

METHANOL

**MATERIAL SAFETY DATA SHEET**

METHANOL

MSDS No. 01611 US/ENGLISH

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**SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

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**MANUFACTURER/SUPPLIER:**

BP Chemicals Inc  
150 West Warrenville Road  
Naperville, Illinois 60563-8460  
USA

**EMERGENCY HEALTH INFORMATION:**

1 (800) 447-8735

**EMERGENCY SPILL INFORMATION:**

1 (800) 424-9300 CHEMTREC (USA)

**OTHER PRODUCT SAFETY INFORMATION:**

1 (866) 4BP-MSDS (866-427-6737  
Toll Free – North America)  
e-mail: [bpcares@bp.com](mailto:bpcares@bp.com)

**SUBSTANCE: METHANOL****TRADE NAMES/SYNONYMS:**

METHYL ALCOHOL, WOOD ALCOHOL, METHYL HYDROXIDE, WOOD SPIRIT,  
WOOD NAPHTHA, CARBINOL, COLUMBIAN SPIRIT, PYROXYLIC SPIRIT

**CREATION DATE:** May 24 2000**REVISION DATE:** Jul 06 2000

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## SECTION 2 COMPOSITION, INFORMATION ON INGREDIENTS

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**COMPONENT:** METHYL ALCOHOL  
**CAS NUMBER:** 67-56-1  
**EC NUMBER (EINECS):** 200-659-6  
**EC INDEX NUMBER:** 603-001-00-X  
**PERCENTAGE:** 99-100

(See Section 8, "Exposure Controls, Personal Protection", for exposure guidelines)

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## SECTION 3 HAZARDS IDENTIFICATION

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



### EMERGENCY OVERVIEW:

**COLOR:** colorless

**PHYSICAL FORM:** liquid

**ODOR:** mild odor

**SIGNAL WORD:** DANGER!

**MAJOR HEALTH HAZARDS:** Causes eye, skin and respiratory irritation. Inhalation causes headaches, dizziness, drowsiness, and nausea, and may lead to unconsciousness. Ingestion may cause nausea, vomiting, gastrointestinal irritation, and central nervous system effects. Can be fatal or cause blindness if swallowed, inhaled, or on prolonged or repeated skin contact.

**PHYSICAL HAZARDS:** Flammable liquid and vapor.

### POTENTIAL HEALTH EFFECTS:

#### INHALATION:

Causes respiratory irritation. Inhalation causes headaches, dizziness, drowsiness, and nausea, and may lead to unconsciousness. Can be fatal or cause blindness if inhaled.

#### SKIN CONTACT:

Causes skin irritation. Can be fatal or cause blindness on prolonged or repeated skin contact.

#### EYE CONTACT:

Causes eye irritation.

#### INGESTION:

Can be fatal or cause blindness if swallowed. Ingestion may cause nausea, vomiting, gastrointestinal irritation, and central nervous system effects.

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## SECTION 4 FIRST AID MEASURES

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

**SKIN CONTACT:** Immediately wash exposed skin with soap and water. Remove

contaminated clothing, including shoes, and thoroughly clean and dry before reuse. Get immediate medical attention.

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

**INGESTION:** If swallowed, drink plenty of water. Get immediate medical attention. Induce vomiting only at the instructions of a physician. Do not give anything by mouth to unconscious or convulsive person.

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## SECTION 5 FIRE FIGHTING MEASURES

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**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

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). Flood with fine water spray. Do not scatter spilled material with high-pressure water streams. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

**FIRE FIGHTING PROTECTIVE EQUIPMENT:** Firefighters should wear full bunker gear, including a positive pressure self contained breathing apparatus.

**FLASH POINT:** 54 F (12 C) (CC)

**LOWER FLAMMABLE LIMIT:** >6 % by volume

**UPPER FLAMMABLE LIMIT:** <36 % by volume

**AUTOIGNITION:** 867 F (464 C)

**HAZARDOUS COMBUSTION PRODUCTS:**

Thermal decomposition products or combustion: oxides of carbon

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## SECTION 6 ACCIDENTAL RELEASE MEASURES

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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. Keep out of water supplies and sewers. 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).

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## SECTION 7 HANDLING AND STORAGE

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**STORAGE:** Store in a cool, dry, well-ventilated area. Store away from heat, ignition sources, and open flame in accordance with applicable regulations.

**HANDLING:** Keep away from heat, sparks and flame. Keep container tightly closed. Use only with adequate ventilation. Ground and bond containers when transferring materials. Do not cut, puncture, or weld on or near this container. After this container has been emptied, it may contain flammable vapors; observe all warnings and precautions listed for this product. Do not get in eyes. Wash thoroughly after handling. Avoid prolonged or repeated contact with skin.

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## SECTION 8 EXPOSURE CONTROLS, PERSONAL PROTECTION

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**EXPOSURE LIMITS:**

**METHYL ALCOHOL:**

**METHYL ALCOHOL (METHANOL):**

200 ppm (260 mg/m<sup>3</sup>) OSHA TWA

250 ppm (328 mg/m<sup>3</sup>) OSHA STEL (vacated by 58 FR 35338, June 30, 1993)

200 ppm ACGIH TWA (skin)

250 ppm ACGIH STEL (skin)

200 ppm (260 mg/m<sup>3</sup>) MEXICO TWA (skin)

250 ppm (310 mg/m<sup>3</sup>) MEXICO STEL (skin)

**VENTILATION:** Control airborne concentrations below the exposure guidelines.

**EYE PROTECTION:** Do not get in eyes. Wear chemical goggles.

**CLOTHING:** Do not get on skin or clothing. Wear clothing and footwear that cannot be penetrated by chemicals or oil.

**GLOVES:** Wear gloves that cannot be penetrated by chemicals or oil.

**RESPIRATOR:** Use with adequate ventilation. Avoid breathing vapor and/or mist. If operating conditions cause high vapor concentrations or TLV is exceeded, use supplied-air respirator approved by NIOSH.

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## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

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**PHYSICAL STATE:** liquid

**APPEARANCE:** clear

**COLOR:** colorless

**ODOR:** mild odor

**BOILING POINT:** 148 F (64.7 C)

**FREEZING POINT:** Not available

**VAPOR PRESSURE:** 100 mmHg @ 21.2 C

**VAPOR DENSITY (air=1):** 1.11 @ 0 C

**SPECIFIC GRAVITY (water=1):** 0.81 @ 0 C

**WATER SOLUBILITY:** miscible

**PH:** Not available

**VOLATILITY:** 100%

**ODOR THRESHOLD:** Not available

**EVAPORATION RATE:** >2 (butyl acetate=1)

**VISCOSITY:** 0.59 cP @ 20 C

**COEFFICIENT OF WATER/OIL DISTRIBUTION:** Not available

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## SECTION 10 STABILITY AND REACTIVITY

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**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:** strong oxidizing materials

**HAZARDOUS DECOMPOSITION:**

Thermal decomposition products or combustion: oxides of carbon

**POLYMERIZATION:** Will not polymerize.

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## SECTION 11 TOXICOLOGICAL INFORMATION

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**EYE IRRITATION:** Testing not conducted. See Other Toxicity Data.

**SKIN IRRITATION:** Testing not conducted. See Other Toxicity Data.

**DERMAL LD50:** Testing not conducted. See Other Toxicity Data.

**ORAL LD50:** Testing not conducted. See Other Toxicity Data.

**INHALATION LC50:** Testing not conducted. See Other Toxicity Data.

**OTHER TOXICITY DATA:**

Specific toxicity tests have not been conducted on this product. Our hazard evaluation is based on information from similar products, the ingredients, technical literature, and/or professional experience.

Methanol: Ingestion of methanol or gross overexposure to methanol vapors or mist can cause blindness, metabolic acidosis, and can be fatal. It can cause headache, giddiness, gastrointestinal disturbances, fatigue, inebriation, irritability, narcosis, and eye irritation. Prolonged or repeated skin contact with methanol can also cause poisoning. Once ingested, methanol is rapidly absorbed and distributed throughout the body. Methanol and its metabolites are slowly eliminated from the body, hence repeated exposures to low concentrations result in an increasing concentration in blood and tissue. Death from ingestion of less than 30 ml has been reported in humans. Rat oral LD50: 5628 mg/kg; rat inhalation LC50: 64,000 ppm/4 hour; rabbit dermal LD50: 15,800 mg/kg.

No component of this product present at levels greater than 0.1% is identified as a carcinogen by the U.S. National Toxicology Program, the U.S. Occupational Safety and Health Act, or the International Agency on Research on Cancer (IARC).

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**SECTION 12 ECOLOGICAL INFORMATION**

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Ecological testing has not been conducted on this product by BP Amoco.

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**SECTION 13 DISPOSAL CONSIDERATIONS**

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Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): U154 The container for this product can present explosion or fire hazards, even when emptied. To avoid risk of injury, do not cut, puncture or weld on or near this container. Since the emptied containers retain product residue, follow product insert warnings even after container is emptied.

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**SECTION 14 TRANSPORT INFORMATION**

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**U.S. DOT 49 CFR 172.101 SHIPPING NAME-ID NUMBER:**  
Methanol (METHYL ALCOHOL)-UN1230



**U.S. DOT 49 CFR 172.101 HAZARD CLASS OR DIVISION:**

3

**U.S. DOT 49 CFR 172.101 PACKING GROUP:**

II

**U.S. DOT 49 CFR 172.101 AND SUBPART E LABELING REQUIREMENTS:**  
Flammable liquid

**U.S. DOT 49 CFR 172.101 PACKAGING AUTHORIZATIONS:**  
**EXCEPTIONS:** 49 CFR 173.150  
**NON-BULK PACKAGING:** 49 CFR 173.202  
**BULK PACKAGING:** 49 CFR 173.242

**U.S. DOT 49 CFR 172.101 QUANTITY LIMITATIONS:**  
**PASSENGER AIRCRAFT OR RAILCAR:** 1 L  
**CARGO AIRCRAFT ONLY:** 60 L

**CANADIAN TDG SHIPPING NAME-ID NUMBER:**  
Methanol-UN1230



**CANADIAN TDG HAZARD CLASS OR DIVISION:**  
3

**CANADIAN TDG PACKING GROUP:**  
II

**LAND TRANSPORT ADR/RID:** Not determined.

**AIR TRANSPORT IATA/ICAO:**  
**SHIPPING NAME:** Methanol  
**ID NUMBER:** UN1230  
**IATA/ICAO CLASS:** 3  
**PACKAGING GROUP:** II  
**SUBSIDIARY RISK:** 6.1  
**LABEL:** Flammable liquid; Toxic/Flammable liquid; Poison

**MARITIME TRANSPORT IMDG:**  
**CORRECT TECHNICAL NAME:** Methanol  
**ID NUMBER:** UN1230  
**IMDG CLASS:** 3.2  
**PACKAGING GROUP:** II  
**SUBSIDIARY RISK LABEL:** Poison

EmS No.: 3-06  
MFAG Table No.: 306  
IMDG CODE PAGE: 3251

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**SECTION 15 REGULATORY INFORMATION**

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**CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR Part 302.4):** This product is reportable under 40 CFR Part 302.4 because it contains the following substance(s):  
**METHYL ALCOHOL (METHANOL); 5000 LBS RQ**

**SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR Part 355):** This product is not regulated under Section 302 of SARA and 40 CFR Part 355.

**SARA SECTION 304 (40CFR355.40):** This product is not regulated under Section 304 of SARA and 40 CFR Part 355

**SARA TITLE III SECTION 311/312 HAZARDOUS CATEGORIZATION (40 CFR Part 370):**

**ACUTE: Y**  
**CHRONIC: Y**  
**FIRE: Y**  
**REACTIVE: N**  
**SUDDEN RELEASE: N**

**SARA TITLE III SECTION 313 (40 CFR Part 372):** This product contains the following substance(s), which is on the Toxic Chemicals List in 40 CFR Part 372:  
**METHYL ALCOHOL (METHANOL)**

**STATE REGULATIONS:**  
**California Proposition 65: N**

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

**EC INVENTORY (EINECS/ELINCS):** In compliance.

**JAPAN INVENTORY (MITI):** Listed on inventory.

**AUSTRALIA INVENTORY (AICS):** Not determined.

**KOREA INVENTORY (ECL):** Listed on inventory

**CANADA INVENTORY (DSL):** Listed on inventory.

**PHILIPPINE INVENTORY (PICCS):** Listed on inventory.

CHINA INVENTORY (IECS): Not determined.

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**SECTION 16 OTHER INFORMATION**

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**Prepared by:** Product Stewardship and Toxicology

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