

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Identifier:** ECOSE® Synthetic Hydraulic Fluid 22, 32, 46, 68, 100  
**Other means of identification:** Zinc Free Hydraulic Fluid  
**SDS Number:** 534328  
**CAS Number:** Blend  
**CHEMTREC:** EMERGENCY CONTACT 1-800-424-9300

**Supplier:**  
 Nu-Tier Brands, Inc., Tulsa, OK  
 TECHNICAL CONTACT NUMBER: 918-550-8026, Ext. 507  
 www.nu-tierbrands.com

### 2. HAZARDS IDENTIFICATION

<b>Classified Hazards</b> This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.	<b>Other Hazards</b> None Known
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#### Label Elements

No classified hazards

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS	Concentration
Synthetic Base Oil	Various	0-97%
Proprietary Ingredients	Mixture	<5%

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section..

### 4. FIRST AID MEASURES

**INHALATION FIRST AID:** If symptoms develop, move victim to fresh air. If symptoms persist, obtain medical attention.

**SKIN CONTACT FIRST AID:** Wash with soap and water. Remove contaminated clothing and wash before reuse. Get medical attention if needed.

**EYE CONTACT FIRST AID:** Flush with water for several minutes. If effects occur, consult a physician.

**INGESTION FIRST AID:** Rinse mouth with water. If symptoms develop, obtain medical attention.

### 5. FIREFIGHTING MEASURES

**NFPA 704 Hazard Class**

Health: 0      Flammability: 1      Instability: 0



0 (Minimal)  
 1 (Slight)  
 2 (Moderate)  
 3 (Serious)  
 4 (Severe)

**Flash Point:** 204°C / 400°F

**Test Method:** COC (Cleveland Open Cup)



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**Extinguishing Media:** Dry chemical, carbon dioxide, foam, or water spray is recommended. Water or foam may cause frothing of materials heated above 212°F/100°C. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

**Specific hazards arising from the chemical:**

**Unusual Fire & Explosion Hazards:** This material may burn, but will not ignite readily. If container is not properly cooled, it can rupture in the heat of a fire.

**Hazardous Combustion Products:** Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Oxides of sulfur, nitrogen or phosphorus may also be formed.

**Special protective actions for firefighters:** For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing. When the potential chemical hazard is unknown, in enclosed or confined spaces, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done safely. Avoid spreading burning liquid with water used for cooling purposes.

See Section 9 for Flammable Property Including Flash Point

### 6. ACCIDENTAL RELEASE MEASURES

Contain spilled material.  
Collect in suitable and properly labeled containers.  
Pick up excess with inert absorbant material.  
Keep away from drains and ground water.

### 7. HANDLING AND STORAGE

**HANDLING PRECAUTIONS:**

Avoid contact with eyes, skin, or clothing.  
Keep away from sources of ignition.  
Handle with care and avoid spillage on the floor (slippage).

**STORAGE REQUIREMENTS:**

Keep away from sources of ignition.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Material	Source	Type	mg/m3
Oil Mist, Mineral	ACGIH	TWA (Inhalable fraction)	5 mg/m3
Oil Mist, Mineral	ACGIH	STEL (Mist)	10 mg/m3
Oil Mist, Mineral	OSHA	TWA (Mist)	5 mg/m3

**ENGINEERING CONTROLS:**

Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product. TLV for mineral oil is 5 mg/cubic meter.

**EYE/FACE PROTECTION REQUIREMENTS:**

When splashing of the material may occur, chemical goggles and/or a face shield are recommended.

**SKIN PROTECTION REQUIREMENTS:**

Where contact is likely, wear chemical resistant gloves.



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### RESPIRATORY PROTECTION REQUIREMENTS:

Under normal use conditions, with adequate ventilation, no special handling equipment is required. If mists are produced, local ventilation may be required to keep exposure below limits.

### GENERAL COMMENTS:

Always observe good personal hygiene practices. Wash hands and other exposed skin areas with plenty of mild soap and water before eating, drinking, smoking, etc.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Note:** Data represents typical values and are not intended to be specifications.

Form:	Liquid
Odor:	Mild petroleum
Vapor Pressure:	< 0.1mm Hg @ 68°F (20°C)
Vapor Density:	Heavier than air (Air = 1)
Autoignition temp:	Not available
Specific Gravity:	0.85-0.89 @ 60°F (15.6°C)
Density:	Approx. 7.1-7.4 lbs/gal
Melting Point:	Not determined
Viscosity:	20-110 cSt @ 40°C; 4.0-12.0 cSt @100°C
Flash Point:	>400°F / >204°C
Test Method:	Cleveland Open Cup (COC), ASTM D92

## 10. STABILITY AND REACTIVITY

**REACTIVITY:** Not chemically reactive.

**CHEMICAL STABILITY:** Stable under normal ambient and anticipated conditions of use.

**POSSIBILITY OF HAZARDOUS REACTIONS:** Hazardous reactions not anticipated.

**CONDITIONS TO AVOID:** Avoid all possible sources of ignition. Extended exposure to high temperatures can cause decomposition.

**INCOMPATIBLE MATERIALS:** Avoid contact with strong oxidizing agents and strong reducing agents.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Not anticipated under normal conditions of use.

## 11. TOXICOLOGICAL INFORMATION

**GENERAL INFORMATION:** Based on data on the components and the toxicology of similar materials.

**ROUTES OF ENTRY:** Skin, Eyes, Ingestion, and Inhalation

### ACUTE EXPOSURE:

**EYE IRRITATION:** Not expected to cause eye irritation. Based on data from components or similar materials.

Vapors may cause irritation.

**SKIN IRRITATION:** Slightly irritating based on data from components or similar materials. Prolonged or repeated skin contact without proper hygiene may result in skin disorders such as acne.

**RESPIRATORY IRRITATION:** Based on data from components and similar materials, inhalation of vapors or mists may cause irritation.

**DERMAL TOXICITY:** Expected to be of low toxicity: LD50 > 5000 mg/kg, Rabbit

**ORAL TOXICITY:** Expected to be of low toxicity: LD50 > 5000 mg/kg, Rat

**INHALATION TOXICITY:** Based on data from components and similar materials, product is not considered to be an inhalation hazard under normal conditions of use.

**SENSITIZATION:** Component concentrations in this formulation would not be expected to cause skin sensitization, based on tests of the components or similar formulations.



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**CHRONIC EXPOSURE:**

**CHRONIX TOXICITY:** No data available to indicate product or components present at greater than 1% are chronic health hazards.

**CARCINOGENICITY:** Product contains mineral and/or synthetic oils shown to be noncarcinogenic in laboratory studies with the same or similar materials. Mineral and synthetic oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC). Other components are not known to be associated with carcinogenic effects.

**MUTAGENICITY:** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**REPRODUCTIVE TOXICITY:** No data available to indicate either product or components present at greater than 0.1% that may cause reproductive toxicity.

**TERATOGENICITY:** No data available to indicate either product or components present at greater than 0.1% that may cause birth defects.

**ADDITIONAL INFORMATION:** No other health hazards known.

### 12. ECOLOGICAL INFORMATION

**ENVIRONMENTAL HAZARDS:** Ecological Toxicity data has not been determined specifically for this product. The ecological toxicity hazard is based on an evaluation of data for the components or a similar material. This material is expected to be harmful to aquatic organisms and may cause long-term adverse effects in the aquatic environment.

**ENVIRONMENTAL FATE:** This material is not expected to be readily biodegradable. The biodegradability of this material is based on an evaluation of data for the components or a similar material. This product contains components which may be persistent in the environment.

### 13. DISPOSAL CONSIDERATIONS

**WASTE DISPOSAL:** Avoid disposal into waste water treatment facilities. Treat or dispose of waste material in accordance with all local, state/provincial, and national requirements. This product, if discarded, is not considered a hazardous waste.

### 14. TRANSPORTATION INFORMATION

<b>PRODUCT LABEL:</b>	ECOSE® Synthetic Hydraulic Fluid
<b>DOT SHIPPING:</b>	Not Regulated by DOT
<b>IMDG:</b>	This material is not classified as dangerous under IMDG regulations.
<b>IATA:</b>	This material is not classified as dangerous under IATA regulations.
<b>TRANSPORT CANADA:</b>	This material is not classified as dangerous under Transport Canada regulations.

### 15. REGULATORY INFORMATION

**OSHA Hazard Communication Standard:**

The classification of this material is based on OSHA HCS 2012 criteria.

United States inventory (TSCA):	All components are listed or exempted.
Canada inventory:	All components are listed or exempted.
Europe inventory:	All components are listed or exempted.
Japan inventory (ENCS):	All components are listed or exempted.
Australia inventory (AICS):	All components are listed or exempted.
Korea inventory (KECI):	All components are listed or exempted.
China inventory (IECSC):	All components are listed or exempted.
Philippines inventory (PICCS):	All components are listed or exempted.



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### 16. OTHER INFORMATION

REASON FOR ISSUE: New  
APPROVAL DATE: October 20, 2016  
REVISED DATE: November 28, 2018

The data in this Material Safety Data Sheet relates only to the specific material designated herein.

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END OF MSDS