

1. Identification

Product identifier	T-Det® EPO 61	
Other means of identification		
SDS number	320191-02	
Recommended use	Non-ionic surfactant.	
Recommended restrictions	None known.	
Manufacturer/Importer/Supplier/Distributor information		
Manufacturer		
Company name	Deep South Chemical, Inc.	
Address	229 Millstone Road Broussard, LA 70518 United States	
Telephone	Main Telephone Number	1-337-837-9931
Website	www.deep-south-chemical.com	
E-mail	info@deep-south-chemical.com	
Emergency phone number	CHEMTREC	1-800-424-9300
	CHEMTREC	1-703-527-3887 (call collect)

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2
Environmental hazards	Hazardous to the aquatic environment, long-term hazard	Category 3
OSHA defined hazards	Combustible dust	Not applicable
	Pyrophoric gas	Not applicable
	Simple asphyxiant	Not applicable

Label elements



Signal word	Warning	
Hazard statement	Causes skin irritation. Causes serious eye irritation. Harmful to aquatic life with long lasting effects.	
Precautionary statement		
Prevention	Wash hands thoroughly after handling. Avoid release to the environment. Wear protective gloves. Wear eye/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 skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse.	
Storage	Store away from incompatible materials.	
Disposal	Not available.	
Hazard(s) not otherwise classified (HNOC)	None known.	

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Ethylene Oxide / Propylene Oxide Co-polymer		9003-11-6	100

Residuals

Chemical name	CAS number	%
Propylene Oxide	75-56-9	<= 0.002
Ethylene Oxide	75-21-8	<= 0.001

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

Composition comments Occupational Exposure Limits for residuals are listed in Section 8.

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
---	---

Methods and materials for containment and cleaning up

This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Avoid contact with eyes, skin, and clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Residuals	Type	Value
Ethylene Oxide (CAS 75-21-8)	STEL	5 ppm
	TWA	1 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Residuals	Type	Value
Propylene Oxide (CAS 75-56-9)	PEL	240 mg/m ³
		100 ppm

US. ACGIH Threshold Limit Values

Residuals	Type	Value
Ethylene Oxide (CAS 75-21-8)	TWA	1 ppm
Propylene Oxide (CAS 75-56-9)	TWA	2 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Residuals	Type	Value
Ethylene Oxide (CAS 75-21-8)	Ceiling	9 mg/m ³
	TWA	5 ppm 0.18 mg/m ³ 0.1 ppm

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product. It is recommended that users of this product perform a risk assessment to determine the appropriate PPE.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear chemical goggles. Avoid contact with eyes. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves.
Other	Wear appropriate chemical resistant clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	Clear.
Physical state	Liquid.
Form	Liquid.
Color	Colorless.
Odor	Mild.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	> 212.0 °F (> 100.0 °C) Pensky-Martens Closed Cup
Evaporation rate	< 1 (H ₂ O=1)
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	< 1 mm Hg
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Slightly Soluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.

Viscosity	Not available.
Other information	
pH in aqueous solution	5 - 7 (1% in DI Water)
Specific gravity	1 - 1.03 @ 68F

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Acids. Bases Strong oxidizing agents.
Hazardous decomposition products	Carbon oxides. Organic compounds which may be toxic.

11. Toxicological information

Information on likely routes of exposure

Inhalation	No adverse effects due to inhalation are expected.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics
Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity

Toxicological data

Residuals	Species	Test Results
Ethylene Oxide (CAS 75-21-8)		
Acute		
Inhalation		
LC50	Dog	973 ppm, 4 Hours
		1.8 mg/l, 4 Hours
	Guinea pig	1.5 mg/l, 4 Hours
	Mouse	1.505 mg/l, 4 Hours
	Rat	1.44 mg/l, 4 Hours
		0.9 mg/l, 1 Hours
Oral		
LD50	Guinea pig	270 mg/kg
	Mouse	280 mg/kg
	Rat	72 mg/kg
Propylene Oxide (CAS 75-56-9)		
Acute		
Dermal		
LD50	Rabbit	1245 mg/kg
Inhalation		
LC50	Mouse	1740 ppm, 4 Hours

Residuals	Species	Test Results
	Rat	4000 ppm, 4 Hours
Oral		
LD50	Guinea pig	660 mg/kg
	Rat	380 mg/kg
Other		
LD50	Mouse	175 mg/kg
	Rabbit	1.5 ml/kg
	Rat	150 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not available.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
IARC Monographs. Overall Evaluation of Carcinogenicity	
Ethylene Oxide (CAS 75-21-8)	1 Carcinogenic to humans.
Propylene Oxide (CAS 75-56-9)	2B Possibly carcinogenic to humans.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	
Ethylene Oxide (CAS 75-21-8)	Cancer
US. National Toxicology Program (NTP) Report on Carcinogens	
Ethylene Oxide (CAS 75-21-8)	Known To Be Human Carcinogen.
Propylene Oxide (CAS 75-56-9)	Reasonably Anticipated to be a Human Carcinogen.
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not available.

12. Ecological information

Ecotoxicity	Harmful to aquatic life with long lasting effects.		
Residuals	Species	Test Results	
Ethylene Oxide (CAS 75-21-8)			
Aquatic			
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) 73 - 96 mg/l, 96 hours	

* Estimates for product may be based on additional component data not shown.

Persistence and degradability	No data is available on the degradability of this product.		
Bioaccumulative potential	No data available.		
Partition coefficient n-octanol / water (log Kow)			
Ethylene Oxide		-0.3	
Propylene Oxide		0.03	
Mobility in soil	No data available.		

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

US RCRA Hazardous Waste U List: Reference

Ethylene Oxide (CAS 75-21-8) U115

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. Regulatory information

US federal regulations All components are on the U.S. EPA TSCA Inventory List.
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Ethylene Oxide (CAS 75-21-8) Listed.

Propylene Oxide (CAS 75-56-9) Listed.

SARA 304 Emergency release notification

Ethylene Oxide (CAS 75-21-8) 10 LBS

Propylene Oxide (CAS 75-56-9) 100 LBS

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Ethylene Oxide (CAS 75-21-8) Cancer
Reproductive toxicity
Mutagenicity
Central nervous system
Skin sensitization
Skin irritation
Eye irritation
respiratory tract irritation
Acute toxicity
Flammability

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
 Delayed Hazard - No
 Fire Hazard - No
 Pressure Hazard - No
 Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity	Threshold planning quantity	Threshold planning quantity, lower value	Threshold planning quantity, upper value
Propylene Oxide	75-56-9	100	10000 lbs		
Ethylene Oxide	75-21-8	10	1000 lbs		

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Propylene Oxide	75-56-9	<= 0.002
Ethylene Oxide	75-21-8	<= 0.001

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Ethylene Oxide (CAS 75-21-8)

Propylene Oxide (CAS 75-56-9)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Ethylene Oxide (CAS 75-21-8)

Propylene Oxide (CAS 75-56-9)

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. Massachusetts RTK - Substance List

Ethylene Oxide (CAS 75-21-8)

Propylene Oxide (CAS 75-56-9)

US. New Jersey Worker and Community Right-to-Know Act

Ethylene Oxide (CAS 75-21-8)

Propylene Oxide (CAS 75-56-9)

US. Pennsylvania Worker and Community Right-to-Know Law

Ethylene Oxide (CAS 75-21-8)

Propylene Oxide (CAS 75-56-9)

US. Rhode Island RTK

Ethylene Oxide (CAS 75-21-8)

Propylene Oxide (CAS 75-56-9)

US. California Proposition 65

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

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Ethylene Oxide (CAS 75-21-8) Listed: July 1, 1987

Propylene Oxide (CAS 75-56-9) Listed: October 1, 1988

US - California Proposition 65 - CRT: Listed date/Developmental toxin

Ethylene Oxide (CAS 75-21-8) Listed: August 7, 2009

US - California Proposition 65 - CRT: Listed date/Female reproductive toxin

Ethylene Oxide (CAS 75-21-8) Listed: February 27, 1987

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	03-09-15
HMIS® ratings	Health: 2 Flammability: 1 Physical hazard: 0
NFPA ratings	Health: 2 Flammability: 1 Instability: 0

Disclaimer

Deep South Chemical, Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information provided in this Material Safety Data Sheet has been obtained from sources believed to be reliable. Deep South Chemical, Inc., provides no warranties, either expressed or implied and assumes no responsibility for the accuracy or completeness of the data contained herein. This information is offered for your information, consideration, and investigation. You should satisfy yourself that you have all current data relevant to your particular use. Deep South Chemicals Inc., knows of no medical condition, other than those noted on this Material Safety Data Sheet, which are generally recognized as being aggravated by exposure to this product.