Safety Data Sheet

CAS No 78-93-3
Date Issued: 12-08-2021
Ultrasolve 900-003

Company Details

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1.Product and Company Identification

Trade / Commercial Name	**Ultrasolve 900-003**		
Chemical Name	Methyl Ethyl Ketone		
Formula	C4H8O		
Chemical Family	Aliphatic ketone		
Synonyms	2-butanone, ethyl methyl ketone, MEK, 2-oxobutane		
Un No	1193	Hazchem Code	2[Y]e
ERG No	127	EAC	26

2. Hazards Identification

Flammable F
Irritant Xi
Highly flammable
Irritating to eyes
Repeated exposure may cause skin dryness and cracking
Vapours may cause drowsiness and dizziness
Persons with pre-existing skin, eye, respiratory or neurological condition might be more sensitive.
Vapours are heavier than air. They will travel along the ground and collect in low or confined areas.
Distant ignition is possible.
Vapours may form explosive mixtures with air.

3. Composition

Hazardous Components	Methyl Ethyl Ketone

4. First Aid Measures

First Aid Skin	Flush body with plenty of water for at least 15 minutes. Immediately remove contaminated clothing, including shoes.
First Aid Eyes	Flush eyes with water for 15 minutes. Hold eyelids open while washing. Seek medical advice.
First Aid Ingested	Rinse mouth. Give plenty of water to drink. Seek medical advice.
First Aid Inhalation	Remove from contaminated area. If not breathing give artificial respiration. Seek medical advice.

5. Fire Fighting Measures

SMALL FIRES: Dry chemical, CO2, Halon, water spray or alcohol foam.

LARGE FIRES: Water spray, fog or alcohol foam is recommended.
Move container from fire area if you can do it without risk.
Cool containers that are exposed to flames with water from the side until well after the fire is out.
Keep unnecessary people away; isolate hazard area and deny entry.
Stay upwind; keep out of low areas.
Self-contained breathing apparatus (SCBA) and structural firefighter's protective clothing will provide limited protection.
Remove all sources of flames, heat and sparks.
Vapours are heavier than air. They will spread along the ground and collect in low or confined areas (sewers, basements, tanks).
May polymerise explosively when heated or involved in a fire.
Vapour explosion hazard indoors, outdoors or in sewers.

6. Accidental Release Measures

PRECAUTIONS:
Contain (avoid spillage from entering drains or water courses)
Restrict access to area.
Provide adequate protective equipment and ventilation.
Remove sources of heat and flame.
Notify occupational and environmental authorities.
SPILL OR LEAK:
Shut off ignition sources; no flares, smoking or flames in hazard area.
Stop leak if you can do so without risk.
Water spray may reduce vapour; but it may not prevent ignition in closed spaces.
Do not touch spilled material.
SMALL SPILLS:
Dilute with water or take up with sand or other non-combustible, inert absorbent material and place into containers for later disposal.
LARGE SPILLS:
Dike far ahead of liquid spill for later disposal.

7. Handling And Storage

Handling:
Keep away from heat, sparks or open flames.
Keep in original container and provide good ventilation in storage area.
Keep containers tightly closed.
Do not breathe gas, fumes, vapours or spray.
In case of insufficient ventilation, wear suitable respiratory equipment.
Storage:
Store in a cool, dry environment.
Store away from heat and sources of ignition.
Ground all equipment containing material.
Store away from incompatible materials such as oxidising agents, metals, acids, alkalis.

8. Exposure Controls/Personal Protection

Occupational Exposure Limits	TWA OEL-RL 200 ppm; 600 mg/m^3 Short term OEL-RL 300 ppm; 900 mg/m^3 Skin absorption
Controls	The control measures appropriate for a particular worksite depend on how this material is used and on the extent of exposure. The best protection is to enclose operations and/or provide local exhaust ventilation at the site of chemical release. Use a non-sparking, grounded ventilation system separate from other

	exhaust ventilation systems. Exhaust directly to the outside. Supply sufficient replacement air to make up for air removed. Have a safety shower/eye wash fountain readily available in the immediate work area
Personal Protection	If engineering controls and work practices are not effective in controlling this material, then wear suitable personal protection equipment, including chemical safety goggles & face shield, boots, impervious gloves, coveralls & respiratory protection. Have appropriate equipment available for use in emergencies. Do not eat, drink or smoke during work.

9. Physical & Chemical Properties

Clear, colourless liquid with sweet odour.
Boiling Point: 79,6 °C.
Freezing Point: -86,3 °C.
Relative Density: vapour: 2,5 (air:1)
liquid: 0,81 (water:1)
Vapour Pressure: 9,3 kPa
Flash Point: -9°C.
Flammable Limits: 2 to 12 %.
Partly soluble in water.

10. Stability And Reactivity

Conditions to Avoid	Stable under normal conditions. Will easily be ignited by heat, sparks, flames. Vapours may form explosive mixtures with air.
Incompatible Materials	Strong oxidants, strong acids.
Other	

11. Toxicological Information

Acute toxicity:
Oral rat LD50: 2 737 mg/kg
Dermal rabbit LD50: 13 000 mg/kg
Inhalation rat LC50: 11 270 ppm (4 hours)
Humans:
The substance irritates the eyes and respiratory tract.
May cause effects on central nervous system.
Exposure far above the OEL may result in unconsciousness.
Long-term or repeated exposure:
The liquid defats the skin.
Animal tests show that this substance possibly cause toxic effects upon human reproduction.

12. Ecological Information

Ecotoxicity:
Toxicity to fish;
LC50 Bluegill sunfish: 4 467 mg/l; 96 h
LC50 Poecilia reticulata: 5 700 mg/l; 24 h
LC50 Pimephales promelas: 3 200 mg/l; 96 h
Toxicity to daphnia and other aquatic invertebrates:
LC50 Daphnia magna < 520 mg/l; 48 h
Toxic to aquatic life in high concentrations. Notify local health and wildlife officials.

BOD and COD:
BOD5: 1.515 - 1.92 mg/l in 5 days (standard dilution technique, normal sewage seed)
COD: 2.20 - 2.31 mg/l
BOD 61 % in 28 days CO2 Evolution Test
Biodegradable form OECD
Mobility: Not available
Products of degradation: Carbon oxides
The products of degradation are less toxic than the product itself.
MEK is highly degradable in aerobic systems using sludge, sewage seed or an inoculum from polluted surface water. Degradation is complete in 5 - 10 days.
No information concerning the bioconcentration is available. However, it has a very low octanol/water partition function (log P = 0.29).

13. Disposal Considerations

Disposal Method Product	Chemical residues generally count as special waste. We recommend that you contact the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste.
Disposal Method Packaging	Disposal in accordance with local legal provisions.

14. Transport Information

UN No	1193	Hazchem Code	2[Y]e
ERG No	127	EAC	26
IMDG-Shipping Name	MEK (ETHYL METHYL KETONE)		
		IMDG-Packaging Group	II
Marine Pollutant	No		
Class	Class: 3 Flammable Liquid Group: II		
Subsidiary Risks	None		

15. Regulatory Information

EEC Hazard Classification	3
Risk Phases	Highly flammable Irritating to eyes Repeated exposure may cause skin dryness and cracking Vapours may cause drowsiness and dizziness
Safety Phases	Keep out of reach of children Keep container in a well-ventilated place Keep away from sources of ignition
National Legislation	National Road Traffic Act 1996 (Act 93 of 1996) Occupational Health and Safety Act 1993 (Act 85 of 1993) Hazardous Substances Act 1973 (Act 15 of 1973)

16. Other Information

Reason for alteration: General update
This document has been drafted with reasonable regard to the information available to us, and as accurately as is reasonably practicable.
It characterizes the product with regard to the appropriate safety precautions.
It does not represent a guarantee of the properness of the product.
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LAST PAGE