

Fernol 25-7

Revision Date 06/01/2016

- P270 Do not eat, drink or smoke when using this product.
- P280 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 Immediately call a POISON CENTER or doctor/ physician.
- P330 Rinse mouth.

2.3 Other hazards which do not result in classification

- H401: Toxic to aquatic life.
- H412: Harmful to aquatic life with long lasting effects.

SECTION 3: Composition/information on ingredients**3.1 Substance**

- Chemical nature Alcohols C12-15 ethoxylated

Hazardous Ingredients and Impurities

Chemical Name	Identification number CAS-No.	Concentration [%]
Alcohols, C12-15, ethoxylated	68131-39-5	90 - 100

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

3.2 Mixture

Not applicable, this product is a substance.

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.

In case of inhalation

- Negligible or unlikely exposure pathways
- Move to fresh air in case of accidental inhalation of vapors.
- Consult a physician if necessary.

In case of 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.

In case of eye contact

- Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

- Seek medical advice.

In case of 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**Effects**

- 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

<u>Flash point</u>	>369.99 °F (187.77 °C) Pensky-Martens closed cup
	Flammability class: Will burn
<u>Autoignition temperature</u>	no data available
<u>Flammability / Explosive limit</u>	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

Hazardous combustion products:

- 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

- Wear suitable protective equipment.
- For further information refer to section 8 "Exposure controls / personal protection."

6.2 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

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

- 7. HANDLING AND STORAGE
- 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
- 13. DISPOSAL CONSIDERATIONS

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

- 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.

- Ethylene oxide may collect in container head space.
- Provide adequate ventilation.

- Handle in accordance with good industrial hygiene and safety practice.

- Avoid inhalation of vapor or mist.
- Avoid contact with skin and eyes.

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/Storage conditions

- Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems.
- Stable under normal conditions.
- Keep in a dry, cool and well-ventilated place.
- Keep container tightly closed.
- Keep away from open flames, hot surfaces and sources of ignition.
- Keep away from incompatible materials to be indicated by the manufacturer
- Keep away from: Hazardous reactions may occur on contact with certain chemicals. (Refer to the list of incompatible materials section 10: "Stability-Reactivity").

Requirements for storage rooms and vessels

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

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. 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

Individual protection measures**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
- Choose body protection according to the amount and concentration of the dangerous substance at the work place.

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.

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

<u>Appearance</u>	<u>Form:</u> viscous <u>Physical state:</u> liquid <u>Color:</u> clear
<u>Odor</u>	slight pleasant
<u>Odor Threshold</u>	no data available
<u>pH</u>	6.0 - 8.0 (5 % (m/v))
<u>Freezing point</u>	64 - 68 °F (18 - 20 °C)
<u>Boiling point/boiling range</u>	> 500 °F (260 °C) (760 mmHg (1,013.25 hPa))

Fernol 25-7

Revision Date 06/01/2016

Flash point > 369.99 °F (187.77 °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

Flammability / Explosive limit no data available

Autoignition temperature no data available

Vapor pressure < 0.1 mmHg (0.13 hPa) (77 °F (25 °C))

Vapor density no data available

Density 0.97 kg/dm³ (68 °F (20 °C))

Relative density: 0.97 (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 < 0.3 %

SECTION 10: Stability and reactivity

10.1 Reactivity

- no data available

10.2 Chemical stability

- Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Polymerization

- Hazardous polymerization does not occur.

10.4 Conditions to avoid

- Keep away from heat and sources of ignition.
- Keep away from flames and sparks.

10.5 Incompatible materials

- Strong oxidizing agents

10.6 Hazardous 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**

Alcohols, C12-15, ethoxylated

LD50 : 1,700 mg/kg - Rat , male and female
 Method: OECD Test Guideline 401
 Harmful if swallowed.
 Published data
 CESIO

Acute inhalation toxicity

no data available

Acute dermal toxicity

Alcohols, C12-15, ethoxylated

LD50 : 2,300 mg/kg - Rabbit
 Published data

Acute toxicity (other routes of administration)

no data available

Skin corrosion/irritation

Alcohols, C12-15, ethoxylated

No skin irritation
 category approach

Serious eye damage/eye irritation

Alcohols, C12-15, ethoxylated

4 h
 Risk of serious damage to eyes.
 Unpublished reports

Respiratory or skin sensitization

Alcohols, C12-15, ethoxylated

Does not cause skin sensitization.
 category approach
 Published data

Mutagenicity**Genotoxicity in vitro**

Alcohols, C12-15, ethoxylated

In vitro tests did not show mutagenic effects
category approach**Genotoxicity in vivo**

Alcohols, C12-15, ethoxylated

In vivo tests did not show mutagenic effects
category approach**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**

no data available

Developmental Toxicity/Teratogenicity

no data available

STOT**STOT-single exposure**

Alcohols, C12-15, ethoxylated

The substance or mixture is not classified as specific target organ toxicant, single
exposure.
internal evaluation, category approach**STOT-repeated exposure**

Alcohols, C12-15, ethoxylated

Oral - Rat
NOAEL: 102 mg / kg / day
Published data**Aspiration toxicity**

no data available

SECTION 12: Ecological information**12.1 Toxicity****Aquatic Compartment****Acute toxicity to fish**

Alcohols, C12-15, ethoxylated

LC50 : 1.1 mg/l - Fish

Fernal 25-7

Revision Date 06/01/2016

Acute toxicity to daphnia and other aquatic invertebrates.

Alcohols, C12-15, ethoxylated

EC50 - 48 h : 0.4 mg/l - Daphnia magna (Water flea)
 Method: OECD Test Guideline 202
 Published data

EC50 - 48 h : 0.76 mg/l - Daphnia magna (Water flea)
 Published data

EC50 - 48 h : 1 - 2 mg/l - Daphnia magna (Water flea)
 Published data

EC50 - 48 h : 4.3 mg/l - Daphnia magna (Water flea)
 Method: OECD Test Guideline 202
 Published data

EC50 - 48 h : 0.4 mg/l - Daphnia magna (Water flea)
 Published data

Toxicity to aquatic plants

Alcohols, C12-15, ethoxylated

EC50 - 96 h : 2.9 mg/l - Scenedesmus capricornutum (fresh water algae)
 Method: OECD Test Guideline 201
 Published data

EC50 - 72 h : 0.85 mg/l - Scenedesmus capricornutum (fresh water algae)
 Published data

ErC50 - 24 h : 2.9 mg/l - Scenedesmus capricornutum (fresh water algae)
 Published data

ErC50 - 96 h : 2.9 mg/l - Scenedesmus capricornutum (fresh water algae)
 Published data

12.2 Persistence and degradability**Biodegradation****Biodegradability**

Alcohols, C12-15, ethoxylated

90 %
 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

Alcohols, C12-15, ethoxylated

This substance is not considered to be persistent, bioaccumulating, and toxic (PBT).
 This substance is not considered to be very persistent and very bioaccumulating (vPvB).

12.6 Other adverse effects no data available

Ecotoxicity assessment

Acute aquatic toxicity

Alcohols, C12-15, ethoxylated Toxic to aquatic life.

Chronic aquatic toxicity

Alcohols, C12-15, ethoxylated Harmful to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product 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

- Environmental Protection Agency
- Hazardous Waste – NO

Advice on cleaning and disposal of packaging

- Rinse with an appropriate solvent.
- Dispose of in accordance with local regulations.

SECTION 14: Transport information

Transportation status: IMPORTANT! Statements below provide additional data on listed transport classification.

The listed Transportation Classification does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors.

DOT not regulated

TDG not regulated

NOM 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.

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SECTION 15: Regulatory information

15.1 Notification status

Inventory Information	Status
United States TSCA Inventory	On TSCA Inventory
Canadian Domestic Substances List (DSL)	All components of this product are on the Canadian DSL.
Australia Inventory of Chemical Substances (AICS)	On the inventory, or in compliance with the inventory
Japan. CSCL - Inventory of Existing and New Chemical Substances	On the inventory, or in compliance with the inventory
Korea. Korean Existing Chemicals Inventory (KECI)	On the inventory, or in compliance with the inventory
China. Inventory of Existing Chemical Substances in China (IECSC)	On the inventory, or in compliance with the inventory

15.2 Federal Regulations

US. EPA EPCRA SARA Title III

SARA HAZARD DESIGNATION SECTIONS 311/312 (40 CFR 370)

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

Section 313 Toxic Chemicals (40 CFR 372.65)

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.

Section 302 Emergency Planning Extremely Hazardous Substance Threshold Planning Quantity (40 CFR 355)

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

Section 302 Emergency Planning Extremely Hazardous Substance Reportable Quantity (40 CFR 355)

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

Fernel 25-7

Revision Date 06/01/2016

Section 304 Emergency Release Notification Reportable Quantity (40 CFR 355)

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

US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

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

15.3 State Regulations**US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)**

WARNING! This product contains a chemical known in the State of California to cause cancer.

Ingredients	CAS-No.
Ethylene Oxide	75-21-8
1,4-Dioxane	123-91-1

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

Ingredients	CAS-No.
Ethylene Oxide	75-21-8

SECTION 16: Other information**NFPA (National Fire Protection Association) - Classification**

Health	2 moderate
Flammability	1 slight
Instability or Reactivity	0 minimal

HMIS (Hazardous Materials Identification System (Paint & Coating)) - Classification

Health	3 serious
Flammability	1 slight
Reactivity	0 minimal
PPE	Determined by User; dependent on local conditions

Further information

- This sheet was updated (refer to the date at the top of this page). Subheadings and text which have been modified since the previous version are indicated with two vertical bars.
- Product evaluated under the US GHS format.

Date Prepared: 03/31/2015

- ACGIH American Conference of Governmental Industrial Hygienists
- OSHA Occupational Safety and Health Administration
- NTP National Toxicology Program
- IARC International Agency for Research on Cancer
- NIOSH National Institute for Occupational Safety and Health



Fernol 25-7

Revision Date 06/01/2016

The information on this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, expressed or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. The conditions or methods of handling, storage, use and disposal of the product are beyond our control 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 handling, storage, use, or disposal of this product. If the product is used as a component in another product, this SDS information may not be applicable.

Approved TL 6/13/17

