MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MATHESON TRI-GAS, INC. Emergency Contact:
150 Allen Road Suite 302 CHEMTREC 1-800-424-9300
Basking Ridge, New Jersey 07920 Calls Originating Outside the US:
Information: 1-800-416-2505 703-527-3887 (Collect Calls Accepted)

SUBSTANCE: CUMENE

TRADE NAMES/SYNONYMS:
MTG MSDS 247; ISOPROPYL BENZENE; ISOPROPYL BENZENE; CUMOL; BENZENE, (1-
METHYLETHYL)-; (1-METHYLETHYL) BENZENE; IOSPROPYLBENZOL; 2-PHENYLPROPA
NE; 2-PHENYL PROPA; RCRA U055; UN 1918; C9H12; MAT05570; RTECS GR8575000

CHEMICAL FAMILY: hydrocarbons, aromatic

CREATION DATE: Jan 24 1989
REVISION DATE: Dec 11 2008

2. COMPOSITION, INFORMATION ON INGREDIENTS

COMPONENT: CUMENE
CAS NUMBER: 98-82-8
PERCENTAGE: 100.0

3. HAZARDS IDENTIFICATION

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

EMERGENCY OVERVIEW:
COLOR: colorless
PHYSICAL FORM: liquid
ODOR: distinct odor, pungent odor
MAJOR HEALTH HAZARDS: skin irritation, aspiration hazard, central nervous system depression
PHYSICAL HAZARDS: Flammable liquid and vapor. Vapor may cause flash fire.

POTENTIAL HEALTH EFFECTS:
INHALATION:
SHORT TERM EXPOSURE: irritation, nausea, difficulty breathing, headache, drowsiness, dizziness, loss
of coordination

LONG TERM EXPOSURE: irritation, kidney damage, liver damage

SKIN CONTACT:
SHORT TERM EXPOSURE: irritation, drowsiness
LONG TERM EXPOSURE: itching

EYE CONTACT:
SHORT TERM EXPOSURE: irritation
LONG TERM EXPOSURE: irritation

INGESTION:
SHORT TERM EXPOSURE: vomiting, stomach pain, drowsiness, aspiration hazard
LONG TERM EXPOSURE: no information on significant adverse effects

4. FIRST AID MEASURES

INHALATION: If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.

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: Aspiration hazard. DO NOT induce vomiting. If vomiting occurs, keep head lower than hips to help prevent aspiration. Get immediate medical attention. Give artificial respiration if not breathing.

NOTE TO PHYSICIAN: For ingestion, consider gastric lavage.

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 above flash point. Electrostatic discharges may be generated by flow or agitation resulting in ignition or explosion.

EXTINGUISHING MEDIA: regular dry chemical, carbon dioxide, water, regular foam

Large fires: Use regular 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). Do not attempt to extinguish fire unless flow of material can be stopped first. Flood with fine water spray. Do not scatter spilled material with high-pressure water streams. Cool containers with water spray until well after the fire is out. Apply water from a protected location or from a safe distance. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

**FLASH POINT:** 97 F (36 C) (CC)  
**LOWER FLAMMABLE LIMIT:** 0.9%  
**UPPER FLAMMABLE LIMIT:** 6.5%  
**AUTOIGNITION:** 795 F (424 C)  
**FLAMMABILITY CLASS (OSHA):** IC

### 6. ACCIDENTAL RELEASE MEASURES

**OCCUPATIONAL RELEASE:**  
Avoid heat, flames, sparks and other 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. Remove sources of ignition. Keep unnecessary people away, isolate hazard area and deny entry. 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


### 8. EXPOSURE CONTROLS, PERSONAL PROTECTION

**EXPOSURE LIMITS:**  
**CUMENE:**  
50 ppm (245 mg/m3) OSHA TWA (skin)  
50 ppm ACGIH TWA  
50 ppm (245 mg/m3) NIOSH recommended TWA 10 hour(s) (skin)  

**VENTILATION:** Provide local exhaust or process enclosure ventilation system. 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.

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

900 ppm
Any supplied-air respirator operated in a continuous-flow mode.
Any powered, air-purifying respirator with organic vapor cartridge(s).
Any air-purifying respirator with a full facepiece and an organic vapor canister.
Any air-purifying full-facepiece respirator (gas mask) with a chin-style, front-mounted or back-mounted organic vapor canister.
Any self-contained breathing apparatus with a full facepiece.
Any supplied-air respirator 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: liquid
COLOR: colorless
ODOR: distinct odor, pungent odor
MOLECULAR WEIGHT: 120.19
MOLECULAR FORMULA: C6-H5-C-H-(C-H3)2
BOILING POINT: 306 F (152 C)
FREEZING POINT: -141 F (-96 C)
VAPOR PRESSURE: 8 mmHg @ 20 C
VAPOR DENSITY (air=1): 4.1
SPECIFIC GRAVITY (water=1): 0.86
WATER SOLUBILITY: insoluble
PH: Not available
VOLATILITY: Not available
ODOR THRESHOLD: 1.2 ppm
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. Keep out of water supplies and sewers.

**INCOMPATIBILITIES:** acids, oxidizing materials, combustible materials

**HAZARDOUS DECOMPOSITION:**
Thermal decomposition products: oxides of carbon

**POLYMERIZATION:** Will not polymerize.

11. TOXICOLOGICAL INFORMATION

**CUMENE:**
**IRRITATION DATA:** 10 mg/24 hour(s) open skin-rabbit mild; 100 mg/24 hour(s) skin-rabbit moderate; 86 mg eyes-rabbit mild; 500 mg/24 hour(s) eyes-rabbit mild
**TOXICITY DATA:** 8000 ppm inhalation-rat LC50; 12300 ul/kg skin-rabbit LD50; 1400 mg/kg oral-rat LD50

**LOCAL EFFECTS:**
Irritant: skin

**ACUTE TOXICITY LEVEL:**
Moderately Toxic: ingestion
Slightly Toxic: inhalation, dermal absorption

**TARGET ORGANS:** central nervous system

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** liver and/or kidney disorders, liver disorders, respiratory disorders, skin disorders and allergies

**MUTAGENIC DATA:** Available.

**ADDITIONAL DATA:** Alcohol may enhance the toxic effects. Stimulants such as epinephrine may induce ventricular fibrillation.

12. ECOLOGICAL INFORMATION

**ECOTOXICITY DATA:**
**FISH TOXICITY:** 5100 ug/L 96 hour(s) LC50 (Mortality) Guppy (Poecilia reticulata)
INVERTEBRATE TOXICITY: 100 mg/L 24 hour(s) EC100 (Abundance) Water flea (Daphnia magna)

ALGAL TOXICITY: 2600 ug/L 72 hour(s) EC50 (Growth) Green algae (Selenastrum capricornutum)

13. DISPOSAL CONSIDERATIONS


14. TRANSPORT INFORMATION

U.S. DOT 49 CFR 172.101:
PROPER SHIPPING NAME: Isopropenylbenzene
ID NUMBER: UN2303
HAZARD CLASS OR DIVISION: 3
PACKING GROUP: III
LABELING REQUIREMENTS: 3

CANADIAN TRANSPORTATION OF DANGEROUS GOODS:
SHIPPING NAME: Isopropenylbenzene
UN NUMBER: UN2303
CLASS: 3
PACKING GROUP/CATEGORY: III

15. REGULATORY INFORMATION

U.S. REGULATIONS:
CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4):
CUMENE: 5000 LBS RQ


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):
CUMENE


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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