


SAFETY DATA SHEET		 SILVER FERN CHEMICAL INC
FERNOL 91-6		
Revision: 1.02 US (EN)	Issuing date: 09/25/2014	

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

1.1 Product identifier

Trade name : FERNOL 91-6

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

Uses of the Substance / Mixture : Specific use(s): Detergent

1.3 Details of the supplier of the safety data sheet

Manufacturer/Distributor : Silver Fern Chemical, Inc.
2226 Queen Anne Ave N., Suite B
Seattle, WA 98109
Phone: 866-282-3384
Info@silverfernchemical.com

1.4 Emergency telephone

Emergency telephone number: INFO-TRAC +1-800-535-5053; Outside USA & Canada +1-352-323-3500

SECTION 2: Hazards identification

Although OSHA has not adopted the environmental portion of the GHS regulations, this document may include information on environmental effects.

2.1 Classification of the substance or mixture

HCS 2012 (29 CFR 1910.1200)

Acute toxicity, Category 4 H302: Harmful if swallowed.
Serious eye damage, Category 1 H318: Causes serious eye damage.

2.2 Label elements

HCS 2012 (29 CFR 1910.1200)

Pictogram : 

Signal Word : Danger

Hazard Statements:

H302 Harmful if swallowed.
H318 Causes serious eye damage.

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Precautionary Statements:

Prevention

P264

P270

P280

Wash skin thoroughly after handling.

Do not eat, drink or smoke when using this product.

Wear eye protection/ face protection.

Response

P301 + P312

P305 + P351 + P338

P310

P330

IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER or doctor/ physician.

Rinse mouth.

2.3 Other hazards which do not result in classification

H402: Harmful to aquatic life.

Slightly irritating to the skin.

SECTION 3: Composition/information on ingredients

3.1 Substance

Chemical nature : Alcohols ethoxylated

Hazardous Ingredients and Impurities

Chemical Name	Identification number CAS-No.	Concentration [%]
Ethoxylated Alcohols	68439-46-3	90 - 100

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

Non Hazardous Ingredients and Impurities

Chemical Name	Identification number CAS-No.	Concentration [%]
Water	7732-18-5	0.1 - 1

3.2 Mixture

Not applicable, this product is a substance.

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SECTION 4: First aid measures

4.1 Description of first-aid measures

- General advice : Show this material safety data sheet to the doctor in attendance.
First responder needs to protect himself.
Place affected apparel in a sealed bag for subsequent decontamination.
- If inhaled : Negligible or unlikely exposure pathways
Move to fresh air in case of accidental inhalation of vapors.

Consult a physician if necessary.
- Skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Seek medical advice.
Wash contaminated clothing before reuse.
- Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Seek medical advice.
- Ingestion : Do not induce vomiting without medical advice.
If victim is conscious:
Rinse mouth with water.
Keep at rest.
Do not give anything to drink.
Do not leave the victim unattended.
Vomiting may occur spontaneously
Risk of product entering the lungs on vomiting after ingestion.
Lay victim on side.
Seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed

- Risks : Skin contact may aggravate existing skin disease
Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician : Treat symptomatically.
There is no specific antidote available.

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

SECTION 5: Firefighting measures

- Flash point : 369 °F (187 °C)
Pensky-Martens closed cup

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Flammability class: Will burn

Autoignition temperature : no data available

Flammability / Explosive limit : no data available

5.1 Extinguishing media

Suitable extinguishing media : Water spray
Foam
Carbon dioxide (CO2)
Multipurpose powders

Unsuitable extinguishing media : High volume water jet
(frothing possible)

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire fighting : Under fire conditions:
Will burn
On combustion or on thermal decomposition (pyrolysis), releases:
Carbon oxides

5.3 Advice for firefighters

Special protective equipment for fire-fighters : Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.

Specific fire fighting methods : Do not use a solid water stream as it may scatter and spread fire.

Further information : Standard procedure for chemical fires.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions, protective equipment and emergency procedures : Wear suitable protective equipment.
For further information refer to section 8 "Exposure controls / personal protection."

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6.2 Environmental precautions

Environmental precautions : Stop the leak. Turn leaking containers leak-side up to prevent the escape of liquid.
 Contain the spilled material by diking.
 Do not flush into surface water or sanitary sewer system.
 Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems.
 Spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies

6.3 Methods and materials for containment and cleaning up

Recovery : Stop leak if safe to do so.

Recovery : Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

Recovery : Shovel or sweep up.
 Never return spills in original containers for re-use.

Recovery : Keep in properly labeled containers.
 Keep in suitable, closed containers for disposal.

Decontamination / cleaning : Wash nonrecoverable remainder with large amounts of water.
 Clean contaminated surface thoroughly.
 Recover the cleaning water for subsequent disposal.

Decontamination / cleaning : Decontaminate tools, equipment and personal protective equipment in a segregated area.

Disposal : Dispose of in accordance with local regulations.

Additional advice : Material can create slippery conditions.

6.4 Reference to other sections

Reference to other sections : 7. HANDLING AND STORAGE
 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
 13. DISPOSAL CONSIDERATIONS

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SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Technical measures : Ethylene oxide may collect in container head space.
Provide adequate ventilation.
- Advice on safe handling and usage : Handle in accordance with good industrial hygiene and safety practice.
- Avoid inhalation of vapor or mist.
Avoid contact with skin and eyes.
- Freezing will affect the physical condition but will not damage the material.
Thaw and mix before using.
Avoid localized overheating.
Vent drums while heating
Homogenize before using.
- Hygiene measures : Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this materials:
- 1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.
 - 2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
 - 3) Wash exposed skin promptly to remove accidental splashes or contact with material.
- The user is responsible for monitoring the working environment in accordance with local laws and regulations.

7.2 Conditions for safe storage, including any incompatibilities

- Technical Measures for storage : Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems.

Storage conditions

- Recommended : Stable under normal conditions.
Keep in a dry, cool and well-ventilated place.
Keep container tightly closed.
- To be avoided : Keep away from open flames, hot surfaces and sources of ignition.
Keep away from incompatible materials to be indicated by the manufacturer
- Incompatible products : Hazardous reactions may occur on contact with certain chemicals. (Refer to the list of incompatible materials section 10: "Stability-Reactivity").

Storage stability

- Storage temperature : 59 - 120 °F (15 - 49 °C)

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7.3 Specific end use(s)

no data available

SECTION 8: Exposure controls/personal protection

Introductory Remarks:

These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. While developing safe handling procedures, do not overlook the need to clean equipment and piping systems for maintenance and repairs. Waste resulting from these procedures should be handled in accordance with Section 13: Disposal Considerations.

Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

8.1 Control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Control measures

Engineering measures : Where engineering controls are indicated by use conditions or a potential for excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures :

Effective exhaust ventilation system

Personal protective equipment

Respiratory protection : When respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industrial recommendations.

Hand protection : Recommended preventive skin protection
Gloves

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Eye protection : Eye and face protection requirements will vary dependent upon work environment conditions and material handling practices. Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material.

Eye contact should be prevented through the use of:

Safety glasses with side-shields

Skin and body protection : Recommended preventive skin protection
Footwear protecting against chemicals
impervious clothing

Hygiene measures : Personal hygiene is an important work practice exposure control measure and

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the following general measures should be taken when working with or handling this materials:

- 1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.
- 2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
- 3) Wash exposed skin promptly to remove accidental splashes or contact with material.

The user is responsible for monitoring the working environment in accordance with local laws and regulations.

- Protective measures :
- Ensure that eyewash stations and safety showers are close to the workstation location.
 - Emergency equipment immediately accessible, with instructions for use.
 - Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the potential hazards, and/or risks that may occur during use.
- The protective equipment must be selected in accordance with current local standards and in cooperation with the supplier of the protective equipment.

SECTION 9: Physical and chemical properties

Physical and Chemical properties here represent typical properties of this product. Contact the business area using the Product information phone number in Section 1 for its exact specifications.

9.1 Information on basic physical and chemical properties

- Appearance : Form : viscous
Physical state: liquid
Color: clear
- Odor : slight pleasant
- Odor Threshold : no data available
- pH : 5.5 - 7.5 (1 % (m/v))
- Freezing point : < 45 °F (7 °C)
- Boiling point/boiling range : > 450 °F (232 °C) (760 mmHg (1,013.25 hPa))
- Flash point : 369 °F (187 °C) Pensky-Martens closed cup
- Flammability class: Will burn
- Evaporation rate (Butylacetate = 1) : no data available
- Flammability (solid, gas) : no data available
- Flammability (liquids) : no data available

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Flammability / Explosive limit : no data available
 Autoignition temperature : no data available
 Vapor pressure : < 0.01 mmHg (0.01 hPa) (77 °F (25 °C))
 Vapor density : no data available
 Density : Relative density : 0.99 (77 °F (25 °C))
 Solubility : Water solubility :
 soluble

 Partition coefficient: n-octanol/water : no data available
 Thermal decomposition : no data available
 Viscosity : no data available
 Explosive properties : no data available
 Oxidizing properties : no data available

9.2 Other information

Volatiles by Volume : < 0.5 %

SECTION 10: Stability and reactivity

10.1 Reactivity

no data available

10.2 Chemical stability

Chemical stability : Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Polymerization : Hazardous polymerization does not occur.

10.4 Conditions to avoid

Conditions to avoid : Keep away from heat and sources of ignition.
 Keep away from flames and sparks.

10.5 Incompatible materials

Materials to avoid : Strong oxidizing agents

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10.6 Hazardous decomposition products

Decomposition products : On combustion or on thermal decomposition (pyrolysis), releases: (Carbon oxides (CO + CO₂)).

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity : According to the data on the components
Harmful if swallowed.
According to the classification criteria for mixtures.

Acute inhalation toxicity : Not classified as hazardous for acute toxicity according to GHS
According to the data on the components
According to the classification criteria for mixtures.

Acute dermal toxicity : Not classified as hazardous for acute toxicity according to GHS
According to the data on the components
According to the classification criteria for mixtures.

Acute toxicity (other routes of administration) : no data available

Skin corrosion/irritation

Skin irritation : Not classified as irritating to skin
According to the data on the components
According to the classification criteria for mixtures.

Serious eye damage/eye irritation

Eye irritation : Risk of serious damage to eyes.
According to the data on the components
According to the classification criteria for mixtures.

Respiratory or skin sensitization

Sensitization : Does not cause skin sensitization.
According to the data on the components
According to the classification criteria for mixtures.

Mutagenicity

Genotoxicity in vitro : According to the data on the components
Product is not considered to be genotoxic
According to the classification criteria for mixtures.

Genotoxicity in vivo : According to the data on the components
Product is not considered to be genotoxic
According to the classification criteria for mixtures.

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Carcinogenicity

Carcinogenicity : no data available

This product does not contain any ingredient designated as probable or suspected human carcinogens by:

NTP
IARC
OSHA
ACGIH

Toxicity for reproduction and development

Toxicity to reproduction / fertility : According to the data on the components
The product is not considered to affect fertility.
According to the classification criteria for mixtures.

Developmental Toxicity/Teratogenicity : According to the data on the components
The product is not considered to be toxic for development.
The product is not considered to be teratogenic.
According to the classification criteria for mixtures.

STOT

STOT-single exposure : Toxicology Assessment:
The substance or mixture is not classified as specific target organ toxicant, single exposure.
According to the classification criteria for mixtures.

STOT-repeated exposure : Toxicology Assessment:
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
According to the classification criteria for mixtures.

Aspiration toxicity

Aspiration toxicity : no data available

SECTION 12: Ecological information

12.1 Toxicity

Aquatic Compartment

Acute toxicity to fish : The product itself has not been tested.

Acute toxicity to daphnia and other aquatic invertebrates. : The product itself has not been tested.

Toxicity to aquatic plants : The product itself has not been tested.

Toxicity to microorganisms : The product itself has not been tested.

Chronic toxicity to fish : The product itself has not been tested.

Chronic toxicity to daphnia and other aquatic invertebrates. : The product itself has not been tested.

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Ecotoxicity assessment

- Acute aquatic toxicity : According to the data on the components
Harmful to aquatic life.
According to the classification criteria for mixtures.
- Chronic aquatic toxicity : According to the data on the components
Does not have any known long term adverse effects on the aquatic organisms tested
According to the classification criteria for mixtures.

12.2 Persistence and degradability

Biodegradability

- Biodegradability
Ethoxylated Alcohols : Method: OECD Test Guideline 301 B
76 % - 28 Days
Readily biodegradable.
Published data

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

- Results of PBT and vPvB assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

no data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product Disposal

- Advice on Disposal : Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Consult state and local regulations regarding the proper disposal of this material.
- Waste Code : EPA:
Hazardous Waste – NO

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Advice on cleaning and disposal of packaging

Advice : Rinse with an appropriate solvent.
 Other data : Dispose of in accordance with local regulations.

SECTION 14: Transport information

DOT
not regulated

TDG
not regulated

IMDG
not regulated

IATA
not regulated

Note: The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transportation regulations for hazardous materials, it would be advisable to check their validity with your sales office.

SECTION 15: Regulatory information

15.1 Notification status

United States TSCA Inventory : YES (positive listing)
On TSCA Inventory

Canadian Domestic Substances List (DSL) : YES (positive listing)
All components of this product are on the
Canadian DSL.

Australia Inventory of Chemical Substances (AICS) : YES (positive listing)
On the inventory, or in compliance with the
inventory

Japan. CSCL - Inventory of Existing and New Chemical Substances : YES (positive listing)
On the inventory, or in compliance with the
inventory

Korea. Korean Existing Chemicals Inventory (KECI) : YES (positive listing)
On the inventory, or in compliance with the
inventory

China. Inventory of Existing Chemical Substances in China (IECSC) : YES (positive listing)
On the inventory, or in compliance with the
inventory

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15.2 Federal Regulations

SARA 311/312 Hazards

Fire Hazard	no
Reactivity Hazard	no
Sudden Release of Pressure Hazard	no
Acute Health Hazard	yes
Chronic Health Hazard	no

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:
Glycol Ethers < 10%

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

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

Ingredients	CAS-No.	Reportable quantity
Ethylene Oxide	75-21-8	10 lb
1,4-Dioxane	123-91-1	100 lb

SARA 304 Reportable Quantity

Ingredients	CAS-No.	Reportable quantity
Ethylene Oxide	75-21-8	10 lb

SARA 302 Reportable Quantity

Ingredients	CAS-No.	Reportable quantity
Ethylene Oxide	75-21-8	10 lb

15.3 State Regulations

California Prop 65 : WARNING! This product contains a chemical known in the State of California to cause cancer.
1,4-Dioxane
Ethylene Oxide

WARNING: This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.
Ethylene Oxide

No Significant Risk Levels (NSRLs) have been established for the following:
1,4-Dioxane
Value : 30 micrograms per day

Ethylene Oxide
Value : 2 micrograms per day

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SECTION 16: Other information

NFPA-Classification

Health : 2 moderate
 Flammability : 1 slight
 Instability or Reactivity : 0 minimal

HMIS-Classification

Health : 2 moderate
 Flammability : 1 slight
 Reactivity : 0 minimal

Further information

Date Prepared : 09/25/2014
 Further information : Product classified under the US GHS format.

Key or legend to abbreviations and acronyms used in the safety data sheet

ACGIH : American Conference of Governmental Industrial Hygienists
 OSHA : Occupational Safety and Health Administration
 WHMIS : Workplace Hazardous Materials Information System
 NTP : National Toxicology Program
 IARC : International Agency for Research on Cancer
 SAEL : Solvay Acceptable Exposure Limit
 NIOSH : National Institute for Occupational Safety and Health
 NFPA : National Fire Protection Association
 HMIS : Hazardous Materials Identification System (Paint & Coating)

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. Such information is only given as a guidance to help the user handle, use, process, store, transport, dispose, and release the product in satisfactory safety conditions and is not to be considered as a warranty or quality specification. It should be used in conjunction with technical sheets but do not replace them. Thus, the information only relates to the designated specific product and may not be applicable if such product is used in combination with other materials or in another manufacturing process, unless otherwise specifically indicated. It does not release the user from ensuring he is in conformity with all regulations linked to its activity.