

Material Safety Data Sheet

2-Butanone oxime, 99%

ACC# 47653

Section 1 - Chemical Product and Company Identification

MSDS Name: 2-Butanone oxime, 99%

Catalog Numbers: AC403330000, AC403331000

Synonyms: Ethyl methyl ketone oxime; Ethyl methyl ketoxime; 2-Butanone oxime; Methyl ethyl ketoxime; MEK-oxime.

Company Identification:

Acros Organics N.V.

One Reagent Lane

Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01

For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
96-29-7	Methyl ethyl ketoxime	99	202-496-6

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear colorless to pale yellow. Flash Point: 59 deg C.

Warning! Causes severe eye irritation. **Flammable liquid and vapor.** May cause allergic skin reaction.

Target Organs: Blood, liver, eyes, skin.

Potential Health Effects

Eye: Causes severe eye irritation.

Skin: Harmful if absorbed through the skin. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.

Ingestion: Methemoglobinemia is characterized by dizziness, drowsiness, headache, shortness of breath, cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), rapid heart rate and chocolate-brown colored blood. May be harmful if swallowed. Overexposure may cause methemoglobinemia.

Inhalation: Not available.

Chronic: Chronic exposure may cause liver damage. The major target organ of methyl ethyl ketoxime is the red blood cell.; the no-effect level for erythrotoxicity is 625 ppm in male rats and 312 ppm in female rats based on erythrocyte counts after 13 weeks of exposure. The no-effect level for hematopoietic toxicity is 312 ppm in rats based on erythroid cell hyperplasia in bone marrow and 2,500 ppm in mice based on hematopoietic cell proliferation in the spleen. Hematology results of this drinking water study indicate that methyl ethyl ketoxime induces a methemoglobinemia and a responsive Heinz body anemia. Methyl ethyl ketoxime was at most weakly genotoxic.

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Remove contaminated clothing and shoes.

Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid immediately.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician: Treat symptomatically.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Flammable liquid and vapor. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas.

Extinguishing Media: Use extinguishing media most appropriate for the surrounding fire.

Flash Point: 59 deg C (138.20 deg F)

Autoignition Temperature: Not available.

Explosion Limits, Lower:Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 2; Flammability: 2; Instability: 1

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Use only with adequate ventilation. Keep away from heat, sparks and flame.

Storage: Keep away from sources of ignition. Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Methyl ethyl ketoxime	none listed	none listed	none listed

OSHA Vacated PELs: Methyl ethyl ketoxime: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear chemical splash goggles.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Clear liquid

Appearance: clear colorless to pale yellow

Odor: Not available.

pH: Not available.

Vapor Pressure: 0.904 mm Hg @ 25 deg C

Vapor Density: 3.0 (air=1)

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: 152.5 deg C @ 760 mm Hg

Freezing/Melting Point: -29.5 deg C

Decomposition Temperature: Not available.

Solubility: Slightly soluble.

Specific Gravity/Density: .9200 g/cm³

Molecular Formula: C₄H₉NO

Molecular Weight: 87.12

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: High temperatures, ignition sources.

Incompatibilities with Other Materials: Strong oxidizing agents, strong acids.

Hazardous Decomposition Products: Nitrogen oxides, carbon monoxide, carbon dioxide.

Hazardous Polymerization: Has not been reported

Section 11 - Toxicological Information

RTECS#:

CAS# 96-29-7: EL9275000

LD50/LC50:

CAS# 96-29-7:

Draize test, rabbit, eye: 100 uL Severe;

Oral, mouse: LD50 = 1 gm/kg;

Oral, rat: LD50 = 930 mg/kg;

Skin, rabbit: LD50 = 200 uL/kg;

Skin, rabbit: LD50 = 200 uL/kg = 184 mg/kg.

Carcinogenicity:

CAS# 96-29-7: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No data available.

Teratogenicity: No data available.

Reproductive Effects: No data available.

Mutagenicity: See actual entry in RTECS for complete information.

Neurotoxicity: No data available.

Other Studies:

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	FLAMMABLE LIQUIDS, N.O.S.	No information available.
Hazard Class:	3	
UN Number:	UN1993	
Packing Group:	III	

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 96-29-7 is listed on the TSCA inventory.

Health & Safety Reporting List

CAS# 96-29-7: Effective 12/15/86, Sunset 12/19/95

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

Section 313

No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depleters.
This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 96-29-7 can be found on the following state right to know lists: Minnesota.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

XN

Risk Phrases:

R 21 Harmful in contact with skin.
R 40 Limited evidence of a carcinogenic effect.
R 41 Risk of serious damage to eyes.
R 43 May cause sensitization by skin contact.

Safety Phrases:

S 13 Keep away from food, drink and animal feeding stuffs.
S 23 Do not inhale gas/fumes/vapour/spray.
S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

WGK (Water Danger/Protection)

CAS# 96-29-7: 1

Canada - DSL/NDSL

CAS# 96-29-7 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of D2B, B3.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

Section 16 - Additional Information
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MSDS Creation Date: 5/20/1999

Revision #4 Date: 10/03/2005

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.