

**Section 1 - Chemical Product and Company Identification**

**MSDS Name:** 2-Butanone  
**Catalog Numbers:** AC149670000, AC149670010, AC149670025, AC149670051, AC149670250, AC213010000, AC213010000, AC213015000, AC327910000, AC327910010, AC389430000, AC389430010, AC389430010, AC389430010, AC389430025, AC389570000, AC389570010, AC389570025  
**Synonyms:** Methyl ethyl ketone; MEK  
**Company Identification:** Acros Organics BVBA  
Janssen Pharmaceuticaaan 3a  
2440 Geel, Belgium  
**Company Identification: (USA)** Acros Organics  
One Reagent Lane  
Fair Lawn, NJ 07410  
**For information in the US, call:** 800-ACROS-01  
**For information in Europe, call:** +32 14 57 52 11  
**Emergency Number, Europe:** +32 14 57 52 99  
**Emergency Number US:** 201-796-7100  
**CHEMTREC Phone Number, US:** 800-424-9300  
**CHEMTREC Phone Number, Europe:** 703-527-3887

**Section 2 - Composition, Information on Ingredients**

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**CAS#:** 78-93-3  
**Chemical Name:** 2-Butanone  
**%:** >99%  
**EINECS#:** 201-159-0  
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**Hazard Symbols:**



**Risk Phrases:**

XI F



11 36 66 67

**Section 3 - Hazards Identification**

**EMERGENCY OVERVIEW**

Not available Target Organs: Central nervous system, liver, respiratory system, eyes, skin.

**Potential Health Effects**

**Eye:** Causes eye irritation. May result in corneal injury.  
**Skin:** Causes mild skin irritation. May be absorbed through the skin. Repeated or prolonged exposure may cause drying and cracking of the skin.  
**Ingestion:** May cause gastrointestinal irritation with nausea, vomiting and diarrhea.  
**Inhalation:** May cause respiratory tract irritation. Inhalation of vapors may cause drowsiness and dizziness.  
**Chronic:** Chronic inhalation may cause effects similar to those of acute inhalation.

**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. Do NOT allow victim to rub eyes or keep eyes closed.

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

**Ingestion:** Get medical aid. Wash mouth out with water.

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

**Notes to Physician:** Treat symptomatically and supportively.

**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. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Flammable liquid and vapor.

**Extinguishing Media:** Use water spray, dry chemical, carbon dioxide, or chemical foam.

**Autoignition Temperature:** 404 deg C ( 759.20 deg F)

**Flash Point:** -7 deg C ( 19.40 deg F)

**Explosion Limits:** 1.8 Vol %

**Lower:**

**Explosion Limits:** 11.5 Vol %

**Upper:**

**NFPA Rating:** health: 1; flammability: 3; instability: 0;

**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. Avoid runoff into storm sewers and ditches which lead to waterways. Wear a self contained breathing apparatus and appropriate personal protection. (See Exposure Controls, Personal Protection section). Remove all sources of ignition. Use a spark-proof tool. Do not let this chemical enter the environment.

**Section 7 - Handling and Storage**

**Handling:** Use spark-proof tools and explosion proof equipment. Avoid breathing dust, mist, or vapor. Avoid contact with skin and eyes. Take precautionary measures against static discharges. Avoid ingestion and inhalation.

**Storage:** Keep away from sources of ignition. Store in a cool, dry place. Store in a tightly closed container. Flammables-area.

**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 adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Chemical Name	ACGIH	NIOSH	OSHA
2-Butanone	200 ppm; 300 ppm	200 ppm TWA; 590	200 ppm TWA; 590

	STEL	mg/m3 TWA	3000	mg/m3
TWA		ppm IDLH		

OSHA Vacated PELs: 2-Butanone: 200 ppm TWA; 590 mg/m3 TWA

**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:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Section 9 - Physical and Chemical Properties**

- Physical State:** Clear liquid
- Color:** colorless
- Odor:** sweetish odor - characteristic odor
- pH:** Not available
- Vapor Pressure:** 105mbar @20 deg C
- Vapor Density:** 2.5
- Evaporation Rate:** 2.7 (Ether=1)
- Viscosity:** 0.42 mPa s @15 deg C
- Boiling Point:** 80 deg C @760mmHg ( 176.00°F)
- Freezing/Melting Point:** -87 deg C ( -124.60°F)
- Decomposition Temperature:** Not available
- Solubility in water:** 290 g/l (20°C)
- Specific Gravity/Density:** 0.806
- Molecular Formula:** C4H8O
- Molecular Weight:** 72.11

**Section 10 - Stability and Reactivity**

- Chemical Stability:** Stable under normal temperatures and pressures.
- Conditions to Avoid:** Incompatible materials, ignition sources, excess heat.
- Incompatibilities with Other Materials** Not available
- Hazardous Decomposition Products** Carbon monoxide, carbon dioxide.
- Hazardous Polymerization** Will not occur.

**Section 11 - Toxicological Information**

- RTECS#:** CAS# 78-93-3: EL6475000
- LD50/LC50:** RTECS:  
**CAS# 78-93-3:** Draize test, rabbit, eye: 80 mg;  
Draize test, rabbit, skin: 500 mg/24H Moderate;  
Draize test, rabbit, skin: 402 mg/24H Mild;  
Inhalation, mouse: LC50 = 32 gm/m3/4H;  
Inhalation, rat: LC50 = 23500 mg/m3/8H;  
Oral, mouse: LD50 = 3000 mg/kg;  
Oral, rat: LD50 = 2737 mg/kg;  
Skin, rabbit: LD50 = 6480 mg/kg;
- Carcinogenicity:** 2-Butanone - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
- Other:** See actual entry in RTECS for complete information. Mutagenicity: Ames-test: negative.

## Section 12 - Ecological Information

**Ecotoxicity:** Not available

## Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

## Section 14 - Transport Information

US DOT

Shipping Name: ETHYL METHYL KETONE

Hazard Class: 3

UN Number: UN1193

Packing Group: II

Canada TDG

Shipping Name: Not available

Hazard Class:

UN Number:

Packing Group:

USA RQ: CAS# 78-93-3: 5000 lb final RQ; 2270 kg final RQ

## Section 15 - Regulatory Information

### European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XI F

Risk Phrases:

R 11 Highly flammable.

R 36 Irritating to eyes.

R 66 Repeated exposure may cause skin dryness or cracking.

R 67 Vapours may cause drowsiness and dizziness.

Safety Phrases:

S 9 Keep container in a well-ventilated place.

S 16 Keep away from sources of ignition - No smoking.

WGK (Water Danger/Protection)

CAS# 78-93-3: 1

Canada

CAS# 78-93-3 is listed on Canada's DSL List

Canadian WHMIS Classifications: B2, D2B

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.

CAS# 78-93-3 is listed on Canada's Ingredient Disclosure List

### US Federal

TSCA

CAS# 78-93-3 is listed on the TSCA

Inventory.

## Section 16 - Other Information

**MSDS Creation Date: 4/27/1999**  
**Revision #4 Date 4/13/2006**

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 the company 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 the company has been advised of the possibility of such damages.