

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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