

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MATHESON TRI-GAS, INC.
150 Allen Road Suite 302
Basking Ridge, New Jersey 07920
Information: 1-800-416-2505

Emergency Contact:
CHEMTREC 1-800-424-9300
Calls Originating Outside the US:
703-527-3887 (Collect Calls Accepted)

SUBSTANCE: ACETONE

TRADE NAMES/SYNONYMS:

MTG MSDS 105; DIMETHYLFORMALDEHYDE; DIMETHYLKETAL; DIMETHYL KETONE; BETA-KETOPROPANE; PROPANONE; 2-PROPANONE; PYROACETIC ETHER; B-KETOPROPANE; A-18; A-18-S; A-18-SK; A-11; A-11-S; A-16-P; A-16-S; A-949; A-40; A-20; A-19; A-946; RCRA U002; UN 1090; C3H6O; MAT00140; RTECS AL3150000

CHEMICAL FAMILY: ketones, aliphatic

CREATION DATE: Jan 24 1989

REVISION DATE: Dec 11 2008

2. COMPOSITION, INFORMATION ON INGREDIENTS

COMPONENT: ACETONE
CAS NUMBER: 67-64-1
PERCENTAGE: 100

3. HAZARDS IDENTIFICATION

NFPA RATINGS (SCALE 0-4): HEALTH=2 FIRE=3 REACTIVITY=0



EMERGENCY OVERVIEW:

COLOR: colorless

PHYSICAL FORM: liquid

ODOR: sweet odor, minty odor, pungent odor, pleasant odor

MAJOR HEALTH HAZARDS: respiratory tract irritation, skin irritation, eye irritation, central nervous system depression

PHYSICAL HAZARDS: Flammable liquid and vapor. Vapor may cause flash fire.

POTENTIAL HEALTH EFFECTS:

INHALATION:

SHORT TERM EXPOSURE: irritation, low body temperature, nausea, stomach pain, difficulty breathing, headache, drowsiness, symptoms of drunkenness, kidney damage, liver damage, coma

LONG TERM EXPOSURE: same as effects reported in short term exposure

SKIN CONTACT:

SHORT TERM EXPOSURE: irritation

LONG TERM EXPOSURE: tingling sensation

EYE CONTACT:

SHORT TERM EXPOSURE: irritation

LONG TERM EXPOSURE: same as effects reported in short term exposure

INGESTION:

SHORT TERM EXPOSURE: nausea, diarrhea, symptoms of drunkenness, kidney damage, liver damage, coma

LONG TERM EXPOSURE: no information on significant adverse effects

4. FIRST AID MEASURES

INHALATION: It is unlikely that emergency treatment will be required.

SKIN CONTACT: Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

EYE CONTACT: Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

INGESTION: Contact local poison control center or physician immediately. Never make an unconscious person vomit or drink fluids. When vomiting occurs, keep head lower than hips to help prevent aspiration. If person is unconscious, turn head to side. Get medical attention immediately.

NOTE TO PHYSICIAN: For ingestion, consider gastric lavage and activated charcoal slurry.

5. FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARDS: Severe fire hazard. The vapor is heavier than air. Vapors or gases may ignite at distant ignition sources and flash back. Vapor/air mixtures are explosive.

EXTINGUISHING MEDIA: alcohol-resistant foam, carbon dioxide, regular dry chemical, water, alcohol-resistant foam

Large fires: Use alcohol-resistant foam or flood with fine water spray.

FIRE FIGHTING: Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. For fires in cargo or storage area: Cool

containers with water from unmanned hose holder or monitor nozzles until well after fire is out. If this is impossible then take the following precautions: Keep unnecessary people away, isolate hazard area and deny entry. Let the fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For tank, rail car or tank truck: Evacuation radius: 800 meters (1/2 mile). Water may be ineffective.

FLASH POINT: -4 F (-20 C) (CC)

LOWER FLAMMABLE LIMIT: 2.5%

UPPER FLAMMABLE LIMIT: 13%

AUTOIGNITION: 869 F (465 C)

FLAMMABILITY CLASS (OSHA): IB

6. ACCIDENTAL RELEASE MEASURES

OCCUPATIONAL RELEASE:

Avoid heat, flames, sparks and other sources of ignition. Remove sources of ignition. Stop leak if possible without personal risk. Reduce vapors with water spray. Small spills: Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. Large spills: Dike for later disposal. Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas. Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800)424-8802 (USA) or (202)426-2675 (USA).

7. HANDLING AND STORAGE

STORAGE: Store and handle in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.106. Grounding and bonding required. Keep separated from incompatible substances.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE LIMITS:

ACETONE:

1000 ppm (2400 mg/m³) OSHA TWA

750 ppm (1780 mg/m³) OSHA TWA (vacated by 58 FR 35338, June 30, 1993)

1000 ppm (2375 mg/m³) OSHA STEL (vacated by 58 FR 35338, June 30, 1993)

500 ppm ACGIH TWA

750 ppm ACGIH STEL

250 ppm (590 mg/m³) NIOSH recommended TWA 10 hour(s)

VENTILATION: Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Ensure compliance with applicable exposure limits.

EYE PROTECTION: Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

CLOTHING: Wear appropriate chemical resistant clothing.

GLOVES: Wear appropriate chemical resistant gloves.

RESPIRATOR: The following respirators and maximum use concentrations are drawn from NIOSH and/or OSHA.

2500 ppm

Any air-purifying half-mask respirator equipped with organic vapor cartridge(s).

Any powered, air-purifying respirator with organic vapor cartridge(s).

Any air-purifying full-facepiece respirator (gas mask) with a chin-style, front-mounted or back-mounted organic vapor canister.

Any supplied-air respirator.

Any self-contained breathing apparatus with a full facepiece.

Emergency or planned entry into unknown concentrations or IDLH conditions -

Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.

Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.

Escape -

Any air-purifying full-facepiece respirator (gas mask) with a chin-style, front-mounted or back-mounted organic vapor canister.

Any appropriate escape-type, self-contained breathing apparatus.

For Unknown Concentrations or Immediately Dangerous to Life or Health -

Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.

Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: liquid

APPEARANCE: clear

COLOR: colorless

ODOR: sweet odor, minty odor, pungent odor, pleasant odor

TASTE: sweet taste

MOLECULAR WEIGHT: 58.08

MOLECULAR FORMULA: C-H3-C-O-C-H3

BOILING POINT: 133 F (56 C)

FREEZING POINT: -139 F (-95 C)

VAPOR PRESSURE: 180 mmHg @ 20 C

VAPOR DENSITY (air=1): 2.0
SPECIFIC GRAVITY (water=1): 0.7899
WATER SOLUBILITY: soluble
PH: neutral in solution
VOLATILITY: 100%
ODOR THRESHOLD: 20 ppm
EVAPORATION RATE: 14.4 (butyl acetate=1)
COEFFICIENT OF WATER/OIL DISTRIBUTION: Not available
SOLVENT SOLUBILITY:
Soluble: ethanol, ether, chloroform, benzene, oils, dimethylformamide

10. STABILITY AND REACTIVITY

REACTIVITY: Stable at normal temperatures and pressure.

CONDITIONS TO AVOID: Avoid heat, flames, sparks and other sources of ignition. Containers may rupture or explode if exposed to heat.

INCOMPATIBILITIES: acids, amines, halogens, halo carbons, oxidizing materials, metal salts, peroxides, combustible materials, bases

HAZARDOUS DECOMPOSITION:
Thermal decomposition products: oxides of carbon

POLYMERIZATION: Will not polymerize.

11. TOXICOLOGICAL INFORMATION

ACETONE:

IRRITATION DATA: 500 ppm eyes-human; 395 mg open skin-rabbit mild; 500 mg/24 hour(s) skin-rabbit mild; 20 mg/24 hour(s) eyes-rabbit moderate; 10 ul eyes-rabbit mild; 186300 ppm eyes-human mild; 20 mg eyes-rabbit severe

TOXICITY DATA: 50100 mg/m³ inhalation-rat LC50; >9400 ul/kg skin-guinea pig LD50; 5800 mg/kg oral-rat LD50

CARCINOGEN STATUS: ACGIH: A4 -Not Classifiable as a Human Carcinogen

LOCAL EFFECTS:

Irritant: inhalation, skin, eye

ACUTE TOXICITY LEVEL:

Moderately Toxic: inhalation

Slightly Toxic: ingestion

TARGET ORGANS: central nervous system

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: respiratory disorders, skin disorders and allergies

MUTAGENIC DATA: Available.

REPRODUCTIVE EFFECTS DATA: Available.

ADDITIONAL DATA: Alcohol may enhance the toxic effects.

12. ECOLOGICAL INFORMATION

ECOTOXICITY DATA:

FISH TOXICITY: 4 ug/L 96 hour(s) LC50 (Mortality) Harlequinfish, red rasbora (*Rasbora heteromorpha*)

INVERTEBRATE TOXICITY: 35 ug/L 48 hour(s) EC50 (Immobilization) Water flea (*Daphnia pulex*)

ALGAL TOXICITY: <14 ug/L 11-14 hour(s) MATC (Growth) Red algae (*Champia parvula*)

OTHER TOXICITY: 0.21 ug/L 96 week(s) LC50 (Mortality) Frog (*Rana hexadactyla*)

FATE AND TRANSPORT:

BIOCONCENTRATION: 100000 ug/L 32 hour(s) BCF (Residue) Fathead minnow (*Pimephales promelas*)
4.3 ug/L

ENVIRONMENTAL SUMMARY: Highly toxic to aquatic life.

13. DISPOSAL CONSIDERATIONS

Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): U002. Dispose in accordance with all applicable regulations.

14. TRANSPORT INFORMATION

U.S. DOT 49 CFR 172.101:

PROPER SHIPPING NAME: Acetone

ID NUMBER: UN1090

HAZARD CLASS OR DIVISION: 3

PACKING GROUP: II

LABELING REQUIREMENTS: 3



CANADIAN TRANSPORTATION OF DANGEROUS GOODS:

SHIPPING NAME: Acetone

UN NUMBER: UN1090

CLASS: 3

PACKING GROUP/CATEGORY: II

15. REGULATORY INFORMATION

U.S. REGULATIONS:

CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4):

ACETONE: 5000 LBS RQ

SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355 Subpart B): Not regulated.

SARA TITLE III SECTION 304 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355 Subpart C): Not regulated.

SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES (40 CFR 370 Subparts B and C):

ACUTE: Yes

CHRONIC: No

FIRE: Yes

REACTIVE: No

SUDDEN RELEASE: No

SARA TITLE III SECTION 313 (40 CFR 372.65): Not regulated.

OSHA PROCESS SAFETY (29 CFR 1910.119): Not regulated.

STATE REGULATIONS:

California Proposition 65: Not regulated.

CANADIAN REGULATIONS:

WHMIS CLASSIFICATION: BD2

NATIONAL INVENTORY STATUS:

U.S. INVENTORY (TSCA): Listed on inventory.

TSCA 12(b) EXPORT NOTIFICATION: Not listed.

CANADA INVENTORY (DSL/NDSL): Not determined.

16. OTHER INFORMATION

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