

EMS CATALOG NO: 10000
EMS PRODUCT: Acetone
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MATERIAL SAFETY DATA SHEET

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ELECTRON MICROSCOPY SCIENCES

321 MORRIS ROAD * P.O. BOX 251
P.O. BOX 251
FORT WASHINGTON, PA 19034
215-646-1566 / fax 215-646-8931

email: sgkcck@aol.com
WEB: www.emsdiasum.com

24 HOUR EMERGENCY PHONE NUMBER **CHEMTREC: (800) 424-9300**

FOR PRODUCT AND SALES INFORMATION

CONTACT ELECTRON MICROSCOPY SCIENCES OFFICE ABOVE.

PRODUCT IDENTIFICATION

COMMON NAME: Acetone
COMMERCIAL NAME(S): Not available.
SYNONYM: 2-propanone
CHEMICAL NAME: Dimethylketone
CHEMICAL FAMILY: Aliphatic ketone (Solvent)
CHEMICAL FORMULA: CH₃COCH₃
CAS#: 67-64-1
RTECS: AL3150000
TSCA: TSCA 8(b) inventory: ACETONE
CI#: Not applicable

COMPOSITION AND INFORMATION ON INGREDIENTS

NAME: Acetone

CAS#: 67-64-1

TWA(mg/m³): 750

STEL (mg/m³): 1000

% BY WEIGHT: 100

TOXICOLOGICAL DATA ON INGREDIENTS:

ORAL (LD50): Acute: 5800 mg/kg [Rat].

DERMAL (LD50): Acute: 20000 mg/kg [Rabbit].

VAPOR (LC50): Acute: 29853 ppm 4 hour(s) [Rat].

HAZARDS IDENTIFICATION

POTENTIAL ACUTE HEALTH EFFECTS:

Hazardous in case of skin contact (permeator), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant, sensitizer).

POTENTIAL CHRONIC HEALTH EFFECTS:

Hazardous in case of skin contact (permeator), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant, sensitizer).

CARCINOGENIC EFFECTS: Classified A5 (Not suspected for human.) by ACGIHG.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Classified None. for human.

DEVELOPMENTAL TOXICITY: Not toxic.

The substance is toxic to blood, kidneys, lungs, the nervous system, liver, mucous membranes. The substance is not toxic to the reproductive system. Repeated or prolonged exposure to the substance can produce target organs damage.

FIRST AID MEASURES

EYE CONTACT:

Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek medical attention.

SKIN CONTACT:

After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly

careful to clean folds, crevices, creases and groin. Cold water may be used. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

SERIOUS SKIN CONTACT:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

INHALATION:

Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

SERIOUS INHALATION:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

INGESTION:

Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

SERIOUS INGESTION: Not available.

FIRE AND EXPLOSION DATA

FLAMMABILITY OF THE PRODUCT: Flammable.

AUTO-IGNITION TEMPERATURE: 465°C (869°F)

FLASH POINTS: Closed Cup: -20°C (-4°F).

Open Cup: -9°C (15.8°F) (Cleveland)

FLAMMABLE LIMITS: Lower: 2.6%

Upper: 12.8%

PRODUCTS OF COMBUSTION: The products are carbon oxides (CO, CO₂)

FIRE HAZARDS IN PRESENCE OF VARIOUS SUBSTANCES: Not available.

EXPLOSION HAZARDS IN PRESENCE OF VARIOUS SUBSTANCES:

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: Flammable liquid, soluble or dispersed in water.

SMALL FIRE: Use DRY chemical powder.

LARGE FIRE: Use alcohol foam, water spray or fog.

SPECIAL REMARKS ON FIRE HAZARDS: Not available.

SPECIAL REMARKS ON EXPLOSION HAZARDS: Not available.

ACCIDENTAL RELEASE MEASURES

SMALL SPILL:

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

LARGE SPILL:

Flammable liquid. Keep away from heat. Keep away from sources of ignition. 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. Eliminate all ignition sources. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

HANDLING AND STORAGE

PRECAUTIONS:

Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.

STORAGE:

Flammable materials should be stored in a separate safety storage cabinet or room. Keep away from heat. Keep away from sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place. Ground all equipment containing material. A refrigerated room would be preferable for materials with a flash point lower than 37.8°C (100°F).

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 stations and safety showers are proximal to the work-station location.

PERSONAL PROTECTION:

Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves (impervious).

PERSONAL PROTECTION IN CASE OF A LARGE SPILL:

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

EXPOSURE LIMITS:

TWA: 750

STEL: 1000 (ppm) from OSHA (PEL)

Consult local authorities for acceptable exposure limits.

PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE AND APPEARANCE: Liquid (Z)

ODOR: Pungent (Strong).

TASTE: Not available.

COLOR: Colorless.

MOLECULAR WEIGHT: 58.08 g/mole

pH (1% SOLN/WATER): ~7 [Neutral.]

BOILING POINT: 56.2°C (133.2°F)

MELTING POINT: -95.35°C (-139.2°F)

CRITICAL TEMPERATURE: Not available.

SPECIFIC GRAVITY: 0.79 (Water =1)

VAPOR PRESSURE: 186.2 mm of Hg (@ 20°C)

VAPOR DENSITY: 2 (Air = 1)

VOLATILITY: Not available.

ODOR THRESHOLD: 62 ppm

WATER/OIL DIST. COEFF.: Not available.

IONICITY (IN WATER): Not available.

DISPERSION PROPERTIES: Is not dispersed in methanol, diethyl ether, n-octanol.

See solubility in water, methanol, diethyl ether, n-octanol.

SOLUBILITY: Easily soluble in cold water, hot water, methanol, diethyl ether. Partially soluble in n-octanol.

STABILITY AND REACTIVITY DATA

STABILITY: The product is stable.

INSTABILITY TEMPERATURE: Not available.

CONDITIONS OF INSTABILITY: Not available.

INCOMPATIBILITY WITH VARIOUS SUBSTANCES: Not available.

CORROSIVITY: Non-corrosive in presence of glass.

SPECIAL REMARKS ON REACTIVITY: Not available.

SPECIAL REMARKS ON CORROSIVITY: Not available.

POLYMERIZATION: No.

TOXICOLOGICAL INFORMATION

ROUTES OF ENTRY: Dermal contact. Eye contact. Inhalation. Ingestion.

TOXICITY TO ANIMALS:

WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE.

Acute oral toxicity (LD50): 5800 mg/kg [Rat].

Acute dermal toxicity (LD50): 20000 mg/kg [Rabbit].

Acute toxicity of the vapor (LC50): 29853 ppm 4 hour(s) [Rat].

CHRONIC EFFECTS ON HUMANS:

CARCINOGENIC EFFECTS: Classified A5 (Not suspected for human.) by ACGIH.

TERATOGENIC EFFECTS: Classified None. for human.

DEVELOPMENTAL TOXICITY: Not toxic.

The substance is toxic to blood, kidneys, lungs, the nervous system, liver, mucous membranes. The substance is not toxic to the reproductive system.

OTHER TOXIC EFFECTS ON HUMANS:

Hazardous in case of skin contact (permeator), of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant, sensitizer).

SPECIAL REMARKS ON TOXICITY TO ANIMALS: Not available.

SPECIAL REMARKS ON CHRONIC EFFECTS ON HUMANS: Not available.

SPECIAL REMARKS ON OTHER TOXIC EFFECTS ON HUMANS:

Material is irritating to mucous membranes and upper respiratory tract.

ECOLOGICAL INFORMATION

ECOTOXICITY: Not available.

BOD5 AND COD: Not available.

PRODUCTS OF BIODEGRADATION:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

TOXICITY OF THE PRODUCTS OF BIODEGRADATION:

The products of degradation are more toxic.

SPECIAL REMARKS ON THE PRODUCTS OF BIODEGRADATION: Not available.

DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: Recycle to process, if possible. Consult your local or regional authorities.

TRANSPORT INFORMATION

DOT CLASSIFICATION: Class 3: Flammable liquid.

IDENTIFICATION: Acetone UN1090 PG: II

SPECIAL PROVISIONS FOR TRANSPORT: Not available.

OTHER REGULATORY INFORMATION

FEDERAL AND STATE REGULATIONS:

PENNSYLVANIA RTK: Acetone

MASSACHUSETTS RTK: Acetone

TSCA 8 (b) INVENTORY: Acetone

CERCLA: Hazardous substances: Acetone.

OTHER REGULATIONS:

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

OTHER CLASSIFICATIONS:

WHMIS (CANADA): CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).

CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCLA (EEC): R-11: Highly flammable.
R-36: Irritating to eyes.

HMIS (U.S.A.):

HEALTH HAZARD: 1
FIRE HAZARD: 3
REACTIVITY: 0
PERSONAL PROTECTION: j

NATIONAL FIRE PROTECTION ASSOCIATION (U.S.A.)

HEALTH: 1
FLAMMABILITY: 3
REACTIVITY: 0
SPECIFIC HAZARD:

PROTECTIVE EQUIPMENT:

Gloves (impervious).

Lab coat.

Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Splash goggles.