

Z

Safety Data Sheet



Zep, Inc.
1310 Seaboard Industrial Blvd.
Atlanta, GA 30318
1-877-I-BUY-ZEP (428-9937)
www.zcp.com

Section 1. Chemical Product and Company Identification

Product name ZEP 40
Product use Aerosol Cleaner
Product code 0144
Date of issue 05/30/13 **Supersedes** 01/24/12
Not available.

Emergency Telephone Numbers

For MSDS Information:
Compliance Services 1-877-I-BUY-ZEP (428-9937)

For Medical Emergency
(877) 541-2016 Toll Free - All Calls Recorded

For Transportation Emergency
CHEMTREC: (800) 424-9300 - All Calls Recorded
In the District of Columbia (202) 483-7616

Prepared By
Compliance Services
1420 Seaboard Industrial Blvd.
Atlanta, GA 30318

Section 2. Hazards Identification

Emergency overview

*Hazard Determination System (HDS): Health, Flammability, Reactivity

WARNING !

CAUSES EYE IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN

CONTENTS UNDER PRESSURE.

NOTE: MSDS data pertains to the product as delivered in the original shipping container(s). Risk of adverse effects are lessened by following all prescribed safety precautions, including the use of proper personal protective equipment.

Acute Effects

Routes of Entry

Dermal contact. Inhalation.

- Eyes** Causes eye irritation. Inflammation of the eye is characterized by redness, watering and itching.
- Skin** May cause skin irritation. Product may be dermal absorbed. Skin inflammation is characterized by itching, scaling, or reddening.
- Inhalation** Avoid breathing vapors, spray or mists. Over-exposure by inhalation may cause respiratory irritation.
- Ingestion** May be harmful if swallowed. Aspiration hazard if swallowed. Can enter lungs and cause damage.

Chronic effects

Prolonged or repeated contact may dry skin and cause irritation. Overexposure of this product by inhalation or absorption can produce central nervous system depression resulting in headache, nausea and/or dizziness. Contains material which may cause damage to the following organs: blood, kidneys, liver, upper respiratory tract, skin, eyes, central nervous system (CNS), ears.

Carcinogenicity

Ingredients: Not listed as carcinogen by OSHA, NTP or IARC.

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
2-butoxyethanol	A3	3	-	-	-	-

Additional Information: See Toxicological Information (Section 11)

Section 3. Composition/Information on Ingredients

Name of Hazardous Ingredients	CAS number	% by Weight
Ethanol; Ethyl Alcohol	64-17-5	10-20
Butane	106-97-8	1-5
Butyl Cellosolve; Ethylene Glycol Monobutyl Ether; 2-Butoxyethanol	111-76-2	1-5
propane	74-98-6	1-5

Section 4. First Aid Measures

- Eye Contact** Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention immediately.
- Skin Contact** Flush affected skin with plenty of water. Get medical attention if irritation develops.
- Inhalation** Move exposed person to fresh air. If irritation persists, get medical attention.
- Ingestion** Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. If affected person is conscious, give plenty of water to drink. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Section 5. Fire Fighting Measures

National Fire Protection Association (U.S.A.)



- Flash Point** Not applicable.
- Flammable Limits** Not available.
- Flammability** Non-flammable.(16 CFR 1500.45)
- Fire hazard** In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Bursting aerosol containers may be propelled from a fire at high speed.
- Fire-Fighting Procedures** Use an extinguishing agent suitable for the surrounding fire. Cool closed containers exposed to fire with water. Fire-fighters should wear appropriate protective equipment.

Section 6. Accidental Release Measures

- Spill Clean up** Large spills are unlikely due to packaging.

Section 7. Handling and Storage

- Handling** Put on appropriate personal protective equipment (see section 8). Store and use away from heat, sparks, open flame or any other ignition source. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Observe label precautions. Wash contaminated clothing before reusing. Wash thoroughly after handling.
- Storage** Do not store above the following temperature: 49°C (120.2°F). Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Use appropriate containment to avoid environmental contamination. Keep out of the reach of children.

Section 8. Exposure Controls/Personal Protection**Product name**

Ethanol; Ethyl Alcohol

Exposure limits

ACGIH TLV (United States, 2/2010).

STEL: 1000 ppm 15 minute(s).

OSHA PEL 1989 (United States, 3/1989).

TWA: 1000 ppm 8 hour(s).

TWA: 1900 mg/m³ 8 hour(s).

NIOSH REL (United States, 6/2009).

TWA: 1000 ppm 10 hour(s).

TWA: 1900 mg/m³ 10 hour(s).

OSHA PEL (United States, 6/2010).

TWA: 1000 ppm 8 hour(s).

TWA: 1900 mg/m³ 8 hour(s).

OSHA PEL 1989 (United States, 3/1989).

TWA: 800 ppm 8 hour(s).

TWA: 1900 mg/m³ 8 hour(s).

NIOSH REL (United States, 6/2009).

TWA: 800 ppm 10 hour(s).

TWA: 1900 mg/m³ 10 hour(s).

ACGIH TLV (United States, 2/2010).

TWA: 1000 ppm 8 hour(s).

OSHA PEL 1989 (United States, 3/1989). Absorbed through skin.

TWA: 25 ppm 8 hour(s).

TWA: 120 mg/m³ 8 hour(s).

NIOSH REL (United States, 6/2009). Absorbed through skin.

TWA: 5 ppm 10 hour(s).

TWA: 24 mg/m³ 10 hour(s).

ACGIH TLV (United States, 2/2010).

TWA: 20 ppm 8 hour(s).

OSHA PEL (United States, 6/2010). Absorbed through skin.

TWA: 50 ppm 8 hour(s).

TWA: 240 mg/m³ 8 hour(s).

OSHA PEL 1989 (United States, 3/1989).

TWA: 1000 ppm 8 hour(s).

TWA: 1800 mg/m³ 8 hour(s).

NIOSH REL (United States, 6/2009).

Butyl Cellosolve; Ethylene Glycol Monobutyl Ether;
2-Butoxyethanol

propane

Product code 0144	Safety Data Sheet	Product Name ZEP 40
-------------------	-------------------	---------------------

TWA: 1000 ppm 10 hour(s).
TWA: 1800 mg/m³ 10 hour(s).
OSHA PEL (United States, 6/2010).
TWA: 1000 ppm 8 hour(s).
TWA: 1800 mg/m³ 8 hour(s).
ACGIH TLV (United States, 2/2010).
TWA: 1000 ppm 8 hour(s).

Personal Protective Equipment (PPE)

Eyes Safety glasses.

Body For prolonged or repeated handling, use gloves. Recommended: Neoprene gloves. Nitrile gloves. Rubber gloves.

Respiratory Use with adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits.



Section 9. Physical and Chemical Properties

Physical State	Liquid. [Aerosol.]	Color	Clear. Colorless.
pH	Not applicable.	Odor	Alcohol-like. [Slight]
Boiling Point	93°C (199.4°F)	Vapor Pressure	Not available.
Specific Gravity	1.1	Vapor Density	Not available.
Solubility	Easily soluble in the following materials: cold water and hot water.	Evaporation Rate	1 (Water = 1)

VOC (Consumer) 22.5 % (w/w) 2.07 lbs/gal (247.7 g/l)

Section 10. Stability and Reactivity

Stability and Reactivity The product is stable.

Incompatibility Avoid contact with strong oxidizers, excessive heat, sparks or open flame.

Hazardous Polymerization Under normal conditions of storage and use, hazardous polymerization will not occur.

Hazardous Decomposition Products carbon oxides (CO, CO₂)

Section 11. Toxicological Information

Acute Toxicity

Product/ingredient name	Result	Species	Dose	Exposure
ethanol	LC50 Inhalation Vapor	Rat	124700 mg/m3	4 hours
	LD50 Oral	Rat	7 g/kg	-
Butane 2-butoxyethanol	LC50 Inhalation Vapor	Rat	658000 mg/m3	4 hours
	LC50 Inhalation Gas.	Rat	450 ppm	4 hours
	LD50 Dermal	Rabbit	220 mg/kg	-
	LD50 Oral	Rat	250 mg/kg	-

Section 12. Ecological Information

Environmental Effects Not available.

Aquatic Ecotoxicity

ethanol	-	Acute LC50 25500 ug/L Marine water	Crustaceans - Brine shrimp - Artemia franchiscana - Larvac	48 hours
2-butoxyethanol	-	Acute EC50 >1000 mg/L Fresh water	Daphnia - Water flea - Daphnia magna - <24 hours	48 hours
	-	Acute LC50 800000 ug/L Marine water	Crustaceans - Common shrimp, sand shrimp - Crangon crangon	48 hours
	-	Acute LC50 1250000 ug/L Marine water	Fish - Inland silverside - Menidia beryllina - 40 to 100 mm	96 hours
	-			


Section 13. Disposal Considerations

Waste Information

Waste must be disposed of in accordance with federal, state and local environmental control regulations. Consult your local or regional authorities for additional information.

Waste Stream Non-hazardous waste

Section 14. Transport Information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label
DOT Classification	Not available.	Consumer commodity or Limited quantity	ORM-D	-	
IMDG Class	UN1950	Aerosols, non-flammable or Limited quantity	2.2	-	

NOTE: DOT classification applies to most package sizes. For specific container size classifications or for size exceptions, refer to the Bill of Lading with your shipment.

PG* : Packing group

Section 15. Regulatory Information**U.S. Federal Regulations**

SARA 313 toxic chemical notification and release reporting:

Product name

2-butoxyethanol

Clean Water Act (CWA) 311: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

All Components of this product are listed or exempt from listing on TSCA Inventory.

State Regulations**California Prop 65**

No products were found.

Section 16. Other Information

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

*NOTE: Hazard Determination System (HDS) ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although these ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HDS ratings are to be used with a fully implemented program to relay the meanings of this scale.

KOM/LMW

SAFETY DATA SHEET

ZepInc

ZEP PREMIUM CARPET SHAMPO

Version 1.2

Revision Date 04/20/2015

Print Date 04/21/2016

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : ZEP PREMIUM CARPET SHAMPO

Material number : ZUPXC128

Manufacturer or supplier's details

Company : Zep Inc.

Address : 1310 Seaboard Industrial Blvd., NW
Atlanta, GA 30318

Telephone : 404-352-1680

Emergency telephone numbers

For SDS Information	: Compliance Services 1-877-428-9937
For a Medical Emergency	: 877-541-2016 Toll Free - All Calls Recorded
For a Transportation Emergency	: CHEMTREC: 800-424-9300 - All Calls Recorded. In the District of Columbia 202-483-7616

Note: This product is labeled as a consumer product in accordance with the United States Consumer Product Safety Commission regulations. The warnings presented below in this Safety Data Sheet (SDS) comply with the 2012 OSHA Hazard Communication Standard (GHS - Globally Harmonized System of Classification and Labeling). The requirements for the labeling and warnings of consumer products may differ from those required for GHS based hazard communication.

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance	liquid
Colour	clear, colourless
Odour	sweet

GHS Classification

Eye irritation : Category 2A

GHS Label element

Hazard pictograms :



Signal word : Warning

Hazard statements : H319 Causes serious eye irritation.

Precautionary statements : **Prevention:**
P264 Wash skin thoroughly after handling.
P280 Wear eye protection/ face protection.
Response:
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water

ZEP PREMIUM CARPET SHAMPO

Version 1.2

Revision Date 04/20/2015

Print Date 04/21/2016

for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 If eye irritation persists: Get medical advice/attention.

Disposal:

P501 Dispose of contents/container in accordance with local regulation.

Potential Health Effects**Carcinogenicity:****IARC**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical Name	CAS-No.	Concentration [%]
tetrasodium ethylenediaminetetraacetate	64-02-8	>= 1 - < 5
Alcohols, C10-14, ethoxylated	66455-15-0	>= 1 - < 5

SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
- If inhaled : If unconscious place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes.
If on skin, rinse well with water.
If on clothes, remove clothes.
- In case of eye contact : If in eyes, rinse with water for 15 minutes.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.

ZEP PREMIUM CARPET SHAMPO

Version 1.2

Revision Date 04/20/2015

Print Date 04/21/2016

If eye irritation persists, consult a specialist.

If swallowed

- : Keep respiratory tract clear.
- DO NOT induce vomiting unless directed to do so by a physician or poison control center.
- Never give anything by mouth to an unconscious person.
- If symptoms persist, call a physician.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Dry chemical
Water spray jet
Carbon dioxide (CO₂)
Alcohol-resistant foam
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : Carbon dioxide (CO₂)
Carbon monoxide
Nitrogen oxides (NO_x)
Smoke
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Further information : Standard procedure for chemical fires.
- Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Do not breathe vapours/dust.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.

ZEP PREMIUM CARPET SHAMPO

Version 1.2

Revision Date 04/20/2015

Print Date 04/21/2016

Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid : No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.

Hand protection
Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Ensure that eyewash stations and safety showers are close to the workstation location.
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection : impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : clear, colourless

Odour : sweet

Odour Threshold : no data available

pH : 8.5 - 9.5

Melting point/freezing point : no data available

Boiling point : 100 °C

SAFETY DATA SHEET

ZepInc

ZEP PREMIUM CARPET SHAMPO

Version 1.2

Revision Date 04/20/2015

Print Date 04/21/2016

Flash point	:	does not flash
Evaporation rate	:	1
Upper explosion limit	:	not applicable
Lower explosion limit	:	not applicable
Vapour pressure	:	not determined
Relative vapour density	:	no data available
Density	:	1.026 g/cm ³
Solubility(ies)		
Water solubility	:	soluble
Solubility in other solvents	:	not determined
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	not determined
Thermal decomposition	:	no data available
Viscosity		
Viscosity, kinematic	:	no data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Stable
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No hazards to be specially mentioned. No decomposition if stored and applied as directed.
Conditions to avoid	:	no data available
Incompatible materials	:	no data available
Hazardous decomposition products	:	Carbon oxides Nitrogen oxides (NO _x) Sodium oxides Copper oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

SAFETY DATA SHEET

ZepInc

ZEP PREMIUM CARPET SHAMPO

Version 1.2

Revision Date 04/20/2015

Print Date 04/21/2016

Acute oral toxicity

: Acute toxicity estimate : > 5,000 mg/kg
Method: Calculation method

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

Product:

Remarks: Irritating to eyes.

Respiratory or skin sensitisation

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

tetrasodium ethylenediaminetetraacetate:
Alcohols, C10-14, ethoxylated:

STOT - single exposure

no data available

STOT - repeated exposure

no data available

Aspiration toxicity

no data available

Further information

Product:

Remarks: no data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

no data available

Persistence and degradability

no data available

Bioaccumulative potential

Product:

SAFETY DATA SHEET

ZepInc

ZEP PREMIUM CARPET SHAMPO

Version 1.2

Revision Date 04/20/2015

Print Date 04/21/2016

Partition coefficient: n-octanol/water : Remarks: no data available

Mobility in soil

no data available

Other adverse effects

no data available

Product:

Regulation

40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances

Remarks

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : no data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Dispose of in accordance with local regulations.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

Transportation Regulation: 49 CFR (USA):
NOT REGULATED AS DANGEROUS GOODS OR HAZARDOUS MATERIAL

Transportation Regulation: IMDG (Vessel):
NOT REGULATED AS DANGEROUS GOODS OR HAZARDOUS MATERIAL

Transportation Regulation: IATA (Cargo Air):
NOT REGULATED AS DANGEROUS GOODS OR HAZARDOUS MATERIAL

Transportation Regulation: IATA (Passenger Air):
NOT REGULATED AS DANGEROUS GOODS OR HAZARDOUS MATERIAL

SAFETY DATA SHEET

ZepInc

ZEP PREMIUM CARPET SHAMPO

Version 1.2

Revision Date 04/20/2015

Print Date 04/21/2016

Transportation Regulation: TDG (Canada):
NOT REGULATED AS DANGEROUS GOODS OR HAZARDOUS MATERIAL

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
sodium hydroxide	1310-73-2	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Acute Health Hazard

SARA 302 : SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65 This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

TSCA	On TSCA Inventory
DSL	This product contains one or several components that are not on the Canadian DSL nor NDSL.
AICS	Not in compliance with the inventory
NZIoC	Not in compliance with the inventory
PICCS	Not in compliance with the inventory
IECSC	Not in compliance with the inventory

Inventory Acronym and Validity Area Legend:

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

SECTION 16. OTHER INFORMATION

SAFETY DATA SHEET

ZepInc**ZEP PREMIUM CARPET SHAMPO**

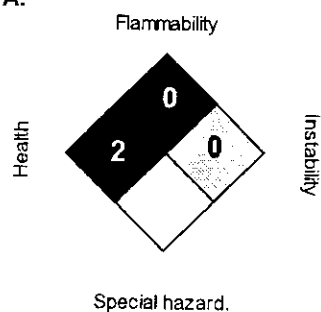
Version 1.2

Revision Date 04/20/2015

Print Date 04/21/2016

Further information

NFPA:



HMIS III:

HEALTH	2
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
 2 = Moderate, 3 = High
 4 = Extreme, * = Chronic

OSHA GHS Label Information:

Hazard pictograms



Signal word
 Hazard statements
 Precautionary statements

: **Warning:**
 : Causes serious eye irritation.

Prevention: Wash skin thoroughly after handling. Wear eye protection/ face protection.
Response: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention.

Disposal: Dispose of contents/container in accordance with local regulation.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. Users should make their own investigations to determine the suitability and applicability of the information for their particular purposes. This SDS has been prepared by the Compliance Services organization supporting this manufacturer, supplier or distributor.

Zep Inc. markets products under well recognized and established brand names such as Zep®, Zep Commercial®, Zep Professional®, Enforcer®, National Chemical™, Selig™, Misty®, Next Dimension™, Petro®, i-Chem®, TimeMist®, TimeWick™, MicrobeMax®, Country Vet®, Konk®, Original Bike Spirits®, Blue Coral®, Black Magic®, Rain-X®, Niagara National™, FC Forward Chemicals®, Rexodan®, Mykal™, and a number of private labeled brands.

FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 859.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Zinc

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Substances and mixtures which, in contact with water, emit flammable gases (Category 1). In contact with water releases flammable gases which may ignite spontaneously (H260). Handle under inert gas. Protect from moisture (P231+P232). Keep away from any possible contact with water, because of violent reaction and possible flash fire (P223).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Zinc	7440-66-6	Zn	65.37	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

If on skin: Brush off loose particles from skin (P335). Wash with plenty of water.

If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.

Finely divided zinc dust is a severe fire hazard. Zinc dust in contact with acids, water or damp air evolves hydrogen gas. The heat produced may ignite the hydrogen gas. Minimize contact with moisture.

In case of fire: Use a tri-class dry class fire extinguisher (P370+P378). If there is contact with water use class D fire extinguisher according to NFPA book.

NFPA Code
None
established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #1. Store with metals and metal hydrides.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Shiny white metal with bluish-gray luster. Forms: granular, mossy dust, metal pieces, foil, sheets, shot, strips. Odorless. Soluble: Acids and alkalis. Insoluble in water.

Boiling point: 908 °C
Melting point: 419 °C
Specific gravity: 7.14

SECTION 10 — STABILITY AND REACTIVITY

Avoid strong acids, strong bases, cadmium, sulfur chlorinated solvents, amines, and carbon disulfide. Avoid any source of flame for zinc dust only! Zinc dust can spontaneously combust when in contact with moisture. Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Dust may cause lung irritations.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD₅₀: N.A.
IHL-RAT LC₅₀: N.A.
SKN-RBT LD₅₀: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding. Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-175-3).

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

Section 1 Chemical Product and Company Information

Page 1 of 2



5100 West Henrietta Rd
PO Box 92912
Rochester, NY 14692-9012
Tel: (800) 962-2660

CHEMTREC 24 Hour Emergency
Phone Number (800) 424-9300
For laboratory use only.
Not for drug, food or household use.

Product ZINC ACETATE
Synonyms Zinc Acetate, Dihydrate

Section 2 Hazards Identification

Signal word: WARNING
Pictograms: GHS07 / GHS09
Target organs: None known



GHS Classification:
Acute toxicity, oral (Category 4)
Eye irritation (Category 2)
Aquatic toxicity, acute (Category 1)
Aquatic toxicity, chronic (Category 1)

GHS Label information: Hazard statement:
H302: Harmful if swallowed.
H319: Causes serious eye irritation.
H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects.

Precautionary statement:

P264: Wash hands thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
P330: Rinse mouth.
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 attention.
P391: Collect spillage.
P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Ca Prop 65: This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Zinc acetate, dihydrate	5970-45-6	100%	209-170-2 (zinc di(acetate))

INGESTION: HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: MAY BE HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES SERIOUS EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY BE HARMFUL IF ABSORBED THROUGH SKIN. MAY CAUSE SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 4 Fire Fighting Measures

Suitable Extinguishing Media: Use extinguishing agent suitable for type of surrounding fire.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Section 5 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Recover for reuse if not contaminated. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Section 7 Handling & Storage

Page E2 of E2

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 Exposure Controls / Personal Protection

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	Zinc and compounds	Not established	Not established	Not established

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Solid. White crystals	Evaporation rate (= 1): Data not available	Partition coefficient: Data not available
Odor: Slight acetic acid odor	Flammability (solid/gas): Data not available	Auto-ignition temperature: Data not available
Odor threshold: Data not available	Explosion limits: Lower / Upper: Data not available	Decomposition temperature: Data not available
pH: 6.0 - 8.0 @ 50 g/L @ 77°F	Vapor pressure (mm Hg): Data not available	Viscosity: Data not available
Melting / Freezing point: Data not available	Vapor density (Air = 1): Data not available	Molecular formula: $\text{Zn}(\text{C}_2\text{H}_3\text{O}_2)_2 \cdot 2\text{H}_2\text{O}$
Boiling point: Data not available	Relative density (Specific gravity): 1.74	Molecular weight: 219.50
Flash point: Data not available	Solubility(ies): Soluble in water	

Section 10 Stability & Reactivity

Chemical stability: Stable

Hazardous polymerization: Will not occur.

Conditions to avoid: Excessive temperatures.

Incompatible materials: Strong oxidizers.

Hazardous decomposition products: Zinc oxides.

Acute toxicity: Oral-rat LD50: 2510 mg/kg (Zinc acetate) ; Oral-rat LD50: 237 mg/kg (Zinc)

Skin corrosion/irritation: Data not available

Serious eye damage/irritation: Data not available

Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available

Carcinogenicity: Data not available

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Ca Prop 65: This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Reproductive toxicity: Data not available

STOT-single exposure: Data not available

STOT-repeated exposure: Data not available

Aspiration hazard: Data not available

Potential health effects:

Inhalation: May be harmful if inhaled.

Ingestion: Harmful if swallowed.

Skin: Contact causes irritation.

Eyes: Contact causes irritation.

Signs and symptoms of exposure: To the best of our knowledge the chemical, physical and toxicological properties have not been thoroughly investigated. Specific data is not available. Exercise appropriate procedures to minimize potential hazards.

Additional information: RTECS #: ZG8750000

Toxicity to fish: *Oncorhynchus mykiss* (fish, fresh water), LC50 = 0.55 mg/L/96 hour

Toxicity to daphnia and other aquatic invertebrates: No data available

Toxicity to algae: No data available

Persistence and degradability: No data available

Bioaccumulative potential: No data available

Mobility in soil: No data available

PBT and vPvB assessment: No data available

Other adverse effects: Very toxic to aquatic life with long lasting effects.

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

UN/NA number: Not applicable

Shipping name: Not Regulated

Hazard class: Not applicable

Packing group: Not applicable

Reportable Quantity: Yes

Marine pollutant: No

Exceptions: Not applicable

2012 ERG Guide # Not applicable

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERCLA (RQ)	RCRA code	DSL	NDSL	WHMIS Classification
Zinc acetate, dihydrate	Listed	1000 lbs (2270 Kg)	Not listed	Listed	Not listed	Uncontrolled product

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

Revision Date: April 21, 2014

Supersedes: April 21, 2014

Safety Data Sheet

Zinc Chloride

CAROLINA[®]
www.carolina.com

Section 1

Product Description

Product Name: Zinc Chloride
Recommended Use: Science education applications
Synonyms: Zinc Dichloride
Distributor: Carolina Biological Supply Company
2700 York Road, Burlington, NC 27215
1-800-227-1150
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)
Chemtrec: 800-424-9300 (Transportation Spill Response 24 hours)

Section 2

Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

WARNING



Harmful if swallowed.

GHS Classification:

Acute Toxicity - Oral Category 4

Acute Toxicity Dermal Contains	100 % of the mixture consists of ingredient(s) of unknown toxicity
Acute Toxicity Inhalation Gas Contains	100 % of the mixture consists of ingredient(s) of unknown toxicity
Acute Toxicity Inhalation Vapor Contains	100 % of the mixture consists of ingredient(s) of unknown toxicity
Acute Toxicity Inhalation Dust/Mist Contains	100 % of the mixture consists of ingredient(s) of unknown toxicity

Section 3

Composition / Information on Ingredients

Chemical Name	CAS #	%
Zinc Chloride (CAS#7646-85-7)	7646-85-7	100

Section 4

First Aid Measures

Emergency and First Aid Procedures

Inhalation: In case of accident by inhalation: remove casualty to fresh air and keep at rest.
Eyes: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Ingestion: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

Section 5

Firefighting Procedures

Extinguishing Media: Use media suitable to extinguish surrounding fire.
Fire Fighting Methods and Protection: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards: Reacts with water or steam to produce toxic and corrosive fumes.
Hazardous Combustion Products: Carbon dioxide, Carbon monoxide

Section 6

Spill or Leak Procedures

Safety Data Sheet

Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation.

Section 7 Handling and Storage

Handling: Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Keep container tightly closed in a cool, well-ventilated place.

Storage: Keep container tightly closed in a cool, well-ventilated place.

Storage Code: Blue - Toxic. Store separately in a secured area.

Section 8 Protection Information

Chemical Name	ACGIH		OSHA PEL	
	(TWA)	(STEL)	(TWA)	(STEL)
Zinc Chloride (CAS#7646-85-7) 100%	1 mg/m3 TWA (fume)	2 mg/m3 STEL (fume)	1 mg/m3 TWA (fume)	N/A

Control Parameters

Engineering Measures:

No exposure limits exist for the constituents of this product. General room ventilation might be required to maintain operator comfort under normal conditions of use.

Personal Protective Equipment (PPE):

Lab coat, apron, eye wash, safety shower.

Respiratory Protection:

No respiratory protection required under normal conditions of use.

Eye Protection:

Wear chemical splash goggles when handling this product. Have an eye wash station available.

Skin Protection:

Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves:

No information available

Section 9 Physical Data

Formula: ZnCl ₂	Vapor Pressure: 1.33 hPa @ 428°C
Molecular Weight: 136.29 g/mol	Evaporation Rate (BuAc=1): N/A
Appearance:	Vapor Density (Air=1): N/A
Odor: No data available	Specific Gravity: 2.91
Odor Threshold: No data available	Solubility in Water: Soluble
pH: No data available	Log Pow (calculated): No data available
Melting Point: No data available	Autoignition Temperature: No data available
Boiling Point: No data available	Decomposition Temperature: No data available
Flash Point: No data available	Viscosity: No data available
Flammable Limits in Air: N/A N/A	Percent Volatile by Volume: N/A

Section 10 Reactivity Data

Reactivity:	No data available
Chemical Stability:	Stable under normal conditions.
Conditions to Avoid:	None known.
Hazardous Polymerization:	Will not occur

Section 11 Toxicity Data

Routes of Entry	Inhalation, ingestion, eye or skin contact.
Symptoms (Acute):	Harmful by inhalation and if swallowed.
Delayed Effects:	No data available

Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
---------------	------------	-----------	-------------	-----------------

Safety Data Sheet

Zinc Chloride (CAS#7646-85-7) 100% 7646-85-7 Oral LD50 Mouse 329 mg/kg
Oral LD50 Rat 350 mg/kg Not determined Not determined

Carcinogenicity:
Chemical Name **CAS Number** **IARC** **NTP** **OSHA**
 No data available 7646-85-7 Not listed Not listed Not listed

Chronic Effects:
Mutagenicity: No evidence of a mutagenic effect.
Teratogenicity: No evidence of a teratogenic effect (birth defect).
Sensitization: No evidence of a sensitization effect.
Reproductive: No evidence of negative reproductive effects.
Target Organ Effects:
Acute: See Section 2
Chronic: Not listed as a carcinogen by IARC, NTP or OSHA.

Section 12 Ecological Data

Overview: This material is not expected to be harmful to the ecology.
Mobility: No data
Persistence: No data
Bioaccumulation: No data
Degradability: No data
Other Adverse Effects: No data

Chemical Name **CAS Number** **Eco Toxicity**
 N/A 7646-85-7

Section 13 Disposal Information

Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
Waste Disposal Code(s): Not Determined

Section 14 Transport Information

Ground - DOT Proper Shipping Name: UN2331, Zinc Chloride, Anhydrous, 8, III
Air - IATA Proper Shipping Name: Not regulated for air transport by IATA.

Section 15 Regulatory Information

TSCA Status: All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
Zinc Chloride (CAS#7646-85-7) 100%	7646-85-7	No	1000 lb RQ	1000 lb final RQ; 454 kg final RQ	No	No

Section 16 Additional Information

Revised: 09/03/2014 **Replaces:** 08/27/2014 **Printed:** 09-11-2014

The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

Glossary

Safety Data Sheet

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health

Safety Data Sheet (SDS)

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Zinc Chloride Solution

Signal
Word
WARNING

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261
Chemtrec Emergency Phone Number: (800) 424-10502

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 5). May be harmful if swallowed (H303).

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).



SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Zinc chloride	7646-85-7	ZnCl ₂	136.29	7-14%
Hydrochloric acid	7647-01-0	HCl	36.46	<0.5%>
Water	7732-18-5	H ₂ O	18.00	86-93%

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists eyes:** Get medical advice or attention (P337+P313).

If on skin: Wash with plenty of water (P302+P352). **If skin irritation occurs:** Get medical advice or attention

(P332+P313).

If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solution.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA Code

None
established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Contain spill with sand or absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless liquid. Odorless.

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Toxic, corrosive.

Chronic effects: N.A.

Target organs: N.A.

ORL-RAT LD₅₀: 350 mg/kg as ZnCl₂

IHL-RAT LC₅₀: N.A.

SKN-RBT LD₅₀: N.A.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #26b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM

LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

N.A. = Not available, not all health aspects of this substance have been fully investigated.

N/A = Not applicable

Consult your copy of the Flinn Science Catalog/Reference Manual for additional information about laboratory chemicals.

Revision Date: March 21, 2014

© 2020 Flinn Scientific, Inc. All Rights Reserved.

Section 1 Chemical Product and Company Information

Page E1 of E2



5100 West Henrietta Rd
PO Box 92912
Rochester, NY 14692-9012
Tel: (800) 962-2660

CHEMTREC 24 Hour Emergency
Phone Number (800) 424-9300
For laboratory use only.
Not for drug, food or household use.

Product ZINC METAL
Synonyms Zinc / Zinc Metal Powder

Section 2 Hazards Identification

Signal word: WARNING
Pictograms: GHS09
Target organs: None known



GHS Classification:
Aquatic acute (Category 1)
Aquatic chronic (Category 1)

GHS Label information: Hazard statement(s):
H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects.

Precautionary statement(s):

P273: Avoid release to the environment.
P391: Collect spillage.
P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Supplemental information:

Do not breathe dust. Do not get in eyes, on skin, or on clothing. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Get medical attention if you feel unwell.

Ca Prop 65 - This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

Section 3 Composition / Information on Ingredients

Nommé Chimique	# CAS	%	EINECS
Zinc powder	7440-66-6	100%	231-175-3

Section 4 First Aid Measures

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: HARMFUL IF INHALED AS FUME. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: MAY CAUSE MECHANICAL IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY CAUSE DERMATITIS. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

Suitable Extinguishing Media: Use triclass, dry chemical fire extinguisher. Do NOT use water on fire where molten metal is present.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Molten metals produce fume, vapor and/or dust that may be toxic and/or a respiratory irritant. Metal reacts with oxidizing agents. Small chips, turnings, and dust with ignite readily. Dust cloud may be explosive.

Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Section 7 Handling & Storage

Page E2 of E2

Read label on container before using. Do not wear contact lenses when working with chemicals. Keep container tightly closed. Keep out of reach of children. Use with adequate ventilation. Wash thoroughly after handling.

Handling: Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Avoid ingestion. Do not inhale fumes from molten metals. Wash thoroughly after handling. Remove and wash clothing before reuse.

Storage: Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 Exposure Controls / Personal Protection

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	Particulates not otherwise classified	None established	TWA: 5 mg/m ³ respirable fraction	None established

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Solid. Metallic silver-gray powder
Odor: No odor.
Odor threshold: Data not available.
pH: Data not available.
Melting / Freezing point: 419°C (787°F)
Boiling point: 907°C (1665°F)
Flash point: Not applicable

Evaporation rate (= 1): Not applicable
Flammability (solid/gas): Not applicable
Explosion limits: Lower / Upper: Not applicable
Vapor pressure (mm Hg): Data not available
Vapor density (Air = 1): Data not available
Relative density (Specific gravity): 7.12
Solubility(ies): Insoluble

Partition coefficient: Data not available
Auto-ignition temperature: Not applicable
Decomposition temperature: Data not available.
Viscosity: Data not available.
Molecular formula: Zn
Molecular weight: 65.38

Section 10 Stability & Reactivity

Chemical stability: Stable

Hazardous polymerization: Will not occur.

Conditions to avoid: Excessive temperatures. Hydrogen may evolve when in contact with water or damp air.

Incompatibilities with other materials: Strong acids, halogens, acids, alkalies and water.

Hazardous decomposition products: Zinc oxides and zinc fumes. Reacts with water, acids or alkalies to generate hydrogen gas.

Section 11 Toxicological Information

Acute toxicity: Data not available

Skin corrosion/irritation: Data not available

Serious eye damage/irritation: Data not available

Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available

Carcinogenicity: Data not available

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: Data not available

STOT-single exposure: Data not available

STOT-repeated exposure: Data not available

Aspiration hazard: Data not available

Potential health effects:

Inhalation: Inhalation of dust or fume may cause irritation to eyes, nose, throat, and cause a metallic taste in the mouth. May cause metal fume fever or produce flu-like symptoms.

Ingestion: May be harmful if swallowed.

Skin: May cause dermatitis.

Eyes: Contact with eyes may cause mechanical irritation.

Signs and symptoms of exposure: Over-heating of alloy can produce metal fumes and oxides. Over-exposure to dust and fumes may cause mouth, eye, and nose irritation.

Additional information: RTECS #: None assigned

Section 12 Ecological Information

Toxicity to fish: No data available

Toxicity to daphnia and other aquatic invertebrates: No data available

Toxicity to algae: No data available

Persistence and degradability: No data available

Bioaccumulative potential: No data available

Mobility in soil: No data available

PBT and vPvB assessment: No data available

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport Information

UN/NA number: None assigned

Shipping name: Not Regulated.

Hazard class: None assigned **Packing group:** None assigned **Reportable Quantity:** No **Marine pollutant:** No **Exceptions:** No

Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the inventory list.

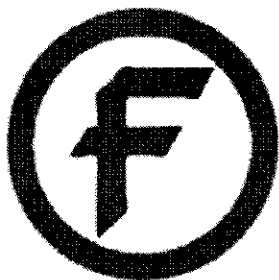
Component	TSCA	CERCLA (RQ)	RCRA code	DSL	NDSL	WHMIS Classification
Zinc	Listed	Not listed	Not listed	Listed	Not listed	Not listed

Section 16 Additional Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure.

Revision Date: June 24, 2013

Supersedes: January 10, 2012



Fisher Scientific

Part of Thermo Fisher Scientific

SAFETY DATA SHEET

Creation Date 02-Jun-2010

Revision Date 19-Aug-2014

Revision Number 1

1. Identification

Product Name Zinc Metal Powder

Cat No. : Z5-500; Z46-3

Synonyms Zinc Dust (Certified/Technical)

Recommended Use Laboratory chemicals.

Uses advised against No Information available

Details of the supplier of the safety data sheet

Company

Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number

CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887

2. Hazard(s) identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Substances/mixtures which, in contact with water, emit flammable gases	Category 1
Pyrophoric solids	Category 1

Label Elements

Signal Word

Danger

Hazard Statements

In contact with water releases flammable gases which may ignite spontaneously
Catches fire spontaneously if exposed to air

**Precautionary Statements****Prevention**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking

Do not allow contact with air

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

Keep away from any possible contact with water, because of violent reaction and possible flash fire

Handle under inert gas. Protect from moisture

Skin

Brush off loose particles from skin. Immerse in cool water/wrap with wet bandages

Fire

In case of fire: Use CO2, dry chemical, or foam for extinction

Storage

Store under an inert atmosphere

Store in a dry place. Store in a closed container

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Very toxic to aquatic life with long lasting effects

May form combustible dust concentrations in air

3. Composition / information on ingredients

Component	CAS-No	Weight %
Zinc powder - zinc dust (pyrophoric)	7440-66-6	100

4. First-aid measures

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. Get medical attention if symptoms occur.
Ingestion	Do not induce vomiting. Obtain medical attention.
Most important symptoms/effects	No information available.
Notes to Physician	Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media	Dry sand, clay, approved class D extinguishers.
Unsuitable Extinguishing Media	DO NOT USE WATER, Carbon dioxide (CO2), Dry chemical, Foam
Flash Point	No information available
Method -	No information available
Autoignition Temperature	460 °C / 860 °F
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

Flammable. Fine dust dispersed in air may ignite. Pyrophoric: Spontaneously flammable in air. Water reactive. Contact with water liberates extremely flammable gases. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products

Hydrogen

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
1

Flammability
4

Instability
3

Physical hazards
W

6. Accidental release measures

Personal Precautions

Use personal protective equipment. Remove all sources of ignition. Avoid dust formation. Take precautionary measures against static discharges. Do not get in eyes, on skin, or on clothing.

Environmental Precautions

Should not be released into the environment. See Section 12 for additional ecological information.

Methods for Containment and Clean Up

Remove all sources of ignition. Do not expose spill to water. Sweep up or vacuum up spillage and collect in suitable container for disposal. Use spark-proof tools and explosion-proof equipment. Avoid dust formation.

7. Handling and storage

Handling

Use only under a chemical fume hood. Wear personal protective equipment. Avoid dust formation. Avoid contact with skin, eyes and clothing. Avoid ingestion and inhalation. Handle under an inert atmosphere. Do not allow contact with air. Do not allow contact with water. Keep away from open flames, hot surfaces and sources of ignition. Use spark-proof tools and explosion-proof equipment. Take precautionary measures against static discharges.

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store under an inert atmosphere. Keep away from heat and sources of ignition. Keep away from water.

8. Exposure controls / personal protection

Exposure Guidelines

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

Engineering Measures

Use only under a chemical fume hood. Use explosion-proof electrical/ventilating/lighting/equipment. Ensure that eyewash stations and safety showers are close to the workstation location.

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

Respiratory Protection

Wear appropriate protective gloves and clothing to prevent skin exposure. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State
Appearance

Solid
Light blue

Odor	Odorless
Odor Threshold	No information available
pH	No information available
Melting Point/Range	419 °C / 786.2 °F
Boiling Point/Range	908 °C / 1666.4 °F
Flash Point	No information available
Evaporation Rate	No information available
Flammability (solid,gas)	No information available
Flammability or explosive limits	No information available
Upper	No data available
Lower	No data available
Vapor Pressure	1 mmHg @ 487 °C
Vapor Density	No information available
Relative Density	7.14
Solubility	Insoluble in water
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	460 °C / 860 °F
Decomposition temperature	No information available
Viscosity	No information available
Molecular Formula	Zn
Molecular Weight	65.37

10. Stability and reactivity

Reactive Hazard	Yes
Stability	Water reactive. Moisture sensitive. Air sensitive. Pyrophoric: Spontaneously flammable in air.
Conditions to Avoid	Avoid dust formation. Incompatible products. Exposure to air. Exposure to moist air or water. Keep away from open flames, hot surfaces and sources of ignition.
Incompatible Materials	Strong oxidizing agents, Strong acids, Strong bases, Amines
Hazardous Decomposition Products	Hydrogen
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	Contact with water liberates extremely flammable gases. Pyrophoric: Spontaneously flammable in air.

11. Toxicological information

Acute Toxicity

Product Information	No acute toxicity information is available for this product
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
Zinc powder - zinc dust (pyrophoric)	7440-66-6	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	Tumorigenic effects have been reported in experimental animals. See actual entry in RTECS for complete information.

12. Ecological information

Ecotoxicity

This product contains the following substance(s) which are hazardous for the environment.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Zinc powder - zinc dust (pyrophoric)	0.09 - 0.125 mg/L EC50 72 h 0.11 - 0.271 mg/L EC50 96 h	0.41 mg/L LC50 96 h 0.59 mg/L LC50 96 h 0.24 mg/L LC50 96 h 3.5 mg/L LC50 96 h 7.8 mg/L LC50 96 h 0.45 mg/L LC50 96 h 30 mg/L LC50 96 h 2.66 mg/L LC50 96 h 0.211 - 0.269 mg/L LC50 96 h 2.16 - 3.05 mg/L LC50 96 h	Not listed	0.139 - 0.908 mg/L EC50 48 h

Persistence and Degradability No information available

Bioaccumulation/ Accumulation No information available.

Mobility No information available.

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

UN-No	UN1436
Proper Shipping Name	ZINC POWDER
Hazard Class	4.3
Subsidiary Hazard Class	4.2
Packing Group	II

TDG

UN-No	UN1436
Proper Shipping Name	ZINC POWDER
Hazard Class	4.3
Subsidiary Hazard Class	4.2
Packing Group	II

IATA

UN-No	UN1436
Proper Shipping Name	ZINC POWDER
Hazard Class	4.3
Subsidiary Hazard Class	4.2
Packing Group	II

IMDG/IMO

UN-No	UN1436
Proper Shipping Name	ZINC POWDER
Hazard Class	4.3

Subsidiary Hazard Class 4.2
Packing Group II

15. Regulatory information

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Zinc powder - zinc dust (pyrophoric)	X	X	-	231-175-3	-		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

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Zinc powder - zinc dust (pyrophoric)	7440-66-6	100	1.0

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	Yes
Sudden Release of Pressure Hazard	No
Reactive Hazard	Yes

Clean Water Act

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Zinc powder - zinc dust (pyrophoric)	-	-	X	X

Clean Air Act Not applicable

OSHA Occupational Safety and Health Administration
Not applicable

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substances RQs	CERCLA EHS RQs
Zinc powder - zinc dust (pyrophoric)	1000 lb	-

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

State Right-to-Know

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Zinc powder - zinc dust (pyrophoric)	X	X	X	-	X

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

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class B6 Reactive flammable material

**16. Other information**

Prepared By Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Creation Date 02-Jun-2010
Revision Date 19-Aug-2014
Print Date 19-Aug-2014
Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Disclaimer

The information provided on 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 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 SDS

Section 1 Chemical Product and Company Identification

Page E1 of E2

**Aldon
Corporation**221 Rochester Street
Avon, NY 14414
(585) 226-6177**CHEMTREC 24 Hour Emergency USA**
Phone Number (800) 424-9300
For laboratory and industrial use only.
Not for drug, food or household use.**Product** ZINC NITRATE, 0.1 MOLAR SOLUTION**Synonyms** Zinc Nitrate, Water Solution

Section 2 Hazards Identification

Signal word: WARNING**Pictograms:** GHS07**Target organs:** None known**GHS Classification:**

Acute toxicity (Category 5)

Skin irritation (Category 3)

Eye irritation (Category 2B)

STOT SE (Category 3)

GHS Label information: Hazard statement:

H303: May be harmful if swallowed.

H316: Causes mild skin irritation.

H320: Causes eye irritation.

H335: May cause respiratory irritation.

Precautionary statement:

P261: Avoid breathing mist/vapours/spray.

P264: Wash hands thoroughly after handling.

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

P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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 attention.

P332+P313: If skin irritation occurs: Get medical attention.

P312: Call a POISON CENTER or doctor if you feel unwell.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P405: Store locked up.

P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known

Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Water	7732-18-5	97.03%	231-791-2
Zinc nitrate, hexahydrate	10196-18-6	2.97%	231-943-8

Section 4 First Aid Measures

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.**INHALATION:** MAY BE HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.**EYE CONTACT:** MAY CAUSE EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.**SKIN ABSORPTION:** MAY BE HARMFUL IF ABSORBED THROUGH SKIN. MAY CAUSE SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

Suitable Extinguishing Media: Use any media suitable for extinguishing supporting fire.**Protective Actions for Fire-fighters:** In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.**Specific Hazards:** In fire conditions, water may evaporate from this solution which may cause hazardous decomposition products to be formed as dust or fume.

Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.**Environmental Precautions:** Avoid runoff into storm sewers and ditches which lead to waterways.**Containment and Cleanup:** Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8 Exposure Controls / Personal Protection

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	Zinc nitrate	Not established	Not established	Not established

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Clear, colorless liquid.	Evaporation rate (Water = 1): <1	Partition coefficient: Data not available
Odor: No odor.	Flammability (solid/gas): Data not available.	Auto-ignition temperature: Data not available
Odor threshold: Data not available.	Explosion limits: Lower / Upper: Data not available	Decomposition temperature: Data not available.
pH: Data not available.	Vapor pressure (mm Hg): 14 (water)	Viscosity: Data not available.
Melting / Freezing point: Approximately 0°C (32°F) (water)	Vapor density (Air = 1): 0.7 (water)	Molecular formula: Mixture
Boiling point: Approximately 100°C (212°F) (water)	Relative density (Specific gravity): Approximately 1.0 (water)	Molecular weight: Mixture
Flash point: Data not available	Solubility(ies): Complete in water.	

Section 10 Stability & Reactivity

Chemical stability: Stable **Hazardous polymerization:** Will not occur.

Conditions to avoid: Excessive temperatures which cause evaporation.

Incompatible materials: Combustible materials, reducing agents, organic materials, metal powders, stannous chloride, phosphorous, thiocyanates, cyanides, sodium hypophosphite.

Hazardous decomposition products: Nitrogen oxides and toxic fumes of zinc oxides.

Section 11 Toxicological Information

Acute toxicity: Oral-rat LD50: 1190 mg/kg ; Dermal-rabbit LD50: 2400 mg/kg [Zinc nitrate, hexahydrate]

Skin corrosion/irritation: Irritant

Serious eye damage/irritation: Irritant

Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available

Carcinogenicity: Data not available

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: Data not available

STOT-single exposure: Data not available

STOT-repeated exposure: Data not available

Aspiration hazard: Data not available

Potential health effects:

Inhalation: Inhalation causes cough, sore throat.

Ingestion: Ingestion causes abdominal cramps, abdominal pain, blue lips, fingernails and skin, nausea.

Skin: Contact with skin causes redness and pain.

Eyes: Contact with eyes causes redness, pain and blurred vision.

Signs and symptoms of exposure: Exercise appropriate procedures to minimize potential hazards.

Additional information: RTECS #: ZH4775000 [Zinc nitrate, hexahydrate]

Section 12 Ecological Information

Toxicity to fish: No data available

Toxicity to daphnia and other aquatic invertebrates: No data available

Toxicity to algae: No data available

Persistence and degradability: No data available

Bioaccumulative potential: No data available

Mobility in soil: No data available

PBT and vPvB assessment: No data available

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport Information (US DOT / CANADA TDG)

UN/NA number: Not applicable

Shipping name: Not Regulated

Hazard class: Not applicable

Packing group: Not applicable

Reportable Quantity: Yes

Marine pollutant: No

Exceptions: Not applicable

2016 ERG Guide # Not applicable

Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Zinc nitrate (as solid)	Listed	1000 lbs (454 kg)	Not listed	Not listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Section 16 Other Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.



SDS #: 863.1

Revision Date: April 12, 2016

Zinc Nitrate Solution ≥10 - 23% Safety Data Sheet (SDS)

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Zinc Nitrate Solution ≥10 - 23%

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

Chemtrec Emergency Phone Number: (800) 424-10505

Signal Word
WARNING

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin irritation (Category 2). Causes skin irritation (H315).

Hazard class: Serious eye irritation (Category 2A). Causes serious eye irritation (H319).



SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Zinc nitrate	10196-18-6	$\text{Zn}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$	297.49	10-23%
Water	7732-18-5	H_2O	18.00	90-77%

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.**If in eyes:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists eyes:** Get medical advice or attention (P337+P313).**If on skin:** Wash with plenty of water (P302+P352). **If skin irritation occurs:** Get medical advice or attention (P332+P313).**If swallowed:** Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solution.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA Code

None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Contain spill with sand or absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #3. Store with amides, nitrates, nitrites and azides.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Clear, colorless liquid. Odorless.

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Good, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Corrosive.

ORL-RAT LD₅₀: 1190 mg/kg as zinc nitrate

Chronic effects: N.A.

IHL-RAT LC₅₀: N.A.

Target organs: N.A.

SKN-RBT LD₅₀: N.A.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #26b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

N.A. = Not available, not all health aspects of this substance have been fully investigated.

N/A = Not applicable

Consult your copy of the Flinn Science Catalog/Reference Manual for additional information about laboratory chemicals.

Revision Date: April 12, 2016

Safety Data Sheet

Zinc, Granulated

CAROLINA[®]
www.carolina.com

Section 1 Product Description

Product Name: Zinc, Granulated
Recommended Use: Science education applications
Synonyms: Zinc
Distributor: Carolina Biological Supply Company
2700 York Road, Burlington, NC 27215
1-800-227-1150
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)
Chemtrec: 800-424-9300 (Transportation Spill Response 24 hours)

Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

WARNING



Very toxic to aquatic life.

GHS Classification:
Hazardous to the aquatic environment - Acute Category 1

Section 3 Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Zinc, Granulated	7440-66-6	100

Section 4 First Aid Measures

Emergency and First Aid Procedures

Inhalation: In case of accident by inhalation: remove casualty to fresh air and keep at rest.
Eyes: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin Contact: After contact with skin, wash immediately with plenty of water.
Ingestion: If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Section 5 Firefighting Procedures

Extinguishing Media: Use dry chemical or cover with dry sand or lime.
Fire Fighting Methods and Protection: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards: Avoid Dusting. May become explosive when dispersed in air. Water sprayed onto burning material may cause frothing and splattering of burning liquid with possible injury of firefighting personnel.
Hazardous Combustion Products: Zinc Oxide,

Section 6 Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled: No adverse health affects expected from the clean-up of spilled material. Follow personal protective equipment recommendations found in Section 8 of this (M)SDS.

Safety Data Sheet

Vacuum or sweep up material and place in a disposal container Do not allow the spilled product to enter public drainage system or open waterways. Collect spillage.

Section 7

Handling and Storage

Handling: Avoid release to the environment. Keep container tightly closed in a cool, well-ventilated place.
Storage: Suitable for any general chemical storage.
Storage Code: Green - general chemical storage

Section 8

Protection Information

Chemical Name	(TWA)	ACGIH	(STEL)	(TWA)	OSHA PEL	(STEL)
No data available	N/A		N/A	N/A		N/A

Control Parameters

Engineering Measures:

No exposure limits exist for the constituents of this product. General room ventilation might be required to maintain operator comfort under normal conditions of use.

Personal Protective Equipment (PPE):

Lab coat, apron, eye wash, safety shower.

Respiratory Protection:

No respiratory protection required under normal conditions of use.

Eye Protection:

Wear chemical splash goggles when handling this product. Have an eye wash station available.

Skin Protection:

Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves:

Nitrile

Section 9

Physical Data

Formula: Zn	Vapor Pressure: 1.33 hPa at 487 °C
Molecular Weight: 65.39	Evaporation Rate (BuAc=1): N/A
Appearance: Grey Lumps	Vapor Density (Air=1): N/A
Odor: No data available	Specific Gravity: 7.14
Odor Threshold: No data available	Solubility in Water: Practically Insoluble
pH: No data available	Log Pow (calculated): No data available
Melting Point: 786 C	Autoignition Temperature: No data available
Boiling Point: 1664 C	Decomposition Temperature: No data available
Flash Point: No data available	Viscosity: No data available
Flammable Limits in Air: N/A N/A	Percent Volatile by Volume: 0

Section 10

Reactivity Data

Reactivity:	No data available
Chemical Stability:	Stable under normal conditions.
Conditions to Avoid:	None known.
Incompatible Materials:	Caustics (bases), Acids, Oxidizing materials
Hazardous Decomposition Products:	Zinc Oxide,
Hazardous Polymerization:	Will not occur

Section 11

Toxicity Data

Routes of Entry	Inhalation and ingestion.
Symptoms (Acute):	Respiratory disorders, Gastrointestinal,
Delayed Effects:	No data available

Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
No data available	7440-66-6	Not determined	Not determined	Not determined

Carcinogenicity:

Chemical Name	CAS Number	IARC	NTP	OSHA
No data available	7440-66-6	Not listed	Not listed	Not listed

Safety Data Sheet

Chronic Effects:

Mutagenicity:	No evidence of a mutagenic effect.
Teratogenicity:	No evidence of a teratogenic effect (birth defect).
Sensitization:	No evidence of a sensitization effect.
Reproductive:	No evidence of negative reproductive effects.
Target Organ Effects:	
Acute:	See Section 2
Chronic:	Not listed as a carcinogen by IARC, NTP or OSHA.

Section 12

Ecological Data

Overview:	This material is not expected to be harmful to the ecology.
Mobility:	No data
Persistence:	No data
Bioaccumulation:	No data
Degradability:	No data
Other Adverse Effects:	No data

Chemical Name
Zinc, Granulated

CAS Number
7440-66-6

Eco Toxicity
96 HR LC50 PIMEPHALES PROMELAS 2.66 MG/L [STATIC]
96 HR LC50 CYPRINUS CARPIO 30 MG/L
96 HR LC50 CYPRINUS CARPIO 7.8 MG/L [STATIC]
96 HR LC50 LEPOMIS MACROCHIRUS 3.5 MG/L [STATIC]
96 HR LC50 ONCORHYNCHUS MYKISS 0.41 MG/L [STATIC]

Section 13

Disposal Information

Disposal Methods:	Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
Waste Disposal Code(s):	Not Determined

Section 14

Transport Information

Ground - DOT Proper Shipping Name:
N/A

Air - IATA Proper Shipping Name:
Not regulated for air transport by IATA.

Section 15

Regulatory Information

TSCA Status: All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
----------------------	-------------------	-------------------	-----------------	------------------	------------------	----------------------

Safety Data Sheet

Zinc, Granulated

7440-66-6

Zinc

No

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);
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)

No

No

California Prop 65:

No California Proposition 65 ingredients

Section 16

Additional Information

Revised: 08/21/2018

Replaces: 06/15/2018

Printed: 08-25-2018

The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

Glossary

ACGIH American Conference of Governmental
Industrial Hygienists
CAS Chemical Abstract Service Number
CERCLA Comprehensive Environmental Response,
Compensation, and Liability Act
DOT U.S. Department of Transportation
IARC International Agency for Research on Cancer
N/A Not Available

NTP National Toxicology Program
OSHA Occupational Safety and Health Administration
PEL Permissible Exposure Limit
ppm Parts per million
RCRA Resource Conservation and Recovery Act
SARA Superfund Amendments and Reauthorization Act
TLV Threshold Limit Value
TSCA Toxic Substances Control Act
IDLH Immediately dangerous to life and health

Safety Data Sheet

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

Printing date 30.09.2015

Revision: 30.06.2019

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

- **1.1 Product identifier**
- **Trade name:** Zoom Spout Oiler
- **Article number:** 14114
- **CAS Number:**
64741-88-4
- **EC number:**
265-090-8
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Lubricating oil
- **1.3 Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
Highside Chemicals, Inc.
11114 Reichold Road
Gulfport, MS 39503 USA
Phone: (228) 896-9220
- **1.4 Emergency telephone number:**
ChemTel Inc.
(800)255-3924, +1 (813)248-0585

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
The product is not classified as hazardous according to OSHA GHS regulations within the United States.
The substance is not classified as hazardous according to the CLP regulation.
- **Additional information:**
There are no other hazards not otherwise classified that have been identified.
0 % of the mixture consists of component(s) of unknown toxicity.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
This product does not have a classification according to the CLP regulation.
The product is not classified as hazardous according to OSHA GHS regulations within the United States.
- **Hazard pictograms** Not Regulated
- **Signal word** Not Regulated
- **Hazard-determining components of labelling:** None.
- **Hazard statements** Not Regulated
- **Precautionary statements** Not Regulated
- **NFPA ratings (scale 0 - 4)**



(Cont'd. on page 2)

Safety Data Sheet

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

Printing date 30.09.2015

Revision: 30.06.2019

Trade name: Zoom Spout Oiler

(Cont'd. from page 1)

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

HEALTH	0	Health = 0
FIRE	1	Fire = 1
REACTIVITY	0	Reactivity = 0

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

SECTION 3: Composition/information on ingredients

- **3.1 Substances**
- **CAS No. Description**
64741-88-4 Distillates (petroleum), solvent-refined heavy paraffinic
- **Identification number(s)**
- **EC number:** 265-090-8
- **Index number:** 649-454-00-7
- **Additional information:**
Note L: The classification as a carcinogen need not apply if it can be shown that the substance contains less than 3 % DMSO extract as measured by IP 346 'Determination of polycyclic aromatics in unused lubricating base oils and asphaltene free petroleum fractions - Dimethyl sulphoxide extraction refractive index method', Institute of Petroleum, London. This product meets these requirements.

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Wash with soap and water.
If skin irritation is experienced, consult a doctor.
- **After eye contact:**
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.
- **4.2 Most important symptoms and effects, both acute and delayed**
Slight irritant effect on eyes.
Slight irritant effect on skin and mucous membranes.
Gastric or intestinal disorders when ingested.
Nausea in case of ingestion.
- **Hazards** Repeated exposure may cause skin dryness or cracking.

(Cont'd. on page 3)

Safety Data Sheet

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

Printing date 30.09.2015

Revision: 30.06.2019

Trade name: Zoom Spout Oiler

(Cont'd. from page 2)

- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
Carbon dioxide
Foam
Fire-extinguishing powder
Gaseous extinguishing agents
- **For safety reasons unsuitable extinguishing agents:** Water
- **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
- **Additional information** No further relevant information available.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation
Wear protective equipment. Keep unprotected persons away.
For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.
Particular danger of slipping on leaked/spilled product.
- **6.2 Environmental precautions:**
Do not allow to enter sewers/ surface or ground water.
Inform respective authorities in case of seepage into water course or sewage system.
Prevent from spreading (e.g. by damming-in or oil barriers).
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Remove from the water surface (e.g. skim or suck off).
Dispose of the material collected according to regulations.
Send for recovery or disposal in suitable receptacles.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Prevent formation of aerosols.
Avoid splashes or spray in enclosed areas.

(Cont'd. on page 4)

Safety Data Sheet

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

Printing date 30.09.2015

Revision: 30.06.2019

Trade name: Zoom Spout Oiler

(Cont'd. from page 3)

- Use only in well ventilated areas.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Avoid storage near extreme heat, ignition sources or open flame.
- **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from oxidising agents.
- **Further information about storage conditions:**
Store in cool, dry conditions in well sealed receptacles.
Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see section 7.
- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **DNELs** No further relevant information available.
- **PNECs** No further relevant information available.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes.
Avoid close or long term contact with the skin.
- **Respiratory protection:**
Not required under normal conditions of use.
Use suitable respiratory protective device when aerosol or mist is formed.
For spills, respiratory protection may be advisable.
- **Protection of hands:**



Protective gloves

Gloves are advised for repeated or prolonged contact.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

(Cont'd. on page 5)

Safety Data Sheet

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

Printing date 30.09.2015

Revision: 30.06.2019

Trade name: Zoom Spout Oiler

(Cont'd. from page 4)

· **Eye protection:**



Safety glasses

- **Body protection:** Oil resistant protective clothing
- **Limitation and supervision of exposure into the environment** No special requirements.
- **Risk management measures** No special requirements.

SECTION 9: Physical and chemical properties

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

· **General Information**

· **Appearance:**

Form:	Liquid
Colour:	Clear
Odour:	Petroleum-like
Odour threshold:	Not determined.
pH-value:	Not determined.

· **Change in condition**

Melting point/Melting range:	Not Determined.
Boiling point/Boiling range:	Undetermined.

- **Flash point:** > 150 °C (> 302 °F)
- **Flammability (solid, gaseous):** Not applicable.
- **Auto/Self-ignition temperature:** Not determined.
- **Decomposition temperature:** Not determined.
- **Self-igniting:** Not determined.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
 - Lower: Not determined.
 - Upper: Not determined.
- **Oxidising properties** Not determined.
- **Vapour pressure at 20 °C (68 °F):** 1 hPa (1 mm Hg)
- **Density at 15,6 °C (60 °F):** 0.86 - 0.87 g/cm³ (7,177 - 7,26 lbs/gal)
- **Relative density** Not determined.
- **Vapour density at 20 °C (68 °F)** > 1 g/cm³ (> 8,345 lbs/gal) (Air =1)
- **Evaporation rate at 20 °C (68 °F)** < 1 (Butyl Acetate = 1)
- **Solubility in / Miscibility with water:** Not miscible or difficult to mix.
- **Partition coefficient (n-octanol/water):** 4 - 6 log POW

(Cont'd. on page 6)

Safety Data Sheet

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

Printing date 30.09.2015

Revision: 30.06.2019

Trade name: Zoom Spout Oiler

(Cont'd. from page 5)

- **Viscosity:**
 - Dynamic:** Not determined.
 - Kinematic at 40 °C (104 °F):** 30 - 110 cSt
- **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
To avoid thermal decomposition do not overheat.
- **10.3 Possibility of hazardous reactions**
Toxic fumes may be released if heated above the decomposition point.
Reacts with strong acids and oxidising agents.
- **10.4 Conditions to avoid**
Keep away from heat and direct sunlight.
Store away from oxidising agents.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Hydrocarbons

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**
- **LD/LC50 values relevant for classification:** None.
- **Primary irritant effect:**
- **Skin corrosion/irritation** Slight irritant effect on skin and mucous membranes.
- **Serious eye damage/irritation** Slight irritant effect on eyes.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Repeated dose toxicity:** Repeated exposure may cause skin dryness or cracking.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

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

(Cont'd. on page 7)

Safety Data Sheet

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

Printing date 30.09.2015

Revision: 30.06.2019

Trade name: Zoom Spout Oiler

(Cont'd. from page 6)

- **12.2 Persistence and degradability** The product is partially biodegradable. Significant residuals remain.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:**
Due to mechanical actions of the product (e.g. agglutinations) damages may occur.
The product is oxygen-consuming. The declared action may be partly caused by lack of oxygen.
- **Additional ecological information:**
- **General notes:**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Contact waste processors for recycling information.
Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- | | |
|--|-----------------|
| · 14.1 UN-Number | |
| · DOT, ADR, IMDG, IATA | Not Regulated |
| · 14.2 UN proper shipping name | |
| · DOT, ADR, IMDG, IATA | Not Regulated |
| · 14.3 Transport hazard class(es) | |
| · DOT, ADR, IMDG, IATA | |
| · Class | Not Regulated |
| · 14.4 Packing group | |
| · DOT, ADR, IMDG, IATA | Not Regulated |
| · 14.5 Environmental hazards: | Not applicable. |
| · 14.6 Special precautions for user | Not applicable. |
| · 14.7 Transport in bulk according to Annex II of
Marpol and the IBC Code | Not applicable. |

(Cont'd. on page 8)

Safety Data Sheet

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

Printing date 30.09.2015

Revision: 30.06.2019

Trade name: Zoom Spout Oiler

· UN "Model Regulation":

Not Regulated

(Cont'd. from page 7)

SECTION 15: Regulatory information

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

· United States (USA)

· SARA

· Section 355 (extremely hazardous substances):

Substance is not listed.

· Section 313 (Specific toxic chemical listings):

Substance is not listed.

· TSCA (Toxic Substances Control Act):

Substance is listed.

· Proposition 65 (California):

· Chemicals known to cause cancer:

Substance is not listed.

· Chemicals known to cause reproductive toxicity for females:

Substance is not listed.

· Chemicals known to cause reproductive toxicity for males:

Substance is not listed.

· Chemicals known to cause developmental toxicity:

Substance is not listed.

· Carcinogenic Categories

· EPA (Environmental Protection Agency)

Substance is not listed.

· IARC (International Agency for Research on Cancer)

Substance is not listed.

· TLV (Threshold Limit Value established by ACGIH)

Substance is not listed.

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

Substance is not listed.

· Canada

· Canadian Domestic Substances List (DSL)

Substance is listed.

· Canadian Ingredient Disclosure list (limit 0.1%)

Substance is not listed.

· Canadian Ingredient Disclosure list (limit 1%)

Substance is not listed.

(Cont'd. on page 9)

Safety Data Sheet

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

Printing date 30.09.2015

Revision: 30.06.2019

Trade name: Zoom Spout Oiler

(Cont'd. from page 8)

- **Directive 2012/18/EU**

- **Named dangerous substances - ANNEX I**

Substance is not listed.

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

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

Substance is not listed.

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

SECTION 16: Other information

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

- **Sources**

Website, European Chemicals Agency ([http://http://echa.europa.eu/](http://echa.europa.eu/))Website, US EPA Substance Registry Services ([http://http://ofmpub.epa.gov/sor_internet/registry/substreg/home/overview/home.do](http://ofmpub.epa.gov/sor_internet/registry/substreg/home/overview/home.do))Website, Chemical Abstracts Registry, American Chemical Society (<https://www.cas.org>)

Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers

SDS Prepared by:

ChemTel Inc.

1305 North Florida Avenue

Tampa, Florida USA 33602-2902

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

Website: www.chemtelinc.com