

TERRA INTERNATIONAL, INC. -- METHANOL,04307000 -- 6810-00-275-6010  
===== Product Identification =====

Product ID:METHANOL,04307000  
MSDS Date:01/06/1994  
FSC:6810  
NIIN:00-275-6010  
MSDS Number: BWPDQ  
=== Responsible Party ===  
Company Name:TERRA INTERNATIONAL, INC.  
Address:600 FOURTH STREET  
City:SIOUX CITY  
State:IA  
ZIP:51101  
Country:US  
Info Phone Num:800-831-1002 EXT 321  
Emergency Phone Num:800-245-45  
32/800-424-9300(CHEMTREC)  
CAGE:TERRA  
=== Contractor Identification ===  
Company Name:HOC INDUSTRIES, INC  
Address:3511 N. OHIO  
Box:2609  
City:WICHITA  
State:KS  
ZIP:67219  
Country:US  
Phone:316-838-4663  
CAGE:0A9L8  
Company Name:TERRA INTERNATIONAL, INC  
Address:600 FORTH STREET  
Box:6000  
City:SIOUX CITY  
State:IA  
ZIP:51102-6000  
Country:US  
Phone:800-831-1002 EXT321  
CAGE:TERRA

===== Composition/Information on Ingredients =====

Ingred Name:METHYL ALCOHOL (METHANOL) (SARA 313) (CERCLA)  
CAS:

67-56-1  
RTECS #:PC1400000  
Fraction by Wt: 99.9%  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:S, 200 PPM  
ACGIH TLV:S,200PPM/250STEL; 95  
EPA Rpt Qty:5000 LBS  
DOT Rpt Qty:5000 LBS

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Hazards Identification  
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LD50 LC50 Mixture:LD50 (ORL RAT) IS 5628 MG/KG (RTECS).  
Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES  
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO  
Health Hazards Acute and Chronic:TARGET ORGANS:EYE, SKIN, CNS,  
RESPIRATORY & GI TRAC  
TS. ACUTE- TOXIC. CAN CAUSE EYES, SKIN,  
RESPIRATORY TRACT IRRITATION & CNS DEPRESSION. ASPIRATION DAMAGE  
LUNGS. SKIN ABSORPTION CAN OCCUR. INGESTION OF ONLY 1-4 OUNCES MAY  
CAUSE DEATH/BLINDNESS. CHRONIC- METHANOL IS SLOWLY ELIMINATED FROM  
BODY CAUSING TOXICITY.  
Explanation of Carcinogenicity:METHANOL HAS BEEN REPORTED TO CAUSE  
BIRTH DEFECTS IN RATS EXPOSED TO VERY HIGH CONCENTRATIONS (20,000  
PPM), PER MSDS.  
Effects of Overexposure:IRRITATION, TEARING. BURNING SENSATION,  
DRYING  
SKIN, DEFATting, DIZZINESS, NAUSEA, VOMITING, DROWSINESS, HEADACHE,  
FATIGUE, CONVULSIONS, UNCONSCIOUSNESS, DEATH, BLINDNESS, SWELLING  
OF EYES AND REDNESS  
Medical Cond Aggravated by Exposure:INDIVIDUALS WITH PRE-EXISTING  
DISEASES OF THE EYE, SKIN, RESPIRATORY TRACT, LIVER, KIDNEY, CNS  
MAY HAVE INCREASED SUSCEPTIBILITY TO THE TOXICITY OF EXCESSIVE  
EXPOSURES.

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First Aid Measures  
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First Aid:EYE:IMMEDIATELY FLUSH WITH WA  
TER FOR 15 MINUTES. HOLD EYELIDS  
OPEN. SEE PHYSICIAN. SKIN:WASH AFFECTED AREA WITH SOAP & WATER. IF  
IRRITATION PERSISTS, SEE DOCTOR. INHALED:REMOVE TO FRESH AIR.  
PROVIDE C PR/OXYGEN IF NEEDED. OBTAIN EMERGENCY MEDICAL HELP.  
ORAL:IF CONSCIOUS, IMMEDIATELY INDUCE VOMITING BY DRINKING WATER &  
PRESSING FINGER DOWN THROAT. CALL A PHYSICIAN/POISON CONTROL CENTER  
IMMEDIATELY.

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Fire Fighting Measures  
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Flash Point Method:TCC  
Flash Poin

t:53.0F,11.7C

Autoignition Temp:Autoignition Temp Text:725F

Lower Limits:6.0%

Upper Limits:36.5%

Extinguishing Media:DRY CHEMICAL, CARBON DIOXIDE, ALCOHOL FOAM, WATER SPRAY, HALON. COOL FIRE-EXPOSED CONTAINERS WITH WATER SPRAY.

Fire Fighting Procedures:WEAR FULL PROTECTIVE CLOTHING AND NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS. FIRE MAY NOT BE VISIBLE TO THE NAKED EYES. >21% METHANOL IN WATER:FLAMMABLE

Unusual Fire/Explosion Hazard:VAPORS CAN FLOW ALONG SURFACES TO DISTAN

CE IGNITION SOURCE AND FLASH BACK. BURNS WITH A CLEAR, ALMOST INVISIBLE FLAME. DILUTE LIQUID/VAPORS WITH WATER SPRAY.

===== Accidental Release Measures =====

Spill Release Procedures:WEAR PROTECTIVE EQUIPMENT. ELIMINATE SOURCES OF IGNITION. VENTILATE AREA. STOP LEAK IF POSSIBLE. COVER WITH NON-FLAMMABLE ABSORBENTS SUCH AS SAND. COLLECT SPILLED MATERIAL USING NON-SPARKING TOOLS. PLACE IN METAL CONTAINERS. DO NOT FLUSH TO SEWER.

Neutralizing Agent

:DILUTE WITH WATER.

===== Handling and Storage =====

Handling and Storage Precautions:KEEP IN COOL(LT 80F), WELL-VENTILATED, FLAMMABLE LIQUID STORAGE AREA, IN TIGHTLY CLOSED CONTAINERS, AWAY FROM SPARKS, FLAMES & INCOMPATIBLE MATERIALS.

Other Precautions:BOND AND GROUND CONTAINERS WHEN TRANSFERRING LIQUID. AVOID BREATHING VAPORS. DO NOT GET IN EYES, ON SKIN OR ON CLOTHING. USE WITH ADEQUATE VENTILATION OR UNDER HOOD. WASH THOROUGHLY AFTER

HANDLING. KEEP OUT OF REACH OF CHILDREN.

===== Exposure Controls/Personal Protection =====

Respiratory Protection:RESPIRATORY PROTECTION IS REQUIRED IF AIRBORNE CONCENTRATION EXCEEDS TLV. AT CONCENTRATIONS >200 PPM, WEAR A NIOSH-APPROVED POSITIVE PRESSURE SELF-CONTAINED BREATHING APPARATUS/SUPPLIED AIR. DO NOT USE ORGANIC VAPOR CARTRIDGE RESPIRATORS.

Ventilation:MECHANICAL (GENERAL AND/OR LOCAL EXHAUST, EXPLOSION-PROOF) VENTILATION TO MAINTAIN EXPOSURE B

ELOW TLV(S).

Protective Gloves:RUBBER, PVC

Eye Protection:CHEMICAL SPLASH GOGGLES/FACE SHIELD

Other Protective Equipment:UNIFORM, PROTECTIVE SUIT, EYEWASH STATION & EMERGENCY SHOWER.

Work Hygienic Practices:OBSERVE GOOD PERSONAL HYGIENE PRACTICES AND RECOMMENDED PROCEDURES. MONITORING OF AIR IN WORKPLACE IS RECOMMENDED.

Supplemental Safety and Health

DANGER. POISON:CAN NOT BE MADE NON POISONOUS. FLAMMABLE. VAPOR HARMFUL. MAY BE FATAL OR CAUSE BLINDNESS IF SWALLOWED. SYMPTOMS MAY

BE

DELAYED. ETHANOL THERAPY MAY BE NEEDED IF INGESTED.

===== Physical/Chemical Properties =====

HCC:F5

NRC/State Lic Num:NOT RELEVANT

Boiling Pt:B.P. Text:148F,65C

Melt/Freeze Pt:M.P/F.P Text:-144F,-98C

Decomp Temp:Decomp Text:NOT KNOWN

Vapor Pres:96 @ 68F

Vapor Density:1.1

Spec Gravity:0.79

Viscosity:1 CPS @ 86F

Evaporation Rate & Reference:5.9 (N-BUTYL ACETATE=1)

Solubility in Water:100%

Appearance and Odor:CLEAR, COLORLESS LIQUID - ALCOHOLIC ODOR  
Percent

Volatiles by Volume:100

===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid:YES

STRONG OXIDIZING AGENTS, ALUMINUM, ZINC (GALVANIZED), ANY OTHER REACTIVE METAL WHICH DISPLACE H<sub>2</sub>, SOME PLASTICS/RUBBER

Stability Condition to Avoid:HEAT, FLAME, SPARKS, OTHER IGNITION SOURCES

Hazardous Decomposition Products:CARBON MONOXIDE, CARBON DIOXIDE AND PERHAPS FORMALDEHYDE

===== Disposal Considerations =====

Waste Disposal Methods:DISPOSE IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. EPA HAZARDOUS WASTE NUMBER IS U154 (TOXIC WASTE). RQ FOR METHANOL IS 5000 LBS. PREFERRED METHOD IS INCINERATION OR BIOLOGICAL TREATMENT IN AN APPROVED FACILITY.

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