

***XYLENES**

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MATERIAL SAFETY DATA SHEET

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SUBSTANCE IDENTIFICATION

SUBSTANCE: ***XYLENES**

CAS-NUMBER 1330-20-7

TRADE NAMES/SYNONYMS: OXYLOL; DIMETHYLBENZENE;

CHEMICAL FAMILY:
HYDROCARBON, AROMATIC

MOLECULAR FORMULA: C8-H10 MOL WT: 106

CERCLA RATINGS (SCALE 0-3): HEALTH=2 FIRE=3 REACTIVITY=0 PERSISTENCE=1
NFPA RATINGS (SCALE 0-4): HEALTH=2 FIRE=3 REACTIVITY=0

COMPONENTS AND CONTAMINANTS

PERCENT: 17.5 COMPONENT: ORTHO-XYLENE

PERCENT: 47.1 COMPONENT: META-XYLENE

PERCENT: 22.0 COMPONENT: PARA-XYLENE

PERCENT: 12.6 COMPONENT: ETHYL BENZENE

OTHER CONTAMINANTS: NONE

EXPOSURE LIMITS:

100 PPM (435 MG/M3) OSHA TWA; 100 PPM ACGIH TWA;
150 PPM (655 MG/M3) ACGIH STEL

PHYSICAL DATA

DESCRIPTION: LIGHT COLORED OR COLORLESS MOBILE LIQUID WITH AN AROMATIC

ODOR BOILING POINT: 278-290 F(139-141 C)

SPECIFIC GRAVITY: 0.86 VAPOR PRESSURE: 10 MMHG @ 25 C

EVAPORATION RATE: (ETHYL ETHER=1) 0.1 SOLUBILITY IN WATER: INSOLUBLE

SOLVENT SOLUBILITY: ABSOLUTE ALCOHOL, ETHER, BENZENE

ODOR THRESHOLD: 0.5 PPM VAPOR DENSITY: 3.6

FIRE AND EXPLOSION DATA

FIRE AND EXPLOSION HAZARD:
MODERATE FIRE AND EXPLOSION HAZARD WHEN EXPOSED TO HEAT OR FLAME.

VAPOR-AIR MIXTURES ARE EXPLOSIVE ABOVE FLASH POINT.

VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL A CONSIDERABLE DISTANCE TO A SOURCE OF IGNITION AND FLASH BACK.

FLASH POINT: 79 F (26 C) UPPER EXPLOSION LIMIT: 1.1%

LOWER EXPLOSION LIMIT: 6.6% AUTOIGNITION TEMP.: 982 F

FLAMMABILITY CLASS(OSHA): IC

FIREFIGHTING MEDIA:

DRY CHEMICAL, CARBON DIOXIDE, WATER SPRAY OR FOAM
(1984 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.3).

FOR LARGER FIRES, USE WATER SPRAY, FOG OR ALCOHOL FOAM
(1984 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.3).

FIREFIGHTING:

MOVE CONTAINER FROM FIRE AREA IF POSSIBLE. COOL FIRE-EXPOSED CONTAINERS WITH WATER FROM SIDE UNTIL WELL AFTER FIRE IS OUT. FOR MASSIVE FIRE IN STORAGE AREA, USE UNMANNED HOSE HOLDER OR MONITOR NOZZLES, ELSE WITHDRAW FROM AREA AND LET FIRE BURN. WITHDRAW IMMEDIATELY IN CASE OF RISING SOUND FROM VENTING SAFETY DEVICE OR ANY DISCOLORATION OF STORAGE TANK DUE TO FIRE (1984 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.3).

EXTINGUISH ONLY IF FLOW CAN BE STOPPED; USE WATER IN FLOODING AMOUNTS AS FOG, SOLID STREAMS MAY SPREAD FIRE. COOL CONTAINERS WITH FLOODING QUANTITIES OF WATER, APPLY FROM AS FAR A DISTANCE AS POSSIBLE. AVOID BREATHING TOXIC VAPORS, KEEP UPWIND (BUREAU OF EXPLOSIVES, EMERGENCY HANDLING OF HAZARDOUS MATERIALS IN SURFACE TRANSPORTATION, 1981).

TOXICITY

200 PPM EYE-HUMAN IRRITATION; 100% CONCENTRATION SKIN-RABBIT MODERATE IRRITATION; 87 MG EYE-RABBIT MILD IRRITATION; 5 MG/24 HOURS EYE-RABBIT SEVERE IRRITATION; 200 PPM INHALATION-HUMAN TCLO; 10000 PPM/6 HOURS INHALATION-HUMAN LCLO; 4300 MG/KG ORAL-RAT LD50; 5000 PPM/4 HOURS INHALATION-RAT LC50; 1700 MG/KG SUBCUTANEOUS-RAT LD50; 1570 UG/KG INTRAPERITONEAL-MOUSE LD50; 2000 MG/KG

INTRAPERITONEAL-GUINEA PIG LDLO; 2000 MG/KG INTRAPERITONEAL-MAMMAL LDLO;
MICROORGANISM MUTATION DATA (RTECS); REPRODUCTIVE EFFECTS DATA (RTECS);
CARCINOGEN STATUS: NONE. XYLENE IS A MILD EYE AND MUCOUS MEMBRANE IRRITANT,
A PRIMARY SKIN IRRITANT, AND CENTRAL NERVOUS SYSTEM DEPRESSANT.

HEALTH EFFECTS AND FIRST AID

INHALATION:
IRRITANT.

ACUTE EXPOSURE- MAY CAUSE DIZZINESS, INCOORDINATION, LOSS OF BALANCE,
IRRITATION OF RESPIRATORY TRACT AND POSSIBLE UNCONSCIOUS-
NESS, COMA AND DEATH FROM RESPIRATORY FAILURE FROM
EXCESSIVE EXPOSURE.

CHRONIC EXPOSURE- MAY CAUSE HEADACHE, LOSS OF APPETITE, DROWSINESS,
NERVOUSNESS AND PALLOR. SEE REFERENCE TO ANIMAL
REPRODUCTIVE EFFECTS DATA AND MICROORGANISM MUTATION DATA
IN TOXICITY SECTION.

FIRST AID- REMOVE FROM EXPOSURE AREA TO FRESH AIR IMMEDIATELY. IF BREATHING
HAS STOPPED, PERFORM ARTIFICIAL RESPIRATION. KEEP AFFECTED PERSON WARM AND
AT REST. GET MEDICAL ATTENTION.

SKIN CONTACT:
IRRITANT.

ACUTE EXPOSURE- PRACTICALLY NON-TOXIC BY SKIN ABSORPTION. MAY IRRITATE AND
DEFAT THE SKIN.

CHRONIC EXPOSURE- REPEATED OR PROLONGED CONTACT MAY CAUSE IRRITATION. DEFATS
THE SKIN.

FIRST AID- REMOVE CONTAMINATED CLOTHING AND SHOES IMMEDIATELY. WASH AFFECTED
AREA WITH SOAP OR MILD DETERGENT AND LARGE AMOUNTS OF WATER UNTIL NO
EVIDENCE OF CHEMICAL REMAINS (APPROXIMATELY 15-20 MINUTES). GET MEDICAL
ATTENTION IMMEDIATELY.

EYE CONTACT:
IRRITANT.

ACUTE EXPOSURE- HIGH VAPOR CONCENTRATIONS OR LIQUID CONTACT MAY CAUSE SEVERE
EYE IRRITATION.

CHRONIC EXPOSURE- REPREATED OR PROLONGED EXPOSURE MAY CAUSE CONJUNCTIVITIS.

FIRST AID- WASH EYES IMMEDIATELY WITH LARGE AMOUNTS OF WATER, OCCASIONALLY
LIFTING UPPER AND LOWER LIDS, UNTIL NO EVIDENCE OF CHEMICAL REMAINS
(APPROXIMATELY 15-20 MINUTES). GET MEDICAL ATTENTION IMMEDIATELY.

INGESTION:
NARCOTIC.

ACUTE EXPOSURE- INGESTION CAUSES A BURNING SENSATION IN THE MOUTH AND
STOMACH, WITH NAUSEA, VOMITING, SALIVATION, AND POSSIBLY
HEMATEMESIS. SUBSTERNAL PAIN, COUGHING, AND HOARSENESS ARE
POSSIBLE. ASPIRATION MAY RESULT IN HEMORRHAGIC PNEUMONITIS.
NARCOSIS MAY OCCUR, WITH SYMPTOMS OF CENTRAL NERVOUS SYSTEM
DEPRESSION AS DESCRIBED IN ACUTE INHALATION. COMA, LIVER
AND KIDNEY DAMAGE MAY OCCUR.

REACTIVITY

REACTIVITY:
STABLE AT ORDINARY PRESSURES UP TO THE BOILING POINT, 139 C.

INCOMPATIBILITIES:
NITRIC ACID: INTENSE EXOTHERMIC REACTION IN THE PRESENCE OF SULFURIC ACID.
1,3-DICHLORO-5,5-DIMETHYL-2,4-IMIDAZOLIDINDIONE: POSSIBLE EXPLOSION.

DECOMPOSITION:
COMBUSTION MAY RELEASE TOXIC OXIDES OF CARBON.

POLYMERIZATION:
NOT KNOWN TO OCCUR.

CONDITIONS TO AVOID

MAY BE IGNITED BY HEAT, SPARKS OR FLAMES. VAPORS MAY TRAVEL TO A SOURCE OF IGNITION AND FLASH BACK. CONTAINER MAY EXPLODE IN HEAT OF FIRE. VAPOR EXPLOSION HAZARD INDOORS, OUTDOORS OR IN SEWERS. RUNOFF TO SEWER MAY CREATE FIRE OR EXPLOSION HAZARD.

SPILL AND LEAK PROCEDURES

SOIL SPILL:
DIG HOLDING AREA SUCH AS LAGOON, POND OR PIT FOR CONTAINMENT.

DIKE FLOW OF SPILLED MATERIAL USING SOIL OR SANDBAGS OR FOAMED BARRIERS SUCH AS POLYURETHANE OR CONCRETE.

USE CEMENT POWDER OR FLY ASH TO ABSORB LIQUID MASS.

IMMOBILIZE SPILL WITH UNIVERSAL GELLING AGENT.

REDUCE VAPOR AND FIRE HAZARD WITH FLUOROCARBON WATER FOAM.

AIR SPILL:
KNOCK DOWN VAPORS WITH WATER SPRAY. KEEP UPWIND.

WATER SPILL:
-LIMIT SPILL MOTION AND DISPERSION WITH NATURAL BARRIERS OR OIL SPILL CONTROL BOOMS.

APPLY DETERGENTS, SOAPS, ALCOHOLS OR ANOTHER SURFACE ACTIVE AGENT TO THICKEN SPILLED MATERIAL.

APPLY UNIVERSAL GELLING AGENT TO IMMOBILIZE TRAPPED SPILL AND INCREASE EFFICIENCY OF REMOVAL.

USE ACTIVATED CARBON TO ABSORB SPILLED SUBSTANCE THAT IS DISSOLVED.

USE SUCTION HOSES TO REMOVE TRAPPED SPILL MATERIAL.

USE DREDGES OR LIFTS TO EXTRACT IMMOBILIZED MASSES OF POLLUTION AND PRECIPITATES.

OCCUPATIONAL SPILL:

SHUT OFF IGNITION SOURCES. STOP LEAK IF YOU CAN DO IT WITHOUT RISK. USE WATER SPRAY TO REDUCE VAPORS. FOR SMALL SPILLS, TAKE UP WITH SAND OR OTHER ABSORBENT MATERIAL AND PLACE INTO CONTAINERS FOR LATER DISPOSAL. FOR LARGER SPILLS, DIKE FAR AHEAD OF SPILL FOR LATER DISPOSAL. NO SMOKING, FLAMES OR FLARES IN HAZARD AREA. KEEP UNNECESSARY PEOPLE AWAY; ISOLATE HAZARD AREA AND DENY ENTRY.

PROTECTIVE EQUIPMENT

VENTILATION:

PROVIDE LOCAL EXHAUST VENTILATION SYSTEM TO MEET PERMISSIBLE EXPOSURE LIMIT REQUIREMENTS. VENTILATION EQUIPMENT MUST BE EXPLOSION-PROOF.

RESPIRATOR:

1000 PPM- CHEMICAL CARTRIDGE RESPIRATOR WITH AN ORGANIC VAPOR CARTRIDGE AND A FULL FACEPIECE.

5000 PPM- GAS MASK WITH A CHIN-STYLE, FRONT-, OR BACK-MOUNTED ORGANIC VAPOR CANISTER.
SUPPLIED-AIR RESPIRATOR WITH A FULL FACEPIECE, HELMET, OR HOOD.
SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE.

10,000 PPM- TYPE C SUPPLIED-AIR RESPIRATOR WITH A FULL FACEPIECE OPERATED IN PRESSURE-DEMAND OR OTHER POSITIVE PRESSURE MODE OR WITH A FULL FACEPIECE, HELMET, OR HOOD OPERATED IN CONTINUOUS-FLOW MODE.

ESCAPE- GAS MASK WITH A CHIN-STYLE, FRONT-, OR BACK-MOUNTED ORGANIC VAPOR CANISTER.
SELF-CONTAINED BREATHING APPARATUS.

FIREFIGHTING- SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN PRESSURE-DEMAND OR OTHER POSITIVE PRESSURE MODE.

CLOTHING:

PROTECTIVE CLOTHING NOT REQUIRED. AVOID REPEATED OR PROLONGED CONTACT WITH THIS SUBSTANCE.

GLOVES:

PROTECTIVE GLOVES ARE NOT REQUIRED BUT RECOMMENDED.

EYE PROTECTION:

EMPLOYEE MUST WEAR SPLASH-PROOF OR DUST-RESISTANT SAFETY GOGGLES AND A FACESHIELD TO PREVENT CONTACT WITH THIS SUBSTANCE.

WHERE THERE IS ANY POSSIBILITY THAT AN EMPLOYEE'S EYES MAY BE EXPOSED TO THIS SUBSTANCE, THE EMPLOYER SHALL PROVIDE AN EYE-WASH FOUNTAIN WITHIN THE IMMEDIATE WORK AREA FOR EMERGENCY USE.

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