

Material Safety Data Sheet

Acetophenone, 99%

ACC# 00002

Section 1 - Chemical Product and Company Identification

MSDS Name: Acetophenone, 99%

Catalog Numbers: AC102410000, AC102410010, AC102410025, AC102410050, AC102412500, A22-500

Synonyms: Methyl phenyl ketone; Phenyl methyl ketone.

Company Identification:

Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410

For information, call: 201-796-7100

Emergency Number: 201-796-7100

For CHEMTREC assistance, call: 800-424-9300

For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
98-86-2	Acetophenone	99	202-708-7

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: slightly oily liquid. Flash Point: 77 deg C.

Warning! Causes eye irritation. **Combustible liquid and vapor.** May be harmful if swallowed. May cause skin and respiratory tract irritation.

Target Organs: Eyes.

Potential Health Effects

Eye: May cause transient corneal injury. Causes severe eye irritation and possible injury. Ocular sensitivity to light has been reported at 0.002 ppm (0.01 mg/m3).

Skin: May cause skin irritation.

Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure. May be harmful if swallowed.

Inhalation: Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. Material has a low vapor pressure at room temperature, so exposure to vapor is not likely.

Chronic: Prolonged or repeated eye contact may cause conjunctivitis. Prolonged or repeated skin contact may cause defatting and dermatitis. Narcotic in high concentrations. Chronic exposure can cause an acne-like skin rash which is apparently not of the allergic

Section 4 - First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for a t least 15 minutes. Get medical aid.

Skin: In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

Ingestion: If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Exposure indicators: Acetophenone in expired air and hippuric acid in urine. 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. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Combustible liquid and vapor.

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

Flash Point: 77 deg C (170.60 deg F)

Autoignition Temperature: 570 deg C (1,058.00 deg F)

Explosion Limits, Lower:1.1%

Upper: 6.7%

NFPA Rating: (estimated) Health: 2; Flammability: 2; 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. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Use only with adequate ventilation. Keep away from heat and flame. Avoid breathing spray or mist.

Storage: Keep away from heat and flame. Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

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

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Acetophenone	10 ppm TWA	none listed	none listed

OSHA Vacated PELs: Acetophenone: 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 minimize contact with skin.

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: Liquid
Appearance: colorless - slightly oily
Odor: orange blossom
pH: Not available.
Vapor Pressure: 0.33 mm Hg @ 20 deg C
Vapor Density: 4.12 (Air=1)
Evaporation Rate: 0.06 (diethyl ether=1)
Viscosity: 1.62 cP @ 25 deg C
Boiling Point: 202 deg C @ 760 mmHg
Freezing/Melting Point: 19.6 deg C
Decomposition Temperature: Not available.
Solubility: Insoluble.
Specific Gravity/Density: 1.0296 @ 20°C
Molecular Formula: C₈H₈O
Molecular Weight: 120.15

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Ignition sources, excess heat.
Incompatibilities with Other Materials: Strong oxidizing agents, strong reducing agents, strong bases, perchloric acid, aldehydes, nitric acid + hydrogen peroxide.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.
Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:
CAS# 98-86-2: AM5250000
LD50/LC50:
CAS# 98-86-2:
Dermal, guinea pig: LD50 = >20 mL/kg;
Draize test, rabbit, eye: 750 ug Severe;
Inhalation, mouse: LC50 = 1200 mg/m³/4H;
Oral, mouse: LD50 = 740 mg/kg;
Oral, mouse: LD50 = 1250 mg/kg;
Oral, rat: LD50 = 815 mg/kg;
Oral, rat: LD50 = 2650 mg/kg;
Skin, rabbit: LD50 = 15900 uL/kg;

Carcinogenicity:
CAS# 98-86-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found

Teratogenicity: No information found

Reproductive Effects: Acetophenone had no adverse effects on reproductive or developmental processes of rats after dermal applications of 480 mg/kg on days 10 through 15 of gestation.

Mutagenicity: Cytogenetic Analysis: Hamster, Lung = 600 mg/L.

Neurotoxicity: No information found

Other Studies:

Section 12 - Ecological Information

Ecotoxicity: Fish: Fathead Minnow: LC50 = 196 mg/L; 96 Hr; Flow-through at 24.6 C (pH 7.83) Bacteria: Phytobacterium phosphoreum: EC50 = 15.5 mg/L; 5,15,30 min; Microtox test at 15 C If released to soil, microbial degradation is likely to be the major degradation pathway. It is expected to be moderately to highly mobile in soil and may evaporate from dry soil surfaces. Biodegradation and volatilization are expected to be the major loss processes in water. The estimated biodegradation half-lives in groundwater, river water and lake water samples were 32 days, 8 days and 4.5 days, respectively.

Environmental: Hydrolysis, oxidation and adsorption to suspended particles and sediments and bioconcentration in aquatic organisms are not likely to be important fate processes. Oxidation by hydroxyl radicals in air has an estimated half-life of 2.2 days. Other oxidants (eg, ozone) and photolysis do not appear to be important loss mechanism of this compound in air. Wet deposition may be important for the removal of atmospheric acetophenone.

Physical: No information available.

Other: 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:

CAS# 98-86-2: waste number U004.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	Not regulated as a hazardous material	No information available.
Hazard Class:		
UN Number:		
Packing Group:		

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 98-86-2 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

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

CAS# 98-86-2: 5000 lb final RQ; 2270 kg final RQ

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 98-86-2: immediate, fire.

Section 313

This material contains Acetophenone (CAS# 98-86-2, 99%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:

CAS# 98-86-2 is listed as a hazardous air pollutant (HAP).
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.

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# 98-86-2 can be found on the following state right to know lists: New Jersey, Pennsylvania, Minnesota, Massachusetts.

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 22 Harmful if swallowed.
R 36 Irritating to eyes.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

WGK (Water Danger/Protection)

CAS# 98-86-2: 1

Canada - DSL/NDSL

CAS# 98-86-2 is listed on Canada's DSL List.

Canada - WHMIS

not available.

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

CAS# 98-86-2 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 5/25/1999

Revision #6 Date: 6/06/2006

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 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.