

R & D METALS & CHEMICALS INC -- WELDING FLUX,SOLDERING LIQUID FORM FLUX --  
3439-01-044-4144

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

Product ID:WELDING FLUX,SOLDERING LIQUID FORM FLUX

MSDS Date:02/20/1998

FSC:3439

NIIN:01-044-4144

MSDS Number: CGLTN

=== Responsible Party ===

Company Name:R & D METALS & CHEMICALS INC

Address:75 SHEER PLAZA

City:PLAINVIEW

State:NY

ZIP:11803-4205

Country:US

Info Phone N

um:516-694-0920

Emergency Phone Num:516-694-0920

CAGE:56406

=== Contractor Identification ===

Company Name:R & D METALS & CHEMICALS, INC

Address:201C PERIMETER PARK

Box:22533

City:KNOXVILLE

State:TN

ZIP:37922-2233

Country:US

Phone:423-531-6065 / FAX: 423-531-2044

CAGE:56406

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

Ingred Name:HYDROGEN CHLORIDE (HYDROCHLORIC ACID) (SARA 302/313)  
(CERCLA)

CAS:7647-01-0

RTECS #:MW4025000

Fraction by Wt: 30 - 45%

Other REC Limits:N

ONE RECOMMENDED  
OSHA PEL:C 5 PPM  
ACGIH TLV:C 5 PPM; 9596  
EPA Rpt Qty:5000 LBS  
DOT Rpt Qty:5000 LBS

Ingred Name:ZINC CHLORIDE (SARA 313) (CERCLA)  
CAS:7646-85-7  
RTECS #:ZH1400000  
Fraction by Wt: 15 - 25%  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:1 MG/M3  
ACGIH TLV:1MG/M3/2STEL(FUME)96  
EPA Rpt Qty:1000 LBS  
DOT Rpt Qty:1000 LBS

Ingred Name:ACETIC ACID (CERCLA)  
CAS:64-19-7  
RTECS #:AF1225000  
Fraction by Wt: 2 - 4%  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:10 PPM  
ACGIH TLV:10 PPM/15 STEL; 9596  
EPA R  
pt Qty:5000 LBS  
DOT Rpt Qty:5000 LBS

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

LD50 LC50 Mixture:LD50 (ORAL RAT) IS UNKNOWN.  
Routes of Entry: Inhalation:YES Skin:NO Ingestion:YES  
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO  
Health Hazards Acute and Chronic:TARGET ORGANS:EYES, SKIN, RESPIRATORY  
AND GASTROINTESTINAL TRACTS. ACUTE- CORROSIVE. ZINC CHLORIDE CAN  
BURN GASTROINTESTINAL TRACT IF INGESTED. MAY CAUSE BURNS IF EYE  
CONTACT OCCURS. MAY CAUSE  
EYE DAM GE. CAN CAUSE SKIN BURNS. MAY  
CAUSE PULMONARY EDEMA IF INHALED. CHRONIC- UNKNOWN.  
Explanation of Carcinogenicity:NONE  
Effects of Overexposure:IRRITATION, BURNS, PAIN, VOMITING, NAUSEA,  
BLINDNESS  
Medical Cond Aggravated by Exposure:UNKNOWN.

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

First Aid:CALL A DOCTOR IF SYMPTOMS PERSIST. EYE:IMMEDIATELY FLUSH WITH  
WATER FOR 15 MINUTES. HOLD EYELIDS OPEN. SEE A DOCTOR.  
SKIN:IMMEDIATELY WASH WITH PLENTY OF

WATER. INHALED:REMOVE TO FRESH  
AIR. PROVIDE CP R/OXYGEN IF NEEDED. ORAL:IF CONSCIOUS, DRINK WATER  
OR MILK. GET MEDICAL ATTENTION IMMEDIATELY.

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

Flash Point:NONE

Extinguishing Media:USE CARBON DIOXIDE, FOAM OR DRY CHEMICAL. USE WATER  
SPRAY TO COOL FIRE EXPOSED CONTAINERS.

Fire Fighting Procedures:WEAR PROTECTIVE CLOTHING AND NIOSH-APPROVED  
SELF-CONTAINED BREATHING APPARATUS.

Unusual Fire/Explosion Hazard:WILL REL  
EASE HYDROCHLORIC ACID FUMES UPON  
DECOMPOSITION.

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

Spill Release Procedures:WEAR PROTECTIVE EQUIPMENT. NEUTRALIZE WITH  
SODA ASH OR SODIUM BICARBONATE. VENTILATE AREA. TRANSFER TO PROPER  
CONTAINER FOR DISPOSAL. WASH SPILL SITE WITH WATER.

Neutralizing Agent:SODIUM BICARBONATE, SODA ASH

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

Handling and Storage Precautions:KEEP AWAY FROM HEAT AND STORE I  
N

PLASTIC OR GLASS CONTAINERS, AWAY FROM INCOMPATIBLES.

Other Precautions:WASH THOROUGHLY AFTER HANDLING. KEEP OUT OF REACH OF  
CHILDREN. AVOID CONTACT WITH EYES AND SKIN. DO NOT BREATHE FUMES.  
WASH CLOTHING BEFORE RE-USE.

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

Respiratory Protection:NONE REQUIRED WHERE ADEQUATE VENTILATION  
CONDITIONS EXIST. IF AIRBORNE CONCENTRATION IS HIGH, WEAR A  
NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS.

Ventilation:U

SE ADEQUATE GENERAL OR LOCAL EXHAUST VENTILATION.

Protective Gloves:RUBBER

Eye Protection:CHEMICAL SAFETY GOGGLES

Other Protective Equipment:EYE WASH STATION, SAFETY SHOWER, UNIFORM

Work Hygienic Practices:OBSERVE GOOD INDUSTRIAL HYGIENE PRACTICES AND  
RECOMMENDED PROCEDURES. WASH THOROUGHLY BEFORE EATING,  
DRINKING/SMOKING.

Supplemental Safety and Health

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

HCC:C1

NRC/State Lic Num:NOT RELEVANT

Boiling Pt:B.P. Text:220F,1

04C  
Melt/Freeze Pt:M.P/F.P Text:32.0F,0.0C  
Vapor Pres:UNKNOWN.  
Vapor Density:UNKNOWN.  
Spec Gravity:1.34  
pH:ACID  
Evaporation Rate & Reference:0.7 (N-BUTYL ACETATE=1)  
Solubility in Water:UNLIMITED  
Appearance and Odor:YELLOW/GREEN LIQUID - PUNGENT ODOR  
Percent Volatiles by Volume:64

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

Stability Indicator/Materials to Avoid:YES  
ALKALIES, METALS, OXIDIZING OR REDUCING MATERIALS, CYANIDES OR  
COMBUSTIBLE MATERIALS  
Stability Condition to Avoid:EXCESSIVE HEAT AND COLD  
Hazardous Decomposition Products:HYDROCHLORIC ACID, ZINC CHLORIDE  
FUMES, ZINC OXIDE

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

Waste Disposal Methods:DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND  
FEDERAL REGULATIONS. REUSING OR RECYCLING IS RECOMMENDED.

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