

1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT CODE A0001
PRODUCT NAME ACETOIN
COMPANY NAME M & U International LLC.
31 Readington Road
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Sales.us@mu-intel.us

FOR EMERGENCIES CALL CHEMTREC: 800-424-9300 (24-HOURS)

2. HAZARD IDENTIFICATION:

Classification of the substance or mixture:

This substance is classified and labeled according to the Globally Harmonized System (GHS).

Flammable liquids (Category 3) H226
Skin irritation (Category 2) H315
Eye irritation (Category 2A) H319

GHS label elements

Pictograms on label shall be in the shape of a square set at a point and shall include a black hazard symbol on a white background with a red frame sufficiently wide to be clearly visible. The substance is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms

Pictogram



Signal word

Warning

Hazard statements

H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary statements

P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.

P241	Use explosion-proof electrical/ ventilating/ lighting equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P264	Wash skin thoroughly after handling.
P280	Wear protective gloves/ eye protection/ face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321	Specific treatment (see supplemental first aid instructions on this label).
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P337 + P313	If eye irritation persists: Get medical advice/ attention.
P362	Take off contaminated clothing and wash before reuse.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P403 + P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/ container to an approved waste disposal plant.

3. COMPOSITION AND INFORMATION ON INGREDIENTS:

Chemical characterization: Substances

CAS No.: 513-86-0

Description: ACETOIN

Identification number(s)

EC No.: 208-174-1

4. FIRST-AID GUIDE:

Description of first aid measures

After inhalation:

Supply fresh air. In case of unconsciousness place patient stably in side position for transportation. Call a doctor if symptoms develop or persist. Move out of dangerous area.

After skin contact:

Wash off with soap and plenty of water. Consult a physician if you feel unwell.

After eye contact:

Rinse opened eye for several minutes under running water. Consult a physician if you feel unwell.

After swallowing:

If swallowed rinse mouth with water (only if person is conscious). If symptoms persist consult doctor.

Information for doctor:**Most important symptoms and effects, both acute and delayed**

No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5. FIRE-FIGHTING GUIDE:**Extinguishing media****Suitable extinguishing agents:**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture

Carbon oxides

Advice for firefighters**Protective equipment:**

Wear self contained breathing apparatus for fire fighting if necessary.

Additional information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE GUIDE:**Personal precautions, protective equipment and emergency procedures**

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental precautions:

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and material for containment and cleaning up:

Contain spillage, and then collect with an electrically protected vacuum cleaner by wet-brushing and place in container for disposal according to local regulations.

7. HANDLING AND STORAGE:**Handling:****Precautions for safe handling**

Use with local exhaust ventilation. Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Use explosion-

proof equipment. Keep away from sources of ignition – No smoking. Take measures to prevent the buildup of electrostatic charge.

Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles:

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature 2 – 8 °C

8. EXPOSURE AND PERSONAL PROTECTION:

Control parameters

Components with limit values that require monitoring at the workplace:

Contains no substances with occupational exposure limit values.

Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of work day.

Personal protective equipment:

General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.

Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material should be based on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be determined by the manufacturer of the protective gloves and has to be observed.

Eye protection:



Tightly sealed goggles.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Information on basic physical and chemical properties

General Information	
Appearance:	
Form:	Crystalline
Color:	Light yellow
Odor:	Not determined.
Odor threshold:	Not determined.
pH-value:	Not determined.
Change in condition	
Melting point/Melting range:	90 °C (194 °F)
Boiling point/Boiling range:	148 °C (298 °F) - lit.
Flash point:	47 °C (117 °F) - closed cup
Flammability (solid, gaseous):	Not applicable.
Ignition temperature:	Not determined
Decomposition temperature:	Not determined.
Auto igniting:	Not determined.
Danger of explosion:	Not determined
Explosion limits:	
Lower:	
Upper:	
Vapor pressure:	Not applicable.
Density at 20 °C (68 °F):	Not determined.
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
Dynamic:	Not determined.

Kinematic:	Not determined.
Organic solvents:	Not determined.
Other information	No further relevant information available.

10. STABILITY AND REACTIVITY:

Reactivity

Not applicable.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Vapors may form explosive mixture with air.

Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

Incompatible materials:

Oxidizing agents, Strong bases, Reducing agents, Metals

Hazardous decomposition products:

Carbon oxides

11. TOXICOLOGICAL INFORMATION:

Information on toxicological effects

Acute toxicity:

LD50 Oral - Rat - female - > 2,000 mg/kg
(OECD Test Guideline 423)

LD50 Dermal - Rabbit - > 5,000 mg/kg

Primary irritant effect:

On the skin:

Skin - reconstructed human epidermis (RhE)
Result: No skin irritation
(OECD Test Guideline 439)

On the eye:

Not applicable.

Sensitization:

Direct Peptide Reactivity Assay (DPRA)
Result: Not a skin sensitizer.
(OECD Test Guideline 442C)

Mutagenicity

No mutagenic effects.

Additional toxicological information:**Carcinogenic categories****IARC (International Agency for Research on Cancer)**

Substance is not listed.

NTP (National Toxicology Program)

Substance is not listed.

OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

Additional Information

RTECS: EL8790000

12. ECOLOGICAL INFORMATION:**Toxicity****Aquatic toxicity:**

Toxicity to fish

LC50 - *Leuciscus idus* (Golden orfe) - > 2,200 mg/l - 96 h

LC0 - *Leuciscus idus* (Golden orfe) - 2,200 mg/l - 48 h

Persistence and degradability

Biodegradability

aerobic - Exposure time 28 d

Result: ca.76 % - Readily biodegradable.

(OECD Test Guideline 301F)

Behavior in environmental systems:**Bioaccumulative potential**

Not applicable.

Mobility in soil

Not applicable.

Results of PBT and vPvB assessment**PBT:**

Not applicable.

vPvB:

Not applicable.

Other adverse effects

No data available.

13. DISPOSAL RECOMMENDATIONS:

Waste treatment methods

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as an unused product.

14. TRANSPORTATION INFORMATION:

DOT (US) UN Number: Class: Packing group: Proper shipping name: Reportable quantity: Poison inhalation hazard:	2621 3 III Acetyl methyl carbinol No
IMDG UN number: Class: Packing group: EMS No.: Proper shipping name: Marine pollutant:	2621 3 III F-E, S-D Acetyl methyl carbinol
IATA UN number: Class: Packing group: Proper shipping name:	2621 3 III Acetyl methyl carbinol

15. REGULATORY INFORMATION:

Safety, health and environmental regulations/legislation specific for the substance or mixture

Sara

Section 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Section 311/312 (hazardous chemical):

Acute health hazard.

Section 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold reporting levels established by SARA Title III, Section 313.

TSCA (Toxic Substances Control Act):

Substance is not listed.

Proposition 65

Chemicals known to cause cancer:

Substance is not listed.

Chemicals known to cause reproductive toxicity for females:

Substance is not listed.

Chemicals known to cause reproductive toxicity for males:

Substance is not listed.

Chemicals known to cause developmental toxicity:

Substance is not listed.

Carcinogenic categories

EPA (Environmental Protection Agency)

Substance is not listed.

TLV (Threshold Limit Value established by ACGIH)

Substance is not listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)

Substance is not listed.

Pennsylvania Right to Know Components

ACETOIN

Cas No.: 513-86-0

New Jersey Right to Know Components

ACETOIN

Cas No.: 513-86-0

Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

16. OTHER INFORMATION:

The information in this SDS was obtained from current and reliable sources. However, the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions for use, handling, storage and disposal of this product are beyond M&U's control, it is the responsibility of the user both to determine safe conditions for use of this product and to assume liability for loss, damage, or expense arising out of the products improper

use. No warranty expressed or implied regarding the product described herein will be created by or inferred from any statement or omission in the SDS. Various federal, state, or provincial agencies may have specific regulations concerning the transportation, handling, storage, use, or disposal of this product which may not be reflected in the SDS. The user should review these regulations to ensure full compliance.

Prepared By: M&U International LLC

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