

MATERIAL SAFETY DATA SHEET

Ashland

Page 001
Date Prepared: 02/26/03
Date Printed: 05/19/03
MSDS No: 999.0001447-008.004

METHANOL TECHNICAL

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity

Product Name: METHANOL TECHNICAL
General or Generic ID: ALCOHOL

Company

Ashland
Ashland Distribution Co. &
Ashland Specialty Chemical Co.
P. O. Box 2219
Columbus, OH 43216
614-790-3333

Emergency Telephone Number:

1-800-ASHLAND (1-800-274-5263)
24 hours everyday

Regulatory Information Number:
1-800-325-3751

2. COMPOSITION/INFORMATION ON INGREDIENTS

| Ingredient(s) | CAS Number | % (by weight) |
|----------------|------------|---------------|
| METHYL ALCOHOL | 67-56-1 | 100.0 |

3. HAZARDS IDENTIFICATION

Potential Health Effects

Eye

May cause mild eye irritation. Symptoms include stinging, tearing, and redness.

Skin

May cause mild skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, drying and cracking of skin, and skin burns. Passage of this material into the body through the skin is possible, and may add to toxic effects from breathing or swallowing.

Continued on next page

MATERIAL SAFETY DATA SHEET

Ashland

Page 002

Date Prepared: 02/26/03

Date Printed: 05/19/03

MSDS No: 999.0001447-008.004

METHANOL TECHNICAL

Swallowing

Swallowing this material may be harmful.

Inhalation

Breathing of vapor or mist is possible. Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms usually occur at air concentrations higher than the recommended exposure limits (See Section 8).

Symptoms of Exposure

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea) irritation (nose, throat, airways), central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness), leg cramps, pain in the abdomen and lower back, blurred vision, shortness of breath, cyanosis (causes blue coloring of the skin and nails from lack of oxygen), visual impairment (including blindness), coma, and death.

Target Organ Effects

Exposure to lethal concentrations of methanol has been shown to cause damage to organs including liver, kidneys, pancreas, heart, lungs and brain. Although this rarely occurs, survivors of severe intoxication may suffer from permanent neurological damage. Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals: liver abnormalities, central nervous system damage, Overexposure to this material (or its components) has been suggested as a cause of the following effects in humans: visual impairment.

Developmental Information

Methanol has caused birth defects in laboratory animals, but only when inhaled at extremely high vapor concentrations. The relevance of this finding to humans is uncertain.

Cancer Information

Based on the available information, this material cannot be classified with regard to carcinogenicity. This material is not listed as a carcinogen by the International Agency for Research on Cancer, the National Toxicology Program, or the Occupational Safety and Health Administration.

Continued on next page

MATERIAL SAFETY DATA SHEET

Ashland

Page 003

Date Prepared: 02/26/03

Date Printed: 05/19/03

MSDS No: 999.0001447-008.004

METHANOL TECHNICAL

Other Health Effects

No data

Primary Route(s) of Entry

Inhalation, Skin absorption, Skin contact, Eye contact, Ingestion.

4. FIRST AID MEASURES

Eyes

If symptoms develop, move individual away from exposure and into fresh air. Flush eyes gently with water while holding eyelids apart. If symptoms persist or there is any visual difficulty, seek medical attention.

Skin

Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

Swallowing

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Inhalation

If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.

Note to Physicians

This product contains methanol which can cause intoxication and central nervous system depression. Methanol is metabolized to formic acid and formaldehyde. These metabolites can cause metabolic acidosis, visual disturbances and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 30 hours following ingestion. Ethanol competes for the same metabolic pathway and has been used to prevent methanol metabolism. Ethanol administration is indicated in symptomatic patients or at blood methanol concentrations above 20 ug/dl. Methanol is effectively removed by hemodialysis. Preexisting disorders of the following organs (or organ systems)

Continued on next page

MATERIAL SAFETY DATA SHEET

Ashland

Page 004

Date Prepared: 02/26/03

Date Printed: 05/19/03

MSDS No: 999.0001447-008.004

METHANOL TECHNICAL

may be aggravated by exposure to this material: skin, lung (for example, asthma-like conditions), liver, kidney, central nervous system, pancreas, heart, Exposure to this material may aggravate any preexisting condition sensitive to a decrease in available oxygen, such as chronic lung disease, coronary artery disease or anemias.

5. FIRE FIGHTING MEASURES

Flash Point

54.0 F (12.2 C) TCC

Explosive Limit

(for product) Lower 6.0 Upper 36.0 %

Autoignition Temperature

725.0 F (385.0 C)

Hazardous Products of Combustion

May form: carbon dioxide and carbon monoxide.

Fire and Explosion Hazards

Vapors are heavier than air and may travel along the ground or may be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electric motors, static discharge, or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.

Extinguishing Media

alcohol foam, carbon dioxide, dry chemical.

Fire Fighting Instructions

Water may be ineffective. Water may be used to keep fire-exposed containers cool until fire is out. Wear a self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment. Refer to the personal protective equipment section of this MSDS.

Continued on next page

MATERIAL SAFETY DATA SHEET

Ashland

Page 005

Date Prepared: 02/26/03

Date Printed: 05/19/03

MSDS No: 999.0001447-008.004

METHANOL TECHNICAL

NFPA Rating

Health - 1, Flammability - 3, Reactivity - 0

6. ACCIDENTAL RELEASE MEASURES

Small Spill

Absorb liquid on vermiculite, floor absorbent or other absorbent material.

Large Spill

Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source. Prevent from entering drains, sewers, streams or other bodies of water. Prevent from spreading. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal. Prevent run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities as required, that a spill has occurred.

7. HANDLING AND STORAGE

Handling

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. All five-gallon pails and larger metal containers, including tank cars and tank trucks, should be grounded and/or bonded when material is transferred. Warning. Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without the presence of obvious ignition sources. Published "autoignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions.

Continued on next page

MATERIAL SAFETY DATA SHEET

Ashland

Page 006

Date Prepared: 02/26/03

Date Printed: 05/19/03

MSDS No: 999.0001447-008.004

METHANOL TECHNICAL

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection

Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Consult your safety representative.

Skin Protection

Wear resistant gloves (consult your safety equipment supplier)., To prevent repeated or prolonged skin contact, wear impervious clothing and boots..

Respiratory Protections

If workplace exposure limit(s) of product or any component is exceeded (see exposure guidelines), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

Engineering Controls

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

Exposure Guidelines

Component

METHYL ALCOHOL (67-56-1)

OSHA PEL 200.000 ppm - TWA

OSHA VPEL 200.000 ppm - TWA (Skin)

OSHA VPEL 250.000 ppm - STEL (Skin)

ACGIH TLV 200.000 ppm - TWA (Skin)

ACGIH TLV 250.000 ppm - STEL (Skin)

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point

(for product) 147.0 F (63.8 C) @ 760 mmHg

Continued on next page

MATERIAL SAFETY DATA SHEET

Ashland

Page 007

Date Prepared: 02/26/03

Date Printed: 05/19/03

MSDS No: 999.0001447-008.004

METHANOL TECHNICAL

Vapor Pressure

(for product) 97.680 mmHg @ 68.00 F

Specific Vapor Density

1.110 @ AIR=1

Specific Gravity

.792 @ 68.00 F

Liquid Density

6.600 lbs/gal @ 68.00 F

.792 kg/l @ 20.00 C

Percent Volatiles

100.0 %

Volatile Organic Compounds (VOC)

100.000 %

795.000 g/l

6.630 lbs/gal

Evaporation Rate

2.10 (N-BUTYL ACETATE)

Appearance

CLEAR, MOBILE

State

LIQUID

Physical Form

NEAT

Color

COLORLESS

Odor

MILD ALCOHOL

Continued on next page

MATERIAL SAFETY DATA SHEET

Ashland

Page 008

Date Prepared: 02/26/03

Date Printed: 05/19/03

MSDS No: 999.0001447-008.004

METHANOL TECHNICAL

pH
No data

Viscosity
.6 cps

Freezing Point
-144.0 F (-97.7 C)

Molecular Weight
32.0

Solubility in Water
COMPLETE

Bulk Density
.890 lbs/ft3

10. STABILITY AND REACTIVITY

Hazardous Polymerization
Product will not undergo hazardous polymerization.

Hazardous Decomposition
May form: carbon dioxide and carbon monoxide.

Chemical Stability
Stable.

Incompatibility
Avoid contact with: calcium hypochlorite, sodium, strong acids,
strong oxidizing agents, zinc.

Continued on next page

MATERIAL SAFETY DATA SHEET

Ashland

Page 009
Date Prepared: 02/26/03
Date Printed: 05/19/03
MSDS No: 999.0001447-008.004

METHANOL TECHNICAL

11. TOXICOLOGICAL INFORMATION

No data

12. ECOLOGICAL INFORMATION

No data

13. DISPOSAL CONSIDERATION

Waste Management Information

Dispose of in accordance with all applicable local, state and federal regulations. For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Ashland Distribution Company, IC&S Environmental Services Group at 800-637-7922.

14. TRANSPORT INFORMATION

DOT Information - 49 CFR 172.101

DOT Description:
METHANOL, 3, UN1230, II

Container/Mode:
55 GAL DRUM/TRUCK PACKAGE

NOS Component:
None

RQ (Reportable Quantity) - 49 CFR 172.101

Product Quantity (lbs) Component

| | |
|------|----------|
| 5000 | METHANOL |
|------|----------|

Continued on next page

MATERIAL SAFETY DATA SHEET

Ashland

Page 010
Date Prepared: 02/26/03
Date Printed: 05/19/03
MSDS No: 999.0001447-008.004

METHANOL TECHNICAL

Other Transportation Information

The DOT Transport Information may vary with the container and mode of shipment.

15. REGULATORY INFORMATION

US Federal Regulations

TSCA (Toxic Substances Control Act) Status
TSCA (UNITED STATES) The intentional ingredients of this product are listed.

CERCLA RQ - 40 CFR 302.4(a)
Component RQ (lbs)

METHYL ALCOHOL 5000

SARA 302 Components - 40 CFR 355 Appendix A
None

Section 311/312 Hazard Class - 40 CFR 370.2
Immediate(X) Delayed(X) Fire(X) Reactive() Sudden
Release of Pressure()

SARA 313 Components - 40 CFR 372.65
Section 313 Component(s) CAS Number %

METHANOL 67-56-1 100.00

OSHA Process Safety Management 29 CFR 1910
None listed

EPA Accidental Release Prevention 40 CFR 68
None listed

International Regulations

Inventory Status
AICS (AUSTRALIA) The intentional ingredients of this product are listed.
DSL (CANADA) The intentional ingredients of this product are listed.
ECL (SOUTH KOREA) The intentional ingredients of this product are listed.
EINECS (EUROPE) The intentional ingredients of this product are listed.

Continued on next page

MATERIAL SAFETY DATA SHEET

Ashland

Page 011
Date Prepared: 02/26/03
Date Printed: 05/19/03
MSDS No: 999.0001447-008.004

METHANOL TECHNICAL

ENCS (JAPAN) The intentional ingredients of this product are listed.
IECSC (CHINA) The intentional ingredients of this product are listed.
PICCS (PHILIPPINES) The intentional ingredients of this product are listed.

State and Local Regulations

California Proposition 65
None

New Jersey RTK Label Information

METHYL ALCOHOL 67-56-1

Pennsylvania RTK Label Information

METHANOL 67-56-1

16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

Last page

SOURCE:ASHLAND INC WTR EASYWTR