

ITEM: 6YE68 - TINNING FLUX 1QT JAR

ORDER: 0006512973

LP NUMBER: U815481563

MSDS: A7838

MATERIAL SAFETY DATA SHEET (MSDS)

This MSDS should be attached or kept with the respective product with which it is associated.

MATERIAL SAFETY DATA SHEET - A7838

RELEASED: HYDROGEN CHLORIDE (HCL)
Associated Grainger Items
VJP8, 6YE68
D RESPIRATORY PROTECTIVE DEVICE.

MATERIAL SAFETY DATA SHEET

6 ACCIDENTAL RELEASE MEASURES
CC. TO ISO/DIS 11014

PRINTING DATE: 05/17/2006

KEEP PERSONS AWAY.
REVIEWED ON: 05/17/2006

ITEM OR ANY WATER COURSE.

1 IDENTIFICATION OF SUBSTANCE

PRODUCT DETAILS:

FLAMMABLE MATERIAL. DO NOT USE COMBUSTIBLE
TRADE NAME: 3350
CHEMICAL WASTE CONTAINER.

APPLICATION OF THE SUBSTANCE / THE PREPARATION: SOLDERING FLUX

7 HANDLING AND STORAGE

MANUFACTURER/SUPPLIER:
WESTER
115 E. TOUHY AVE.
DES PLAINES, IL 60018

WORKPLACE:
TEL.: (847) 297-1600

FAX.: (847) 390-9338
HAZARDOUS SITUATIONS AND FIRES:

TABLE:
INFORMATION DEPARTMENT: MSDS COORDINATOR

TEL.: (847) 699-5755

RECEPTACLES:
EMERGENCY INFORMATION:
CHEMICAL 24-HOUR EMERGENCY TELEPHONE NUMBER: (800) 424-9300

RESULTING GASES:
IN CASE OF FIRE, THE FOLLOWING CAN BE R

PROTECTIVE EQUIPMENT: WEAR SELF-CONTAIN

PERSON-RELATED SAFETY PRECAUTIONS:
ENSURE ADEQUATE VENTILATION
WEAR PROTECTIVE EQUIPMENT. KEEP UNPROTE

MEASURES FOR ENVIRONMENTAL PROTECTION:
DO NOT ALLOW PRODUCT TO REACH SEWAGE SY

MEASURES FOR CLEANING/COLLECTING:
USE NEUTRALIZING AGENT.
ABSORB WITH CLAY, DRY SAND, OR OTHER IN
MATERIALS SUCH AS SANDUST. PLACE IN A C

HANDLING:

INFORMATION FOR SAFE HANDLING:
ENSURE GOOD VENTILATION/EXHAUSTION AT T
OPEN AND HANDLE RECEPTACLE WITH CARE.
INFORMATION ABOUT PROTECTION AGAINST EX
KEEP RESPIRATORY PROTECTIVE DEVICE AVAI

STORAGE:

REQUIREMENTS TO BE MET BY STOREROOMS AN
NO SPECIAL REQUIREMENTS.
INFORMATION ABOUT STORAGE IN ONE COMMON

STORAGE FACILITY: NOT REQUIRED.
EMTREC 24-HOUR EMERGENCY TELEPHONE NUMBER (OUTSIDE OF THE U.S. AND
CANADA): (703) 527-3887
IONS:

ALIED RECEPTACLES. 2 COMPOSITION/DATA ON COMPONENTS

HEMI CHARACTERIZATION:
COR AND PERSONAL PROTECTION

DESCRIPTION:
TECHNICAL SYSTEMS:
MIXTURE OF THE SUBSTANCES LISTED BELOW WITH NONHAZARDOUS ADDITIONS.

HAZARDOUS COMPONENTS:
BE MONITORING AT THE WORKPLACE:

646-85-7	ZINC CHLORIDE	25-50%
647-01-0	HYDROGEN CHLORIDE	10-25%
2125-02-9	AMMONIUM CHLORIDE	</=2.5%

3 HAZARDS IDENTIFICATION

HMS HAZARD SYMBOLS:
2 - MATERIALS CAUSING OTHER TOXIC EFFECTS
1 - CORROSIVE MATERIAL

INFORMATION PERTAINING TO PARTICULAR DANGERS FOR MAN AND ENVIRONMENT:
THE PRODUCT HAS TO BE LABELED DUE TO THE CALCULATION PROCEDURE OF

INTERNATIONAL GUIDELINES.

CAUSES BURNS.

IRRITATING TO RESPIRATORY SYSTEM.

VERY TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE
AQUATIC ENVIRONMENT.

NFPA RATINGS (SCALE 0 - 4):

HEALTH 3
FIRE 0
REACTIVITY 0

HMS-RATINGS (SCALE 0 - 4):

HEALTH 3
FIRE 0
REACTIVITY 0

ADMINISTRATION

ATAL INDUSTRIAL HYGIENISTS

FURTHER INFORMATION ABOUT STORAGE CONDI

KEEP RECEPTACLE TIGHTLY SEALED.
STORE IN COOL, DRY CONDITIONS IN WELL S

8 EXPOSUR

ADDITIONAL INFORMATION ABOUT DESIGN OF

NO FURTHER DATA; SEE ITEM 7.

COMPONENTS WITH LIMIT VALUES THAT REQUI

7646-85-7 ZINC CHLORIDE:
REL: 1 MG/M3

REL:
SHORT-TERM VALUE: 2 MG/M3
LONG-TERM VALUE: 1 MG/M3

TLV:
SHORT-TERM VALUE: 2 MG/M3
LONG-TERM VALUE: 1 MG/M3 FUME

7647-01-0 HYDROGEN CHLORIDE:
REL:
SHORT-TERM VALUE: C 7 MG/M3, C 5 PPM
REL SHORT-TERM VALUE: C 7 MG/M3, C 5 PP

TLV:
SHORT-TERM VALUE: C 7.5 MG/M3, C 5 PPM
NIC-C 2; C 2.98; NIC-A4

12125-02-9 AMMONIUM CHLORIDE:

REL:
SHORT-TERM VALUE: 20 MG/M3
LONG-TERM VALUE: 10 MG/M3

TLV:
SHORT-TERM VALUE: 20 MG/M3
LONG-TERM VALUE: 10 MG/M3

ADDITIONAL INFORMATION:
REL = PERMISSIBLE EXPOSURE LIMIT (OSHA)
REL = RECOMMENDED EXPOSURE LIMIT (NIOSH)

TLV = THRESHOLD LIMIT VALUE (ACGIH)
OSHA = OCCUPATIONAL SAFETY AND HEALTH A

ACGIH = AMERICAN CONFERENCE OF GOVERNME

4 FIRST AID MEASURES

GENERAL SAFETY AND HEALTH

GENERAL INFORMATION: IMMEDIATELY REMOVE ANY CLOTHING SOILED BY THE PRODUCT.

AFTER INHALATION: SUPPLY FRESH AIR; CONSULT DOCTOR IN CASE OF COMPLAINTS.

AFTER SKIN CONTACT:
IMMEDIATELY REMOVE ALL CLOTHING.
IMMEDIATELY WASH WITH WATER AND SOAP AND RINSE THOROUGHLY.
AFTER CONTACT WITH EYES OR FACE:
IMMEDIATELY WASH WITH WATER AND SOAP AND RINSE THOROUGHLY.

AFTER EYE CONTACT:
IMMEDIATELY OPEN EYE FOR SEVERAL MINUTES UNDER RUNNING WATER. THEN CONSULT A DOCTOR.
IMMEDIATELY MOVE FUMES FROM THE BREATHING ZONE,

RESPIRATORY PROTECTIVE APPARATUS SHOULD

AFTER SWALLOWING:
DRINK COPIOUS AMOUNTS OF WATER AND PROVIDE FRESH AIR. IMMEDIATELY CALL A DOCTOR.

5 FIRE FIGHTING MEASURES

SUITABLE EXTINGUISHING AGENTS:
CO₂, EXTINGUISHING POWDER OR WATER SPRAY. FIGHT LARGER FIRES WITH WATER
FOAM OR ALCOHOL RESISTANT FOAM.
EXTINGUISHING AGENT SHOULD BE DETERMINED BY THE MANUFACTURER OF THE

SPECIAL HAZARDS CAUSED BY THE MATERIAL, ITS PRODUCTS OF COMBUSTION OR

NIOSH = NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH

PERSONAL PROTECTIVE EQUIPMENT:

GENERAL PROTECTIVE AND HYGIENIC MEASURES

KEEP AWAY FROM FOODSTUFFS, BEVERAGES AND

IMMEDIATELY REMOVE ALL SOILED AND CONTAMINATED CLOTHING

WASH HANDS BEFORE BREAKS AND AT THE END OF WORK.

AVOID CONTACT WITH THE EYES AND SKIN.

BREATHING EQUIPMENT:

WHEN VENTILATION IS NOT SUFFICIENT TO REMOVE FUMES

A SAFETY APPROVED RESPIRATOR OR SELF-CONTAINED BREATHING APPARATUS

SHOULD BE WORN.

PROTECTION OF HANDS: PROTECTIVE GLOVES

MATERIAL OF GLOVES:

NITRILE RUBBER, NBR

NATURAL RUBBER, NR

PENETRATION TIME OF GLOVE MATERIAL:

THE EXACT BREAK THROUGH TIME HAS TO BE DETERMINED BY THE MANUFACTURER

OF THE GLOVE MATERIAL AND HAS TO BE OBSERVED.

EYE PROTECTION:
TIGHTLY SEALED GOGGLES
SAFETY GLASSES

9 PHYSICAL AND CHEMICAL PROPERTIES

GENERAL INFORMATION:

FORM: LIQUID

COLOR: LIGHT YELLOW

TASTE: MILD

CHANGE IN CONDITION:
N.O.S. (HYDROCHLORIC ACID, ZINC

MELTING POINT/MELTING RANGE: UNDETERMINED.

BOILING POINT/BOILING RANGE: 121 DEG. C (250 DEG. F)

FLASH POINT: NOT APPLICABLE.

HAZARD OF EXPLOSION: PRODUCT DOES NOT PRESENT AN EXPLOSION HAZARD.

DENSITY AT 20 DEG. C (68 DEG. F): 1.524 G/CM3

SOLUBILITY IN / MISCIBILITY WITH WATER: FULLY MISCIBLE.

PH-VALUE AT 20 DEG. C (68 DEG. F): <1.0

10 STABILITY AND REACTIVITY

N.O.S. (HYDROCHLORIC ACID, ZINC
THERMAL DECOMPOSITION / CONDITIONS TO BE AVOIDED:
NO DECOMPOSITION IF USED ACCORDING TO SPECIFICATIONS.

MATERIALS TO BE AVOIDED: STRONG ACIDS, STRONG OXIDIZERS.

DANGEROUS REACTIONS: NO DANGEROUS REACTIONS KNOWN.

DANGEROUS PRODUCTS OF DECOMPOSITION: HYDROGEN CHLORIDE (HCL)

11 TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

N.O.S. (HYDROCHLORIC ACID, ZINC
LD/LC50 VALUES THAT ARE RELEVANT FOR CLASSIFICATION:

7646-85-7 ZINC CHLORIDE:
ORAL LD50: 350 MG/KG (RAT)

15 REGULATIONS

(CHLORIDE)

LABEL: 8

LAND TRANSPORT ADR/RID (CROSS-BORDER):

ADR/RID CLASS: 8 CORROSIVE SUBSTANCES

DANGER CODE (KEMLER): 80

UN-NUMBER: 3264

PACKAGING GROUP: II

DESCRIPTION OF GOODS:
3264 CORROSIVE LIQUID, ACIDIC, INORGANIC

(CHLORIDE)

MARITIME TRANSPORT IMDG:

IMDG CLASS: 8

UN NUMBER: 3264

LABEL: 8

PACKAGING GROUP: II

EMS NUMBER: F-A, S-B

MARINE POLLUTANT: NO

PROPER SHIPPING NAME:
CORROSIVE LIQUID, ACIDIC, INORGANIC, N.

(CHLORIDE)

AIR TRANSPORT ICAO-TI AND IATA-DGR:

ICAO/IATA CLASS: 8

UN/ID NUMBER: 3264

LABEL: 8

PACKAGING GROUP: II

PROPER SHIPPING NAME:
CORROSIVE LIQUID, ACIDIC, INORGANIC, N.

(CHLORIDE)

125-02-9 AMMONIUM CHLORIDE;
PRODUCT REGULATION SPECIFIC TO
CAL LD50: 1650 MG/KG (RAT)

547-01-0 HYDROGEN CHLORIDE;
SECTION ACT):
CAL LD50: 900 MG/KG (RABBIT)

IRITANT EFFECT:

THE SKIN: CAUSTIC EFFECT ON SKIN AND MUCOUS MEMBRANES.
(INGS):

THE EYE: STRONG IRRITANT WITH THE DANGER OF SEVERE EYE INJURY.
CHLORIDE

ROUGH INHALATION:
INGREDIENTS ARE LISTED.
LIX FUMES DURING SOLDERING MAY CAUSE IRRITATION AND DAMAGE OF MUCOUS
MEMBRANES AND RESPIRATORY SYSTEM.

ROUGH INGESTION: MAY BE HARMFUL IF SWALLOWED.
THE INGREDIENTS IS LISTED.

SENSITIZATION: NO SENSITIZING EFFECTS KNOWN.
TOXICITY:

ADDITIONAL TOXICOLOGICAL INFORMATION:
THE PRODUCT SHOWS THE FOLLOWING DANGERS ACCORDING TO INTERNALLY APPROVED
CALCULATION METHODS FOR PREPARATIONS:

IRRITANT EFFECTS:
NONE OF THE INGREDIENTS IS LISTED.

IRRITANT EFFECTS:
ALLOWING WILL LEAD TO A STRONG CAUSTIC EFFECT ON MOUTH AND THROAT AND TO
ON CANCER):
THE DANGER OF PERFORATION OF ESOPHAGUS AND STOMACH.

OF THE INGREDIENTS IS LISTED.

12 ECOLOGICAL INFORMATION

(ACGIH):

GENERAL NOTES:
) NOT ALLOW UNDILUTED PRODUCT OR LARGE QUANTITIES OF IT TO REACH GROUND
WATER, WATER COURSE OR SEWAGE SYSTEM.

ENVIRONMENTAL SAFETY AND HEALTH):
VERY TOXIC FOR AQUATIC ORGANISMS
RELEASE OF BIGGER AMOUNTS INTO DRAINS OR THE AQUATIC ENVIRONMENT MAY LEAD
) DECREASED PH-VALUES. A LOW PH-VALUE HARMS AQUATIC ORGANISMS. IN THE
(ADMINISTRATION):
DILUTION OF THE USE-LEVEL THE PH-VALUE IS CONSIDERABLY INCREASED, SO THAT
AFTER THE USE OF THE PRODUCT THE AQUEOUS WASTE, EMPTIED INTO DRAINS, IS
EXTREMELY LOW WATER- DANGEROUS.

PRODUCT REGULATION SPECIFIC TO CANADA.

USA THE FOLLOWING INFORMATION RELATES TO
THE USA.

SARA (SUPERFUND AMENDMENTS AND REAUTHOR

SECTION 355 (EXTREMELY HAZARDOUS SUBSTA
NONE OF THE INGREDIENT IS LISTED.

SECTION 313 (SPECIFIC TOXIC CHEMICAL LI

7647-01-01 HYDROGE

TSCA (TOXIC SUBSTANCES CONTROL ACT): AL

CALIFORNIA PROPOSITION 65:

CHEMICALS KNOWN TO CAUSE CANCER: NONE O

CHEMICALS KNOWN TO CAUSE REPRODUCTIVE T

NONE OF THE INGREDIENTS IS LISTED.

CARCINOGENICITY CATEGORIES:

EPA (ENVIRONMENTAL PROTECTION AGENCY):

IARC (INTERNATIONAL AGENCY FOR RESEARCH

NONE OF THE INGREDIENTS IS LISTED.

NTP (NATIONAL TOXICOLOGY PROGRAM): NONE

TLV (THRESHOLD LIMIT VALUE ESTABLISHED

NONE OF THE INGREDIENTS IS LISTED.

NIOSH-CA (NATIONAL INSTITUTE FOR OCCUPA

NONE OF THE INGREDIENTS IS LISTED.

OSHA-CA (OCCUPATIONAL SAFETY & HEALTH A

NONE OF THE INGREDIENTS IS LISTED.

CANADA:

THE FOLLOWING INFORMATION RELATES TO PR

13 DISPOSAL CONSIDERATIONS

ION (WHMIS):

ADANCE WITH THE HAZARD CRITERIA OF
RODUCT:
ION (CPR) AND THE MSDS CONTAINS ALL

ECOMMENDATION:
JST NOT BE DISPOSED OF TOGETHER WITH HOUSEHOLD GARBAGE. DO NOT ALLOW
RODU TO REACH SEWAGE SYSTEM.
DUC. LATION SPECIFIC TO THE

NCLEANED PACKAGINGS:

ECOMMENDATION: DISPOSAL MUST BE MADE ACCORDING TO OFFICIAL REGULATIONS.

14 TRANSPORT INFORMATION

SE LONG-TERM ADVERSE EFFECTS IN

OT REGULATIONS:

HAZARD CLASS: 8
HILDREN.

DIATELY WITH PLENTY OF WATER AND
IDENTIFICATION NUMBER: UN3264

ACKING GROUP: II
S MATERIAL AND ITS CONTAINER AT

INT.
ROPER SHIPPING NAME (TECHNICAL NAME):
RRROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (HYDROCHLORIC ACID, ZINC
S AND EYE/FACE PROTECTION.

WORKPLACE HAZARDOUS MATERIALS IDENTIFIC

THIS PRODUCT HAS BEEN CLASSIFIED IN ACC
THE CANADIAN CONTROLLED PRODUCTS REGULA
OF THE INFORMATION REQUIRED BY THE CPR.

EUROPEAN UNION:
THE FOLLOWING INFORMATION RELATES TO PR
DIRECTIVES OF THE EUROPEAN UNION.

RISK PHRASES:
CAUSES BURNS.
IRRITATING TO RESPIRATORY SYSTEM.

VERY TOXIC TO AQUATIC ORGANISMS, MAY CA
THE AQUATIC ENVIRONMENT.

SAFETY PHRASES:
KEEP LOCKED UP AND OUT OF THE REACH OF
IN CASE OF CONTACT WITH EYES, RINSE IMM
SEEK MEDICAL ADVICE.

DO NOT EMPTY INTO DRAINS, DISPOSE OF TH
HAZARDOUS OR SPECIAL WASTE COLLECTION P

WEAR SUITABLE PROTECTIVE CLOTHING, GLOV

IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE IMMEDIATELY
(SHOW THE LABEL WHERE POSSIBLE).

16 OTHER INFORMATION

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE AND
IS OFFERED SOLELY FOR INFORMATION, CONSIDERATION AND INVESTIGATION. KESTER
MAKES NO WARRANTIES, REPRESENTATIONS AND ASSUMES NO
RESPONSIBILITY AS TO THE ACCURACY, COMPLETENESS OR SUITABILITY OF THIS DATA
FOR ANY PURCHASER'S USE. THE DATA ON THIS MATERIAL SAFETY DATA SHEET
RELATES ONLY TO THIS PRODUCT AND DOES NOT RELATE TO USE WITH ANY OTHER
MATERIAL OR IN ANY PROCESS. ALL CHEMICAL PRODUCTS SHOULD BE USED ONLY BY,
AND UNDER THE DIRECTION OF, TECHNICALLY QUALIFIED PERSONNEL WHO ARE AWARE
OF THE HAZARDS INVOLVED AND THE NECESSITY FOR REASONABLE CARE IN HANDLING.
HAZARD COMMUNICATION REGULATIONS REQUIRE THAT EMPLOYEES MUST BE TRAINED
IN HOW TO USE A MATERIAL SAFETY DATA SHEET AS A SOURCE FOR HAZARD
INFORMATION.

DEPARTMENT ISSUING MSDS: PRODUCT SAFETY

3A