

SAFETY DATA SHEET

ANGUS CHEMICAL COMPANY

Product name : ALKATERGE® E , Oxazoline

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ANGUS CHEMICAL COMPANY encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. PRODUCT AND COMPANY IDENTIFICATION

Product name ALKATERGE® E , Oxazoline

Manufacturer or supplier's details

Company name of supplier ANGUS CHEMICAL COMPANY

Address 1500 E. LAKE COOK ROAD
Buffalo Grove IL 60089-6553

Customer Information Number +1-847-808-3711

E-mail address NAR_CC@ANGUS.COM

Emergency telephone number +1 800-424-9300

Recommended use of the chemical and restrictions on use


Recommended use For industrial use.
The ANGUS Chemical Company recommends that you use this product in a manner consistent with the listed use. If your intended use is not consistent with the stated use, please contact the Customer Information Group (see Section 1 of this data sheet).

2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Skin sensitisation : Category 1

GHS label elements

Hazard pictograms	:	
Signal word	:	Warning
Hazard statements	:	H317 May cause an allergic skin reaction.
Precautionary statements	:	<p>Prevention: P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. P272 Contaminated work clothing should not be allowed out of the workplace. P280 Wear protective gloves.</p> <p>Response: P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention. P363 Wash contaminated clothing before reuse.</p> <p>Disposal: P501 Dispose of contents/ container to an approved waste disposal plant.</p>

Other hazards

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a substance.

Components

Chemical name	CAS-No.	Concentration (% w/w)
4-Ethyl-2-(8-heptadecenyl)-2-oxazoline-4-methanol	68140-98-7	>= 70 - <= 80
Related reaction products (Not applicable)	Not Assigned	>= 20 - <= 30

No hazardous ingredients

4. FIRST AID MEASURES

If inhaled	Move person to fresh air; if effects occur, consult a physician.
In case of skin contact	Wash skin thoroughly with soap and water. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands.
In case of eye contact	Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

If swallowed	No emergency medical treatment necessary.
Most important symptoms and effects, both acute and delayed	Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.
Protection of first-aiders	If potential for exposure exists refer to Section 8 for specific personal protective equipment.
Notes to physician	Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. No specific antidote.

5. FIREFIGHTING MEASURES

Suitable extinguishing media	Water fog or fine spray. Carbon dioxide fire extinguishers. Dry chemical fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.
Unsuitable extinguishing media	Do not use direct water stream. May spread fire.
Specific hazards during firefighting	Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.
Hazardous combustion products	During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon dioxide. Carbon monoxide. Nitrogen oxides.
Further information	Avoid accumulation of water. Product may be carried across water surface spreading fire or contracting an ignition source. Keep people away. Isolate fire and deny unnecessary entry. Do not use direct water stream. May spread fire. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up

situations, refer to the relevant sections.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.
Environmental precautions	Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.
Methods and materials for containment and cleaning up	Contain spilled material if possible. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Advice on safe handling	Wash thoroughly after handling. Avoid contact with skin and clothing. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.
Conditions for safe storage	No specific requirements.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures

Local exhaust ventilation may be necessary for some operations.
Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations.

Personal protective equipment

Respiratory protection Under intended handling conditions, no respiratory protection should be needed.

Hand protection

Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Polyethylene. Chlorinated polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Viton. Butyl rubber. Natural rubber ("latex"). Polyvinyl chloride ("PVC" or "vinyl"). Nitrile/butadiene rubber ("nitrile" or

"NBR"). Polyvinyl alcohol ("PVA"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Eye protection	Use safety glasses (with side shields).
Skin and body protection	Wear clean, body-covering clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Liquid.
Colour	Brown
Odour	Amine.
Odour Threshold	No test data available
pH	No test data available
Melting point/freezing point	-24.3 °F / -31.3 °C
Boiling point/boiling range	500 °F / 260 °C
Flash point	241.7 °F / 116.5 °C
	Method: closed cup
Evaporation rate	No data available
Upper explosion limit / Upper flammability limit	No test data available
Lower explosion limit / Lower flammability limit	No test data available
Vapour pressure	1.65 mmHg (68 °F / 20 °C)
Relative vapour density	No test data available
Density	0.93 g/cm ³ (68 °F / 20 °C)
Solubility(ies)	
Water solubility	0.002 mg/l (77 °F / 25 °C)
Partition coefficient: n-octanol/water	log Pow: 9.01 Method: Estimated. Bioconcentration potential is low (BCF less than 100 or log Pow greater than 7).
Auto-ignition temperature	No test data available

Decomposition temperature	No test data available
Viscosity Viscosity, dynamic	119 mPa.s (77 °F / 25 °C)
Percent volatility	No test data available
Molecular weight	No test data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity	No dangerous reaction known under conditions of normal use.
Chemical stability	Thermally stable at typical use temperatures.
Possibility of hazardous reactions	Polymerization will not occur.
Conditions to avoid	Exposure to elevated temperatures can cause product to decompose.
Incompatible materials	Avoid contact with oxidizing materials.
Hazardous decomposition products	Decomposition products depend upon temperature, air supply and the presence of other materials.

11. TOXICOLOGICAL INFORMATION

Toxicological information on this product or its components appear in this section when such data is available.

Acute toxicity

Product:

Acute oral toxicity	: Remarks: Very low toxicity if swallowed. LD50 (Rat, female): > 2,000 mg/kg Method: OECD 425 or equivalent Symptoms: No deaths occurred at this concentration. Assessment: The substance or mixture has no acute oral toxicity Other (Mouse): > 23,000 mg/kg Symptoms: No deaths occurred at this concentration.
Acute inhalation toxicity	: Remarks: No adverse effects are anticipated from single exposure to vapor. Remarks: The LC50 has not been determined.

Acute dermal toxicity : Remarks: Prolonged skin contact is unlikely to result in absorption of harmful amounts.
LD50 (Rat): > 2,000 mg/kg
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Product:

Remarks : Prolonged contact may cause moderate skin irritation with local redness.

Serious eye damage/eye irritation

Product:

Remarks : May cause slight temporary eye irritation.
Corneal injury is unlikely.

Respiratory or skin sensitisation

Product:

Assessment : May cause sensitisation by skin contact.
Remarks : Skin contact may cause an allergic skin reaction.

Remarks : For respiratory sensitization:
No relevant data found.

Carcinogenicity

Product:

No relevant data found.

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Teratogenicity

Product

Has been toxic to the fetus in laboratory animals at doses toxic to the mother.
Did not cause birth defects in laboratory animals.

Mutagenicity

Product

In vitro genetic toxicity studies were negative.

Reproductive toxicity**Product:**

In animal studies, did not interfere with reproduction.

STOT - single exposure**Product:**

Assessment : Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Repeated dose toxicity**Product:**

Remarks : Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Aspiration toxicity**Product:**

Based on physical properties, not likely to be an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicity**Product:**

Toxicity to fish

Remarks: Aquatic toxicity is unlikely due to low solubility.

Persistence and degradability**Product:**

Biodegradability

Remarks: For similar material(s):
Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

Bioaccumulative potential

Partition coefficient: n-octanol/water

log Pow: 9.01

Method: Estimated.

Remarks: Bioconcentration potential is low (BCF less than 100 or log Pow greater than 7).

Components:**4-ethyl-2-(8-heptadecenyl)-2-oxazoline-4-methanol:**

Partition coefficient: n-

log Pow: 9.01

octanol/water

Method: Estimated.
Remarks: Bioconcentration potential is low (BCF less than 100 or log Pow greater than 7).

Related reaction products:

Partition coefficient: n-octanol/water

Remarks: No relevant data found.

Mobility in soil

Product:

Distribution among environmental compartments

Koc: 42000
Method: Estimated.
Remarks: Expected to be relatively immobile in soil (Koc > 5000).

Other adverse effects

Product:

Results of PBT and vPvB assessment

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.
All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations.
Regulations may vary in different locations.
Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.
THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information.
FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device.
Landfill.
ANGUS HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL.

14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations**49 CFR (DOT) -BULK**

Not regulated as a dangerous good

49 CFR (DOT) – NON BULK

Not regulated as a dangerous good

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

OSHA Hazards

This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

EPCRA - Emergency Planning and Community Right-to-Know Act**CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

Components	CAS-No.	Component TPQ (lbs)
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SARA 311/312 Hazards : This product is not a hazardous chemical under 29CFR 1910.1200, and therefore is not covered by Title III of SARA.

SARA 313 : 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.

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

4-ethyl-2-(8-heptadecenyl)-2-oxazoline-4-methanol 68140-98-7

Maine Chemicals of High Concern

This product does not contain any chemicals that are listed as Maine Chemicals of High Concern.

New Jersey Right To Know

4-ethyl-2-(8-heptadecenyl)-2-oxazoline-4-methanol 68140-98-7

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

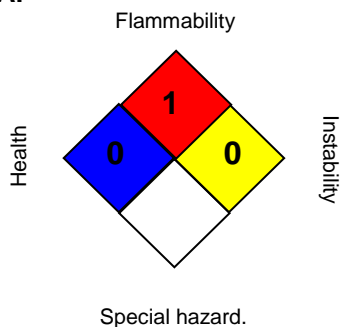
The components of this product are reported in the following inventories:

United States TSCA : All Components OK
Inventory

16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	0
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

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Identification Number: 000040000070

US / EN

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. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative