

ASHLAND CHEMICAL, INC. SUBS. OF ASHLAND OIL, INC. -- TRICHLOROETHANE 111 DEGREASE  
COLD/VAPOR -- 6810-00-664-0388

===== Product Identification =====

Product ID:TRICHLOROETHANE 111 DEGREASE COLD/VAPOR

MSDS Date:07/14/1989

FSC:6810

NIIN:00-664-0388

MSDS Number: BQNQT

=== Responsible Party ===

Company Name:ASHLAND CHEMICAL, INC. SUBS. OF ASHLAND OIL, INC.

Box:2219

City:COLUMBUS

State:OH

ZIP:43216

Coun

try:US

Info Phone Num:614-790-3333

Emergency Phone Num:800-274-5263

CAGE:5A188

=== Contractor Identification ===

Company Name:ASHLAND CHEMICAL CO

Address:5200 PAUL BLAZEL MEMORIAL PARKWAY

Box:City:DUBLIN

State:OH

ZIP:43017

Country:US

Phone:614-889-4505

CAGE:5A188

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

Ingred Name:METHYL CHLOROFORM (1,1,1-TRICHLOROETHANE) (SARA III)

CAS:71-55-6

RTECS #:KJ2975000

Fraction by Wt: >95%

OSHA PEL:350 PPM/450 STEL

ACGIH TLV:350 PPM/450ST

EL:9293  
EPA Rpt Qty:1000 LBS  
DOT Rpt Qty:1000 LBS  
Ozone Depleting Chemical:1

Ingred Name:1,4-DIOXANE (DIETHYLENE DIOXIDE) (SARA III)  
CAS:123-91-1  
RTECS #:JG8225000  
Fraction by Wt: 2.5%  
OSHA PEL:S, 100 PPM  
ACGIH TLV:S, 25 PPM; 9293  
EPA Rpt Qty:100 LBS  
DOT Rpt Qty:100 LBS

===== Hazards Identification =====

LD50 LC50 Mixture:ORAL LD50 (RAT) = 10300 MG/KG  
Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES  
Reports of Carcinogenicity:NTP:YES IARC:YES OS  
HA:NO  
Health Hazards Acute and Chronic:ACUTE: MAY CAUSE EYE & SKIN  
IRRITATION. MAY CAUSE RESPIRATORY TRACT IRRITATION. CENTRAL NERVOUS  
SYSTEM DEPRESSANT. LOSS OF CONSCIOUSNESS AND EVEN DEATH CAN OCCUR  
AT HIGH LEVELS OF EXPOSURE.  
Explanation of Carcinogenicity:1,4-DIOXANE IS LISTED AS AN ANIMAL  
CARCINOGEN BY NTP AND IARC.  
Effects of Overexposure:INCOORDINATION AND IMPAIRED JUDGMENT MAY OCCUR  
AT VAPOR EXPOSURES FROM 500-1000 PPM. DIZZINESS, DROWSINESS, AND  
GENERAL ANESTETHI  
C EFFECTS MAY OCCUR IN RANGES OF 1000 PPM AND  
HIGHER.  
Medical Cond Aggravated by Exposure:INCREASED SENSITIVITY TO ADRENALIN  
MAY BE CAUSED BY OVER EXPOSURE.

===== First Aid Measures =====

First Aid:INHALATION: REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE CPR.  
IF BREATHING IS DIFFICULT, GIVE OXYGEN. CALL A PHYSICIAN. EYE:  
FLUSH IMMEDIATELY WITH LARGE AMOUNTS OF WATER FOR 15 MINUTES. GET  
MEDICAL AT TENTION. SKIN: REMOVE CONTAMINATED CLOTHI

NG. WASH WITH

SOAP AND WATER PROMPTLY. INGESTION: DO NOT INDUCE VOMITING. GIVE MILK OR USP MINERAL OIL. GET IMMEDIATE MEDICAL ATTENTION.

===== Fire Fighting Measures =====

Lower Limits:7.5%

Upper Limits:15.0%

Extinguishing Media:WATER FOG

Fire Fighting Procedures:WATER MAY BE USED TO KEEP FIRE-EXPOSED CONTAINERS COOL UNTIL FIRE IS OUT. WEAR SCBA WITH A FULL FACEPIECE OPERATED IN THE POSITIVE PRESSURE DEMAND MODE.

Unusual Fire/Explosion Hazard:N

EFER USE WELDING OR CUTTING TORCH ON OR NEAR DRUM BECAUSE PRODUCT CAN IGNITE EXPLOSIVELY(EVEN JUST RESIDUE)

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

Spill Release Procedures:SMALL SPILL: WIPE UP WITH RAGS OR TOWELS.

LARGE SPILLS: WEAR NIOSH APPROVED RESPIRATOR. VENTILATE AREA. DIKE TO RETAIN FLUID. PUMP UP FREE LIQUID. RESIDUE WILL EVAPORATE QUICKLY. DO NOT FLUSH TO SEWER OR WATERWAY.

Neutralizing Agent:NONE

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

Handling and Storage Precautions:STORE IN A COOL, DRY, WELL-VENTILATED LOCATION, AWAY FROM ANY AREA WHERE THE FIRE HAZARD MAY BE ACUTE. KEEP CONTAINERS CLOSED WHEN NOT IN USE.

Other Precautions:DO NOT USE WITH ALUMINUM. READ AND FOLLOW DIRECTIONS ON LABEL. DO NOT REUSE CONTAINERS.

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

Respiratory Protection:IN HIGH VAPOR AREA, USE NIOSH/MSHA APPROVED RESPIRATOR WITH ORGANIC VAPOR CARTRIDGE. USE SELF-CONTAINED

BREATHING APPARATUS IF VAPOR LEVELS EXCEED 1000 PPM.

Ventilation:LOCAL EXHAUST RECOMMENDED TO CONTROL VAPORS BELOW 50% OF TLV.

Protective Gloves:NEOPRENE, PVA GLOVES RECOMMENDED.

Eye Protection:USE CHEMICAL SAFETY GOGGLES.

Other Protective Equipment:APRON AND WORK CLOTHING TO MINIMIZE EXPOSURE. EYE WASH STATION & SAFETY SHOWER RECOMMENDED.

Work Hygienic Practices:WASH THOROUGHLY AFTER USE AND BEFORE EATING, SMOKING OR USING TOILET FACILITIES. DO NOT BREATH

VAPORS OR MIST.  
Supplemental Safety and Health  
TARGET ORGANS ARE SKIN, CNS, CVS, AND EYES

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

HCC:T4  
Boiling Pt:B.P. Text:161F,72C  
Vapor Pres:100 MM HG  
Vapor Density:4.5(AIR=1)  
Spec Gravity:1.3-1.324  
Evaporation Rate & Reference:2.6 (ETHLY ETHER=1)  
Appearance and Odor:HOMOGENEOUS SOLUTION THAT IS CLEAR. APHA COLOR 15  
MAX.  
Percent Volatiles by Volume:100

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

Stability Indicator/Materials to Avoid:YES  
WATER, REACTIVE METALS SUCH AS ALUMINU;M AND MAGNESIUM.  
Stability Condition to Avoid:OPEN FLAMES, WELDING ARCS, RESISTANCE  
HEATERS, ETC., WHICH CAN RESULT IN THERMAL DECOMPOSITION.  
Hazardous Decomposition Products:WHEN INVOLVED IN FIRE,  
1,1,1-TRICHLOROETHANE EMITS HIGHLY TOXIC AND IRRITATING HYDROGEN  
CHLORIDE AND PHOSGENE FUMES.

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

Waste Disposal Methods:DISOPSE OF I/A/W FED  
ERAL, STATE & LOCAL  
REGULATIONS

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