


SAFETY DATA SHEET		 <b>SILVER FERN</b> CHEMICAL INC
<b>FERNOL 91-6</b>		
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

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## 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.

SAFETY DATA SHEET	
<b>FERNOL 91-6</b>	
Revision: 1.02 US ( EN )	Issuing date: 09/25/2014

**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

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

P305 + P351 + P338

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

P310  
P330

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.

SAFETY DATA SHEET	
<b>FERNOL 91-6</b>	
Revision: 1.02 US ( EN )	Issuing date: 09/25/2014

## 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

SAFETY DATA SHEET	
<b>FERNOL 91-6</b>	
Revision: 1.02 US ( EN )	Issuing date: 09/25/2014

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 (CO<sub>2</sub>)  
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.

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## **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."

SAFETY DATA SHEET		
<b>FERNOL 91-6</b>		
Revision: 1.02 US ( EN )	Issuing date: 09/25/2014	

### **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

SAFETY DATA SHEET	
<b>FERNOL 91-6</b>	
Revision: 1.02 US ( EN )	Issuing date: 09/25/2014

## 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)

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

### **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

SAFETY DATA SHEET	
<b>FERNOL 91-6</b>	
Revision: 1.02 US ( EN )	Issuing date: 09/25/2014

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





SAFETY DATA SHEET	
<b>FERNOL 91-6</b>	
Revision: 1.02 US ( EN )	Issuing date: 09/25/2014

### **10.6 Hazardous decomposition products**

Decomposition products : On combustion or on thermal decomposition (pyrolysis), releases:  
(Carbon oxides (CO + CO<sub>2</sub>)).

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## **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.

SAFETY DATA SHEET	
<b>FERNOL 91-6</b>	
Revision: 1.02 US ( EN )	Issuing date: 09/25/2014

**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.

SAFETY DATA SHEET	
<b>FERNOL 91-6</b>	
Revision: 1.02 US ( EN )	Issuing date: 09/25/2014

### 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

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## 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

SAFETY DATA SHEET	
<b>FERNOL 91-6</b>	
Revision: 1.02 US ( EN )	Issuing date: 09/25/2014

#### 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

SAFETY DATA SHEET	
<b>FERNOL 91-6</b>	
Revision: 1.02 US ( EN )	Issuing date: 09/25/2014

## 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

SAFETY DATA SHEET	
<b>FERNOL 91-6</b>	
Revision: 1.02 US ( EN )	Issuing date: 09/25/2014

**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)

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