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: NAPHTHALENE

TRADE NAMES/SYNONYMS:
MTG MSDS 191; NAPHTHALIN; TAR CAMPHOR; WHITE TAR; NAPHTHENE; MOTH BALLS;
MOTH FLAKES; NAPHTHALINE; NAPHTHALEN; CAMPHOR TAR; RCRA U165; UN 1334; C10H8;
MAT16120; RTECS QJ0525000

CHEMICAL FAMILY: hydrocarbons, polynuclear

CREATION DATE: Jun 07 1995
REVISION DATE: Dec 11 2008

2. COMPOSITION, INFORMATION ON INGREDIENTS

COMPONENT: NAPHTHALENE
CAS NUMBER: 91-20-3
PERCENTAGE: 100

3. HAZARDS IDENTIFICATION

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

EMERGENCY OVERVIEW:
COLOR: white
PHYSICAL FORM: flakes
ODOR: mothball odor
MAJOR HEALTH HAZARDS: harmful if swallowed, respiratory tract irritation, skin irritation, eye
irritation, blood damage, allergic reactions, suspect cancer hazard (in animals)
PHYSICAL HAZARDS: Dust/air mixtures may ignite or explode.

POTENTIAL HEALTH EFFECTS:
INHALATION:
SHORT TERM EXPOSURE: irritation, fever, nausea, vomiting, diarrhea, stomach pain, headache, disorientation, eye damage, lung congestion, blood disorders, kidney damage, liver damage, convulsions, coma

LONG TERM EXPOSURE: irritation (possibly severe), vomiting, headache, eye damage, lung damage, cancer

SKIN CONTACT:
SHORT TERM EXPOSURE: irritation, allergic reactions
LONG TERM EXPOSURE: irritation (possibly severe), allergic reactions, eye damage

EYE CONTACT:
SHORT TERM EXPOSURE: irritation (possibly severe), eye damage
LONG TERM EXPOSURE: irritation

INGESTION:
SHORT TERM EXPOSURE: irritation, fever, nausea, vomiting, diarrhea, stomach pain, headache, disorientation, eye damage, lung congestion, blood disorders, kidney damage, liver damage, convulsions, coma, death

LONG TERM EXPOSURE: eye damage, reproductive 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: If swallowed, drink plenty of water, do NOT induce vomiting. Get immediate medical attention. Induce vomiting only at the instructions of a physician. Do not give anything by mouth to unconscious or convulsive person.

NOTE TO PHYSICIAN: For ingestion, consider gastric lavage.

5. FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARDS: Moderate fire hazard. Dust/air mixtures may ignite or explode.

EXTINGUISHING MEDIA: regular dry chemical, dry sand, earth, regular foam, water

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. Use extinguishing agents appropriate for surrounding fire. Avoid inhalation of material or combustion by-products.

**FLASH POINT:** 174 F (79 C) (CC)
**LOWER FLAMMABLE LIMIT:** 0.9%
**UPPER FLAMMABLE LIMIT:** 5.9%
**AUTOIGNITION:** 979 F (526 C)

### 6. ACCIDENTAL RELEASE MEASURES

**WATER RELEASE:**
Subject to California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). Keep out of water supplies and sewers.

**OCCUPATIONAL RELEASE:**
Avoid heat, flames, sparks and other sources of ignition. Do not touch spilled material. Small spills: Collect spilled material in appropriate container for disposal. Move containers away from spill to a safe area. Large spills: Wet down area with water. 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

**STORAGE:** Store and handle in accordance with all current regulations and standards. Store in a cool, dry place. Store in a well-ventilated area. Store under an inert atmosphere. Store in a tightly closed container. Protect from physical damage. Keep separated from incompatible substances.

**HANDLING:** Use methods to minimize dust.

### 8. EXPOSURE CONTROLS, PERSONAL PROTECTION

**EXPOSURE LIMITS:**

**NAPHTHALENE:**
10 ppm (50 mg/m3) OSHA TWA
15 ppm (79 mg/m3) OSHA STEL (vacated by 58 FR 35338, June 30, 1993)
10 ppm ACGIH TWA (skin)
15 ppm ACGIH STEL (skin)
10 ppm (50 mg/m3) NIOSH recommended TWA 10 hour(s)
15 ppm (75 mg/m³) NIOSH recommended STEL

**VENTILATION:** Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

**EYE PROTECTION:** Wear splash resistant safety goggles with a faceshield. 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.

**100 ppm**
- Any air-purifying half-mask respirator equipped with organic vapor cartridge(s) in combination with an N95, R95, or P95 filter. The following filters may also be used: N99, R99, P99, N100, R100 or P100.
- Any supplied-air respirator.

**250 ppm**
- Any supplied-air respirator operated in a continuous-flow mode.
- Any air-purifying full-facepiece respirator equipped with organic vapor cartridge(s) in combination with an N100, R100, or P100 filter.
- Any powered, air-purifying respirator with an organic vapor cartridge in combination with a high-efficiency particulate filter.
- 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 having an N100, R100, or P100 filter.
- Any appropriate escape-type, self-contained breathing apparatus.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

**PHYSICAL STATE:** solid

**COLOR:** white

**PHYSICAL FORM:** flakes

**ODOR:** mothball odor

**MOLECULAR WEIGHT:** 128.16

**MOLECULAR FORMULA:** C10-H8
10. STABILITY AND REACTIVITY

REACTIVITY: Stable at normal temperatures and pressure.

CONDITIONS TO AVOID: Avoid heat, flames, sparks and other sources of ignition.

INCOMPATIBILITIES: oxidizing materials, combustible materials

HAZARDOUS DECOMPOSITION:
Thermal decomposition products: oxides of carbon

POLYMERIZATION: Will not polymerize.

11. TOXICOLOGICAL INFORMATION

NAPHTHALENE:
IRRITATION DATA: 495 mg open skin-rabbit mild; 0.05 ml/24 hour(s) skin-rabbit severe
TOXICITY DATA: >20 gm/kg skin-rabbit LD50; 490 mg/kg oral-rat LD50
CARCINOGEN STATUS: NTP: Anticipated Human Carcinogen; IARC: Human Inadequate Evidence, Animal Sufficient Evidence, Group 2B; ACGIH: A4 -Not Classifiable as a Human Carcinogen; EC: Category 3
LOCAL EFFECTS:
Irritant: inhalation, skin, eye
ACUTE TOXICITY LEVEL:
Toxic: ingestion
TARGET ORGANS: blood, immune system (sensitizer)
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: metabolic disorders
TUMORIGENIC DATA: Available.
MUTAGENIC DATA: Available.
REPRODUCTIVE EFFECTS DATA: Available.
ADDITIONAL DATA: May cross the placenta.

12. ECOLOGICAL INFORMATION

ECOTOXICITY DATA:
FISH TOXICITY: 2600 ug/L 96 hour(s) LC50 (Mortality) Rainbow trout, donaldson trout (Oncorhynchus mykiss)

INVERTEBRATE TOXICITY: 2194 ug/L 48 hour(s) EC50 (Immobilization) Water flea (Daphnia magna)

ALGAL TOXICITY: <695 ug/L 11-14 hour(s) MATC (Growth) Red algae (Champia parvula)

FATE AND TRANSPORT:
BIOCONCENTRATION: 10844 ug/L 24 hour(s) BCF (Residue) Water flea (Daphnia pulex) 0.45 ug/L

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): U165.

14. TRANSPORT INFORMATION

U.S. DOT 49 CFR 172.101:
PROPER SHIPPING NAME: Naphthalene, crude
ID NUMBER: UN1334
HAZARD CLASS OR DIVISION: 4.1
PACKING GROUP: III
LABELING REQUIREMENTS: 4.1
MARINE POLLUTANT: NAPHTHALENE

CANADIAN TRANSPORTATION OF DANGEROUS GOODS:
SHIPPING NAME: Naphthalene, crude
UN NUMBER: UN1334
CLASS: 4.1
PACKING GROUP/CATEGORY: III
15. REGULATORY INFORMATION

U.S. REGULATIONS:
CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4):
NAPHTHALENE: 100 LBS RQ


SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES (40 CFR 370 Subparts B and C):
ACUTE: Yes
CHRONIC: Yes
FIRE: Yes
REACTIVE: No
SUDDEN RELEASE: No

SARA TITLE III SECTION 313 (40 CFR 372.65):
NAPHTHALENE


STATE REGULATIONS:
California Proposition 65:
Known to the state of California to cause the following:
NAPHTHALENE
Cancer (Apr 19, 2002)

CANADIAN REGULATIONS:
WHMIS CLASSIFICATION: Not determined.

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

TSCA 12(b) EXPORT NOTIFICATION:
NAPHTHALENE
CAS NUMBER: 91-20-3
SECTION 4

CANADA INVENTORY (DSL/NDSL): Not determined.
16. OTHER INFORMATION

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