TCI AMERICA

Material Safety Data Sheet

HAZARD WARNINGS	RISK PHRASES	PROTECTIVE CLOTHING
	**Combustible material; avoid heat and sources of ignition.** **Irritating to skin, eyes, and the respiratory system.** **Light sensitive.** **Refrigerate.**	

Section I. Chemical Product and Company Identification

Chemical Name: **Acetoin**
(May exist as crystalline dimer)

Catalog Number: H0225

Synonym: 3-Hydroxy-2-butanone

Chemical Formula: $CH_3COCH(OH)CH_3$

CAS Number: 513-86-0

Supplier: TCI America
9211 N. Harborgate St.
Portland OR
1-800-423-8616

In case of Emergency Call: **Chemtrec®**
(800) 424-9300 (U.S.)
(703) 527-3887 (International)

Section II. Composition and Information on Ingredients

Chemical Name	CAS Number	Percent (%)	TLV/PEL	Toxicology Data
Acetoin (May exist as crystalline dimer)	513-86-0	Min. 95.0 (GC)	Not available.	Rat LD_{50} (oral) >5gm/kg Rabbit LD_{50} (dermal) >5gm/kg

Section III. Hazards Identification

Acute Health Effects

Irritating to eyes and skin on contact. Inhalation causes irritation of the lungs and respiratory system. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.
Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.

Chronic Health Effects

CARCINOGENIC EFFECTS : Not available.
MUTAGENIC EFFECTS : Not available.
TERATOGENIC EFFECTS : Not available.
DEVELOPMENTAL TOXICITY: REPRODUCTIVE EFFECTS:
Rat TDLo (oral) 12600mg/kg, male, 42 Days prior to mating.
Toxic Effects:
Paternal Effects- Testes, epididymis, sperm duct.
Repeated or prolonged exposure to this compound is not known to aggravate existing medical conditions.

Section IV. First Aid Measures

Eye Contact

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Skin Contact

In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Inhalation

If the victim is not breathing, perform mouth-to-mouth resuscitation. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, oxygen can be administered. Seek medical attention if respiration problems do not improve.

Ingestion

INDUCE VOMITING by sticking finger in throat. Lower the head so that the vomit will not reenter the mouth and throat. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive.

Section V. Fire and Explosion Data

Flammability: Combustible.

Auto-Ignition: Not available.

Flash Points: 47°C (116.6°F) (C.C.)

Flammable Limits: Not available.

Combustion Products: These products are toxic carbon oxides (CO, CO_2).

Fire Hazards: Not available.

Explosion Hazards: Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions: SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion. Consult with local fire authorities before attempting large scale fire-fighting operations.

Continued on Next Page **Emergency phone number (800) 424-9300**

Section VI. Accidental Release Measures

Spill Cleanup Instructions

Combustible liquid. Irritating material. Light sensitive material. Refrigerate material.
Keep away from heat. Mechanical exhaust required. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. DO NOT touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Consult federal, state, and/or local authorities for assistance on disposal.

Section VII. Handling and Storage

Handling and Storage Information

COMBUSTIBLE. IRRITANT. LIGHT SENSITIVE. REFRIGERATE.
Forms a solid dimer on standing which is easily converted back to the monomer by melting, distilling, or dissolving.
Keep away from heat. Mechanical exhaust required. Avoid excessive heat and light. Do not breathe gas/fumes/vapor/spray.
Always store away from incompatible compounds such as oxidizing agents, alkalis (bases).

Section VIII. Exposure Controls/Personal Protection

Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash station and safety shower is proximal to the work-station location.

Personal Protection

Splash goggles. Lab coat. Vapor respirator. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product. Be sure to use a MSHA/NIOSH approved respirator or equivalent.

Exposure Limits

Not available.

Section IX. Physical and Chemical Properties

Physical state @ 20°C	Liquid. (Clear, slightly yellow.)	Solubility	Miscible with water, alcohol. Sparingly soluble in ether, petroleum ether.
Specific Gravity	1.00 (water=1)		
Molecular Weight	88.11	Partition Coefficient	Not available.
Boiling Point	148°C (298.4°F)	Vapor Pressure	Not available.
Melting Point	90 to 91°C (194 to 195.8°F) (Dimer) 15°C (59°F) (Monomer)	Vapor Density	Not available.
Refractive Index	1.42	Volatility	Not available.
Critical Temperature	Not available.	Odor	Bland, woody, yogurt.
Viscosity	Not available.	Taste	Not available.

Section X. Stability and Reactivity Data

Stability

This material is stable if stored under proper conditions. (See Section VII for instructions)

Conditions of Instability

Light sensitive. Avoid excessive heat and light.

Incompatibilities

Reactive with strong oxidizing agents, strong alkalis (bases).

Section XI. Toxicological Information

RTECS Number

EL8790000

Routes of Exposure

Eye Contact. Ingestion. Inhalation.

Toxicity Data

Rat LD_{50} (oral) >5gm/kg
Rabbit LD_{50} (dermal) >5gm/kg

Chronic Toxic Effects

CARCINOGENIC EFFECTS : Not available.
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Continued on Next Page **Emergency phone number (800) 424-9300**

Section XII. Ecological Information

Ecotoxicity	Not available.
Environmental Fate	Not available.

Section XIII. Disposal Considerations

Waste Disposal	Recycle to process, if possible. Consult your local regional authorities. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state and local regulations when disposing of the substance.

Section XIV. Transport Information

DOT Classification	CLASS 3: Flammable liquid.
PIN Number	UN2621
Proper Shipping Name	Acetyl methyl carbinol
Packing Group (PG)	III
DOT Pictograms	

Section XV. Other Regulatory Information and Pictograms

TSCA Chemical Inventory (EPA)	This compound is **ON** the EPA Toxic Substances Control Act (TSCA) inventory list.
WHMIS Classification (Canada)	CLASS B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F). On DSL.
EINECS Number (EEC)	208-174-1
EEC Risk Statements	R10- Flammable. R18- In use, may form flammable/explosive vapor-air mixture. R36/37/38- Irritating to eyes, respiratory system and skin.
Japanese Regulatory Data	ENCS No. 2-597

Section XVI. Other Information

Version 1.0
Validated on 10/11/2004.
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Notice to Reader

TCI laboratory chemicals are for research purposes only and are NOT intended for use as drugs, food additives, households, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we can not guarantee that these are the only hazards which exist. Our MSDS sheets are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated MSDS sheets for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, facial mask, fume hood). For proper handling and disposal, always comply with federal, state, and local regulations.