

MALLINCKRODT INC.,SCIENCE PRODUCTS DIVISION -- FORMALDEHYDE -- 6505-00-664-0329  
===== Product Identification =====

Product ID:FORMALDEHYDE  
MSDS Date:01/20/1988  
FSC:6505  
NIIN:00-664-0329  
MSDS Number: BFKJL  
=== Responsible Party ===  
Company Name:MALLINCKRODT INC.,SCIENCE PRODUCTS DIVISION  
Address:PARIS BYPASS  
Box:M  
City:PARIS  
State:KY  
ZIP:40361  
Info Phone Num:314-982-5000  
Emergency Phone Num:314-982-5000  
CAGE:62910  
=== Contractor Identification ===  
Company Name:MALLINCKRODT SPECIALTY CHEMICALS CO  
Address:222 RED SCHOOL LANE  
Box:City:PHILLIPSBURG  
State:NJ  
ZIP:08865  
Country:US  
Phone:908-859-2151  
CAGE:62910

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

Ingred Name:FORMALDEHYDE (SARA III)  
CAS:50-00-0  
RTECS #:LP8925000  
Fraction by Wt: 37.0%  
Other REC Limits:NONE  
OSHA PEL:SEE 1910.1048  
ACGIH TLV:C 0.3 PPM; A2; 9293  
EPA Rpt Qty:100 LBS  
DOT Rpt Qty:100 LBS

Ingred Name:ME

THYL ALCOHOL (METHANOL) (SARA III)

CAS:67-56-1

RTECS #:PC1400000

Fraction by Wt: 10-15%

Other REC Limits:NONE

OSHA PEL:S,200PPM/250STEL

ACGIH TLV:S,200PPM/250STEL; 93

EPA Rpt Qty:5000 LBS

DOT Rpt Qty:5000 LBS

Ingred Name:WATER, WT% BY DIFFERENCE

CAS:7732-18-5

RTECS #:ZC0110000

Fraction by Wt: 48-53%

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

LD50 LC50 Mixture:LD50 ORAL RAT=800MG/KG

Routes of Entry: Inhalation:NO Skin:YES Ingestion:YES

Reports of Carcinogenicity:NTP

:YES IARC:YES OSHA:YES

Health Hazards Acute and Chronic:ACUTE:SEE SIGNS & SYMPTOMS OF  
OVEREXPOSURE. CHRONIC:HYPERSENSITIVITY LEADING TO CONTACT  
DERMATITIS,ALLERGIC REACTION,VISION IMPAIRMENT,ENLARGEMENT OF LIVER

Explanation of Carcinogenicity:FORMALDEHYDE IS A SUSPECTED HUMAN  
CARCINOGEN.

Effects of Overexposure:EYES:IRRITATION,REDNESS,PAINS,BLURRED  
VISION,IRREVERSIBLE EYE

DAMAGE;SKIN:REDNESS,PAIN,BURNS,DISCOLORATION,CRACKING,SCALING;SKIN  
ABSORPTION:SAME SYMPTOMS AS

INGESTION;INHALATION:SORE

THROAT,COUGH,SHORTNESS OF BREATH,IRRITATION,SEVERE RESPIRATORY  
TRACT INJURY LEADING TO PULMONARY EDEMA & PNEUMONITIS-SEE  
SUPPLEMENTAL DAT

Medical Cond Aggravated by Exposure:PERSONS WITH PRE-EXISTING SKIN  
DISORDERS,EYE PROBLEMS,OR IMPAIRED LIVER,KIDNEY OR RESPIRATORY  
FUNCTION.

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

First Aid:EYES:WASH WITH PLENTY OF WATER FOR 15 MINUTES.SEE DOCTOR  
IMMEDIATELY;SKIN:FLUSH WITH PLENT

Y OF WATER FOR 15 MINUTES WHILE

REMOVING CONTAMINATED CLOTHING & SHOES;INHALATION:REMOVE TO FRESH AIR.GIVE CPR /OXYGEN IF NEEDED.SEE DOCTOR;INGESTION:GIVE 2 GLASSES OF WATER.INDUCE VOMIT.NOTHING BY MOUTH IF UNCONSCIOUS.SEE DOCTOR IMMEDIATELY.

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

Flash Point:140F(60C)

Autoignition Temp:Autoignition Temp Text:572F

Lower Limits:7.0

Upper Limits:73

Extinguishing Media:WATER SPRAY CAN BE USED TO EXTINGUISH FIRES & COO

L

FIRE EXPOSED CONTAINERS.

Fire Fighting Procedures:WEAR SCBA & PROTECTIVE CLOTHING. WATER MAY BE USED TO FLUSH SPILLS & TO DILUTE SPILLS TO NON-FLAMMABLE MIXTURES.

Unusual Fire/Explosion Hazard:ABOVE FLASH POINT,VAP-AIR MIXTURES ARE EXPLOSIVE WITHIN FLAMMABLE LIMITS; AUTO IGN TEMP:300C(572F)

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

Spill Release Procedures:WEAR SCBA & PROTECTIVE CLOTHING.REMOVE IGNITION SOURCES.VENTILATE.ABSORB IN INERT MATERIAL & PL

ACE IN

APPROPRIATE DISPOSAL CONTAINER.

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

Handling and Storage Precautions:KEEP CONTAINERS CLOSED.PROTECT AGAINST PHYSICAL DAMAGE.OUTSIDE OR DETACHED STORAGE IS PREFERRED.INSIDE STORAGE SHOULD BE IN STD FLAMM.LIQ.STORAGE ROOM

Other Precautions:SEPARATE FROM OXIDIZING MATERIALS.STORAGE & USE AREAS SHOULD BE NO SMOKING.

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

Respiratory Protection:WEAR

A SUPPLIED AIR,FULL-FACEPIECE

RESPIRATOR,AIRLINED HOOD,OR SCBA IF TLV IS EXCEEDED.

Ventilation:LOCAL EXHAUST TO MAINTN BELOW TLV.

Protective Gloves:IMPERVIOUS

Eye Protection:GOGGLES/FACE SHIELD

Other Protective Equipment:IMPERVIOUS PROTECTIVE CLOTHING,INCLUDING BOOTS,LAB COAT,APRON OR COVERALLS. SAFETY SHOWER & EYE WASH STATION.

Work Hygienic Practices:WASH HANDS,FACE,FOREARMS & NECK WHEN EXITING RESTRICTED AREAS-SEE SUPPLEMENTAL DATA.

Supplemental Safety and Health

CONT'D FROM

SIGNS & SYMPTOMS OF OVEREXPOSURE:MAY BE FATAL IN HIGH CONCENTRATIONS;INGESTION:SEVERE ABDOMINAL PAIN,VIOLENT VOMIT,HEADACHE,DIARRHEA.DECREASED BODY TEMPERATURE,PAIN IN DIGESTIVE TRACT,SHAL LOW RESPIRATION,WEAK IRREGULAR PULSE,UNCONSCIOUSNESS,DEATH.METHANOL COMPONENT AFFECTS OPTIC NERVE & MAY CAUSE BLINDNESS.

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

HCC:F4

Boiling Pt:B.P. Text:205F(96C)

Melt/Freeze Pt:M.P/F.P Text:5F(-15C)

Vapor Density:1.04

Spec

Gravity:1.08

Solubility in Water:COMPLETE

Appearance and Odor:CLEAR,COLORLESS LIQUID. PUNGENT ODOR.

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

Stability Indicator/Materials to Avoid:YES

OXIDIZERS,ALKALIES,PERCHLORIC ACID,NITROGEN DIOXIDE,NITROMETHANE,HYDROCHLORIC ACID.

Stability Condition to Avoid:HEAT, IGNITION SOURCES

Hazardous Decomposition Products:CO

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

Waste Disposal Methods:COLLECT SPILLS & A

TOMIZE IN A RCRA-APPROVED

COMBUSTION CHAMBER.BEFORE ATOMIZING,DISSOLVE IN AN APPROPRIATE COMBUSTIBLE SOLVENT.WASTE CAN BE DISPOSED IN A RCRA APPROVED FACILITY.ENSURE COMPLIANCE W/LOC AL,STATE & FED REGS: CWA/CERCL RQ:1000 LBS.

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