet criteria Chronic Exposure – Does not meet criteria	Does not meet criteria for any Physical Hazard	Aquatic Toxicity – Long Term (Chronic) Category 4

LABEL:

Symbols: <i>None Required</i>	Signal Word: <i>None Required</i>
Hazard Statements May cause long lasting harmful effects to aquatic life.	Precautionary Statements: Avoid release to the environment.

Emergency Overview: A lustrous white metal that does not burn in bulk but may form a weak explosive mixture if dispersed in air as a fine powder. This product is relatively non-toxic and poses little immediate hazard to the health of emergency response personnel or to the environment in an emergency situation.

Potential Health Effects: Metallic silver is relatively non-toxic to humans. This product may cause mild local irritation to eyes, nose, throat and upper airways, particularly if the product is heated to the point of fuming. Prolonged exposure to silver dust may cause a bluish or grayish pigmentation to the skin, eyes and mucous membranes. Silver is not listed as a carcinogen by OSHA, NTP, IARC, ACGIH or the EU (see Toxicological Information, Section 11).

Potential Environmental Effects: In the form in which this product is sold, it has low bioavailability and does not pose any significant environmental risks. Releases of the product to water and soil should, nevertheless, be prevented (see Ecological Information, Section 12).

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS Registry No.	CONCENTRATION (% wgt/wgt)
Silver	7440-22-4	99.99%

Note: See Section 8 for Occupational Exposure Guidelines.

SECTION 4. FIRST AID MEASURES

Eye Contact: *Symptoms:* Mild irritation, redness. Do not allow victim to rub eye(s). Let the eye(s) water naturally for a few minutes. If particle/dust does not dislodge, flush with lukewarm, gently flowing water for 5 minutes or until particle/dust is removed, while holding eyelid(s) open. If irritation persists, obtain medical attention. DO NOT attempt to manually remove anything stuck to the eye.

Skin Contact: *Symptoms:* Soiling of skin. Dust: No health effects expected. If irritation does occur, wash with lukewarm, gently flowing water and mild soap for 5 minutes or until the product is removed. If skin irritation persists or if you feel unwell, obtain medical advice. Molten Metal: Flush contact area to solidify and cool but do not attempt to remove encrusted material or clothing. Cover burns and seek medical attention immediately.

Inhalation: *Symptoms:* Coughing and irritation in heavy dust clouds. If symptoms are experienced remove source of contamination or move victim to fresh air. Get medical advice/attention if you feel unwell or are concerned.

Ingestion: *Symptoms:* Stomach upset, nausea, vomiting. If swallowed, no specific intervention is indicated as this material is not likely to be hazardous by ingestion. However, if irritation or discomfort occurs, obtain medical advice.

SECTION 5. FIRE FIGHTING MEASURES

Fire and Explosion Hazards: Massive metal is difficult to ignite and is not considered a serious fire hazard. Finely-divided silver metal dust or powder may form weakly explosive dust clouds when dispersed in the air at high concentrations and exposed to heat, flame, or other sources of ignition. Explosions may also occur upon contact with certain incompatible materials (see Stability and Reactivity, Section 10).

Extinguishing Media: Use any means of extinction appropriate for surrounding fire conditions such as water spray, carbon dioxide, dry chemical, or foam. Do not use direct water streams on fires where molten metal is present.

Fire Fighting: Fire fighters should be fully trained and wear full protective clothing including an approved, self-contained breathing apparatus which supplies a positive air pressure within a full face-piece mask.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Procedures for Cleanup: Control source of spillage if possible to do so safely. Clean up spilled material immediately, observing precautions in Section 8, Personal Protection. Molten metal should be allowed to cool and harden before cleanup. Once solidified wear gloves, pick up and return to process. Powder or dust should be cleaned up by carefully sweeping. Return uncontaminated spilled material to the process if possible. Place contaminated material in clean, dry, suitably labelled containers for later recovery in view of the economic value of silver. Treat or dispose of waste material in accordance with all local, regional, and national requirements.

Personal Precautions: Protective clothing, gloves, and a respirator are recommended for persons responding to an accidental release, especially of molten silver metal. Close-fitting safety goggles may be necessary in some circumstances to prevent eye contact with dust or fume. Where molten metal is involved, heat-resistant gloves and suitable clothing for protection from hot-metal splash should be worn.

Environmental Precautions: Silver metal has relatively low bioavailability and is not considered to pose immediate ecological risks. However, good management practices should always be applied in the storage and use of silver and its compounds. Releases of the product to water and soil should be prevented.

SECTION 7. HANDLING AND STORAGE

Store silver in a secure, covered area away from incompatible materials. Solid metal suspected of containing moisture should be THOROUGHLY DRIED before being added to a molten bath. Otherwise, entrained moisture could expand explosively and spatter molten metal out of the bath.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Guidelines: (*Time-Weighted Average (TWA) concentration over 8 hr unless otherwise indicated*)

<u>Component</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>NIOSH REL</u>
Silver	0.1 mg/m ³	0.01 mg/m ³	0.01 mg/m ³

NOTE: OEGs for individual jurisdictions may differ from those given above. Check with local authorities for the applicable OEGs in your jurisdiction.

ACGIH - American Conference of Governmental Industrial Hygienists; OSHA - Occupational Safety and Health Administration; NIOSH - National Institute for Occupational Safety and Health. TLV – Threshold Limit Value, PEL – Permissible Exposure Limit, REL – Recommended Exposure Limit.

NOTE: The selection of the necessary level of engineering controls and personal protective equipment will vary depending upon the conditions of use and the potential for exposure. The following are therefore only general guidelines that may not fit all circumstances. Control measures to consider include:

Ventilation: Use adequate local or general ventilation to maintain the concentration of silver fumes in the working environment well below recommended occupational exposure limits. Supply sufficient replacement air to make up for air removed by the exhaust system. Local exhaust is recommended for melting, casting, grinding and polishing, etching, or use of powders.

Protective Clothing: Gloves and coveralls or other work clothing are recommended to prevent prolonged or repeated direct skin contact when silver is processed. Appropriate eye protection should be worn where fume or dust is generated. Where hot or molten metal is handled, heat-resistant gloves, goggles or face-shield, and clothing to protect from hot metal splash should be worn. Safety type boots are recommended.

Respirators: Where silver dust or fumes are generated and cannot be controlled to within acceptable levels by engineering means, use appropriate NIOSH-approved respiratory protection equipment (a 42CFR84 Class N, R or P-95 particulate filter cartridge or better).

General Hygiene Considerations: Always practice good personal hygiene. Refrain from eating, drinking, or smoking in work areas. Thoroughly wash hands before eating, drinking, or smoking in appropriate, designated areas. No special packaging materials are required.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Ductile lustrous white metal	Odour: None	Odour Threshold: None	pH: Not Applicable
Vapour Pressure: Negligible @ 20°C	Vapour Density: Not Applicable	Melting Point/Range: 961°C	Boiling Point/Range: 2212°C
Relative Density (Water = 1): 10.49	Evaporation Rate: Not Applicable	Coefficient of Water/Oil Distribution: Not Applicable	Solubility: Insoluble in water
Flash Point: None	Flammable Limits (LEL/UEL): Not Applicable.	Auto-ignition Temperature: Not Applicable.	Decomposition Temperature: Not Applicable.

SECTION 10. STABILITY AND REACTIVITY

Stability & Reactivity: Massive metal is stable and not considered reactive under normal temperatures and pressures. Hazardous polymerization or runaway reactions will not occur. Ozone, sulphur, and hydrogen sulphide blacken silver. Most silver salts are light sensitive.

Incompatibilities: Silver reacts with acetylene, acetylene compounds and ammonia to form explosive and shock sensitive compounds. Contact with strong hydrogen peroxide solutions will cause violent decomposition of the peroxide, releasing oxygen

gas and increasing the fire and explosion potential. Silver is incompatible with bromine azide, chlorine trifluoride, ethyleneimine, oxalic and tartaric acids and with nitric acid in the presence of ethanol.

Hazardous Decomposition Products: High temperature operations such as oxy-acetylene cutting, electric arc welding or overheating a molten bath will generate silver oxide fume. The particle size of metal fumes is largely within the respirable size range, which increases the likelihood of inhalation and deposition of the fume within the body.

SECTION 11. TOXICOLOGICAL INFORMATION

General: Solid silver presents few health hazards. Repeated long-term exposure to silver dust can cause permanent blue-grey staining of eyes, nose, mouth, throat, and skin.

Acute:

Skin/Eye: Direct contact may cause mild local skin or eye irritation. There have been limited reports of allergic contact dermatitis following exposure to powdered silver, silver solutions, and dental amalgams.

Inhalation: Inhalation of silver fume or dust may be irritating to mucous membranes and the upper respiratory tract. Extremely high exposures to silver oxide fume have caused lung damage with pulmonary edema.

Ingestion: Ingestion of silver compounds may cause irritation of the stomach. However, ingestion is not a typical route of occupational exposure.

Chronic:

Prolonged exposure to silver dust may cause a bluish or greyish pigmentation to the skin, eyes and mucous membranes. This occurs slowly and may take years to develop. Once present, it does not go away and, in the most severe cases, may be quite disfiguring but is not considered to be a toxic effect. Silver is not listed as a human carcinogen by the Occupational Safety and Health Administration (OSHA), the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC), the American Conference of Governmental Industrial Hygienists (ACGIH) or the European Union (EU).

Animal Toxicity:

<u>Ingredient:</u>	<u>Acute Oral Toxicity:</u>	<u>Acute Dermal Toxicity:</u>	<u>Acute Inhalation Toxicity:</u>
Silver	>5,000 mg/kg [†]	>2,000 mg/kg*	>5.16 mg/m ^{3‡}
	[†] LD ₅₀ , Rat, Oral,	* LD ₅₀ , Rat, Dermal	[‡] LC ₅₀ , Rat, Inhalation, 4 hour

SECTION 12. ECOLOGICAL INFORMATION

Silver metal is relatively insoluble, and therefore poses minimal ecological risks. However, its processing, use or extended exposure in aquatic and terrestrial environments may result in conversion of the metal to more bioavailable forms. In particular, silver compounds can be highly toxic to aquatic organisms.

SECTION 13. DISPOSAL CONSIDERATIONS

In view of the economic value of silver metal, every effort should be made to recover and reuse all spilled material. If material cannot be returned to process or recovered for its economic value, dispose of only in accordance with applicable regulations.

SECTION 14. TRANSPORT INFORMATION

No special shipping or transportation requirements.

SECTION 15. REGULATORY INFORMATION

U.S.

Listed on TSCA Inventory Yes

Hazardous Under Hazard Communication Standard No

CERCLA Section 103 Hazardous Substance Yes RQ 1,000lbs. (454 kg.)*

*reporting not required if the diameter of the metal pieces released is equal to or exceeds 100 micrometers (0.004 inches)

EPCRA Section 302 Extremely Hazardous Substance No

EPCRA Section 311/312 Hazard Categories No Hazard Categories Apply
EPCRA Section 313 Toxic Release Inventory: Silver - CAS Number 7440-22-4
Percent by Weight 99.99%

SECTION 16. OTHER INFORMATION

Date of Original Issue: December 3, 1998 **Version:** 01 (*First edition*)
Date of Latest Revision: July 20, 2015 **Version:** 13

The information in this Safety Data Sheet is based on the following references:

- American Conference of Governmental Industrial Hygienists, 2004, Documentation of the Threshold Limit Values and Biological Indices, 7th Edition plus updates.
- American Conference of Governmental Industrial Hygienists, Guide to Occupational Exposure Values - 2015.
- American Conference of Governmental Industrial Hygienists, 2015, Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices.
- Bretherick's Handbook of Reactive Chemical Hazards, 20th Anniversary Edition. (P. G. Urben Ed.) 1995.
- Canadian Centre for Occupational Health and Safety (CCOHS) CHEMINFO Chemical Substance Data Base.
- Commission de la santé et la sécurité du travail, Service du Répertoire toxicologique, – Argent Métal.
- European Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, amending and repealing directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (REACH).
- Health Canada, SOR/2015-17, Hazardous Products Regulations, 30 January 2015.
- Merck & Co., Inc., 2001, The Merck Index, An Encyclopedia of Chemicals, Drugs, and Biologicals, 13th Edition.
- National Library of Medicine, National Toxicology Information Program, Hazardous Substance Data Bank (on-line version).
- Patty's Toxicology, 5th Edition, 2001: E. Bingham, B. Cohrssen & C.H. Powell, Ed.
- U.S. Dept. of Health and Human Services, National Institute for Occupational Safety and Health, NIOSH Pocket Guide to Chemical Hazards (on-line version).
- U.S. EPA, Prevention, Pesticides, & Toxic Substances, Reregistration Eligibility Decision (RED) for Silver, Revised July 1993.
- U.S. Occupational Safety and Health Administration, 1989, Code of Federal Regulations, Title 29, Part 1910.

Notice to Reader

Although reasonable precautions have been taken in the preparation of the data contained herein, it is offered solely for your information, consideration and investigation. Teck American Metal Sales Incorporated and Teck Metals Ltd. extend no warranty and assume no responsibility for the accuracy of the content and expressly disclaim all liability for reliance thereon. This safety data sheet provides guidelines for the safe handling and processing of this product; it does not and cannot advise on all possible situations. Therefore, your specific use of this product should be evaluated to determine if additional precautions are required. Individuals exposed to this product should read and understand this information and be provided pertinent training prior to working with this product.

SECTION 1: Identification

1.1. Identification

Product form : Substance
 Substance name : Water
 CAS-No. : 7732-18-5
 Product code : LC26750
 Formula : H₂O

1.2. Recommended use and restrictions on use

Use of the substance/mixture : For laboratory and manufacturing use only.
 Recommended use : Laboratory chemicals
 Restrictions on use : Not for food, drug or household use

1.3. Supplier

LabChem Inc
 Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court
 Zelienople, PA 16063 - USA
 T 412-826-5230 - F 724-473-0647
info@labchem.com - www.labchem.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 or +1-703-741-5970

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Not classified

2.2. GHS Label elements, including precautionary statements

Not classified as a hazardous chemical.

Other hazards not contributing to the classification : None.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	%	GHS-US classification
Water (Main constituent)	(CAS-No.) 7732-18-5	100	Not classified

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

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice (show the label where possible).
 First-aid measures after inhalation : Allow victim to breathe fresh air. Allow the victim to rest. Adverse effects not expected from this product.
 First-aid measures after skin contact : Adverse effects not expected from this product. Take off contaminated clothing.
 First-aid measures after eye contact : Adverse effects not expected from this product.
 First-aid measures after ingestion : Do NOT induce vomiting. Adverse effects not expected from this product.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

Water

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according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

5.2. Specific hazards arising from the chemical

No additional information available

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container closed when not in use.

Incompatible products : Metallic sodium.

Incompatible materials : Sources of ignition. Direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Provide adequate general and local exhaust ventilation.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Gloves. Safety glasses.



Hand protection:

Water

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Wear protective gloves.

Eye protection:

Chemical goggles or safety glasses

Respiratory protection:

None necessary.

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Colorless
Odor	: None.
Odor threshold	: No data available
pH	: 7
Melting point	: 0 °C
Freezing point	: No data available
Boiling point	: 100 °C
Critical temperature	: 374.1 °C
Critical pressure	: 218.3 atm
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: 17.535 mm Hg
Vapor pressure at 50 °C	: 92.51 mm Hg
Relative vapor density at 20 °C	: No data available
Relative density	: 1
Specific gravity / density	: 0.99823 g/ml
Molecular mass	: 18 g/mol
Solubility	: Soluble in acetic acid. Soluble in acetone. Soluble in ammonia. Soluble in ammonium chloride. Soluble in ethanol. Soluble in glycerol. Soluble in hydrochloric acid. Soluble in methanol. Soluble in nitric acid. Soluble in sulfuric acid. Soluble in sodium hydroxide solution. Soluble in propylene glycol.
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: 1.004 cSt
Viscosity, dynamic	: 1.002 cP
Explosion limits	: No data available
Explosive properties	: Not applicable.
Oxidizing properties	: None.

9.2. Other information

VOC content	: 0 %
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SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Not established.

Water

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10.4. Conditions to avoid

Extremely high or low temperatures.

10.5. Incompatible materials

Metallic sodium.

10.6. Hazardous decomposition products

Hydrogen. oxygen.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure : Skin and eye contact

Acute toxicity : Not classified

Water (7732-18-5)

LD50 oral rat	≥ 90000 mg/kg
ATE US (oral)	90000 mg/kg body weight

Skin corrosion/irritation : Not classified
pH: 7

Serious eye damage/irritation : Not classified
pH: 7

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

(Based on available data, the classification criteria are not met)

Reproductive toxicity : Not classified

Specific target organ toxicity – single exposure : Not classified

Specific target organ toxicity – repeated exposure : Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

Water (7732-18-5)

Persistence and degradability	Not established.
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12.3. Bioaccumulative potential

Water (7732-18-5)

Bioaccumulative potential	Not established.
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12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : No other effects known.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Water

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SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

Water (7732-18-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

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

SECTION 16: Other information

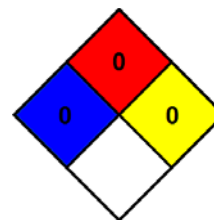
Revision date : 06/12/2018

Other information : None.

NFPA health hazard : 0 - Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials.

NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

Health : 0 Minimal Hazard - No significant risk to health

Flammability : 0 Minimal Hazard - Materials that will not burn

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal protection : A
A - Safety glasses

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