

Material Safety Data Sheet

According to 91/155 EC

Printing date 26.06.2003

Reviewed on 26.06.2003

1 Identification of the substance/preparation and of the company/undertaking**Product details****Trade name: 1630**

Application of the substance / the preparation Soldering flux

Manufacturer/Supplier:Kester
515 E. Touhy Ave.
Des Plaines, IL 60018Tel.(847) 297-1600
Fax.(847) 390-9338**Further information obtainable from:**

MSDS Coordinator:

Tel. (847) 699-5755

Information in case of emergency:





CHEMTREC 24-Hour Emergency Response Telephone Number:

(800) 424-9300

CHEMTREC 24-Hour Emergency Response Telephone Number (Outside US and Canada):

(703) 527-3887

2 Composition/information on ingredients**Chemical characterization****Description:** Mixture of substances listed below with nonhazardous additions.**Dangerous components:**

CAS: 7699-45-8 EINECS: 231-718-4	zinc bromide	 C; R 34	2.5-10%
CAS: 56-81-5 EINECS: 200-289-5	glycerol		2.5-10%
CAS: 10035-10-6 EINECS: 233-113-0	hydrogen bromide	 C; R 35-37	≤ 2.5%
CAS: 7664-41-7 EINECS: 231-635-3	ammonia, anhydrous	 T,  N; R 10-23-34-50	≤ 2.5%

Additional information: For the wording of the listed risk phrases refer to section 16.**3 Hazards identification****Hazard description:**

C Corrosive

Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

R 34 Causes burns.

4 First-aid measures**After inhalation:** Supply fresh air; consult doctor in case of complaints.**After skin contact:** Immediately wash with water and soap and rinse thoroughly.

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After eye contact: *Rinse opened eye for several minutes under running water. Then consult a doctor.***After swallowing:** *Drink plenty of water and provide fresh air. Call for a doctor immediately.***5 Fire-fighting measures****Suitable extinguishing agents:***CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.***Special hazards caused by the substance, its products of combustion or resulting gases:***In case of fire, the following can be released:**Hydrogen bromide**Zinc oxide***Protective equipment:** *Wear self-contained respiratory protective device.***6 Accidental release measures****Person-related safety precautions:***Ensure adequate ventilation**Wear protective equipment. Keep unprotected persons away.***Measures for environmental protection:** *Do not allow to enter sewers/ surface or ground water.***Measures for cleaning/collecting:***Absorb with clay, diatomaceous earth, dry sand, or other inert material. Do not use combustible materials such as sawdust. Place in a chemical waste container. Flush residual with water.***7 Handling and storage****Handling:****Information for safe handling:** *Ensure good ventilation/exhaustion at the workplace.***Information about fire - and explosion protection:** *Keep respiratory protective device available.***Storage:****Requirements to be met by storerooms and receptacles:** *No special requirements.***Information about storage in one common storage facility:** *Not required.***Further information about storage conditions:** *Store in cool, dry conditions in well sealed receptacles.***8 Exposure controls/personal protection****Additional information about design of technical facilities:** *No further data; see item 7.***Ingredients with limit values that require monitoring at the workplace:****56-81-5 glycerol**OES | *Long-term value: 10 mg/m³***10035-10-6 hydrogen bromide**OES | *Short-term value: 10 mg/m³, 3 ppm
IOELV*

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7664-41-7 ammonia, anhydrous

OES	Short-term value: 25 mg/m ³ , 35 ppm Long-term value: 18 mg/m ³ , 25 ppm IOELV
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Additional information:

PEL = Permissible Exposure Limit (OSHA)

REL = Recommended Exposure Limit (NIOSH)

TLV = Threshold Limit Value (ACGIH)

OSHA = Occupational Safety and Health Administration

ACGIH = American Conference of Governmental Industrial Hygienists

NIOSH = National Institute for Occupational Safety and Health

Personal protective equipment:**General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Respiratory protection:

When ventilation is not sufficient to remove fumes from the breathing zone, 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 found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Tightly sealed goggles

Safety glasses

9 Physical and chemical properties**General Information**

Form:	Liquid
Colour:	Colourless
Odour:	Odourless

Change in condition**Melting point/Melting range:** Undetermined.**Boiling point/Boiling range:** 102°C

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Flash point:	<i>Not applicable.</i>
Danger of explosion:	<i>Product does not present an explosion hazard.</i>
Density at 20°C:	<i>1.087 g/cm³</i>
Solubility in / Miscibility with water:	<i>Fully miscible.</i>
pH-value at 20°C:	<i>1.5</i>

10 Stability and reactivity

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 decomposition products:

Hydrogen bromide

Zinc oxide

11 Toxicological information

Acute toxicity:

Primary irritant effect:

on the skin: Caustic effect on skin and mucous membranes.

on the eye: Irritating effect.

Sensitization: *No sensitizing effects known.*

Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Corrosive

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

12 Ecological information

General notes:

Do not allow product to reach ground water, water course or sewage system.

Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the 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 only low water-dangerous.

13 Disposal considerations

Product:

Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

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Uncleaned packaging:**Recommendation:** Disposal must be made according to official regulations.**14 Transport information****Land transport ADR/RID (cross-border)****ADR/RID class:** 8 Corrosive substances.**Danger code (Kemler):** 80**UN-Number:** 3264**Packaging group:** III**Hazard label** 8**Description of goods:** 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (HYDROGEN BROMIDE, zinc bromide)**Maritime transport IMDG:****IMDG Class:** 8**UN Number:** 3264**Label** 8**Packaging group:** III**Marine pollutant:** No**Proper shipping name:** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (HYDROGEN BROMIDE, zinc bromide)**Air transport ICAO-TI and IATA-DGR:****ICAO/IATA Class:** 8**UN/ID Number:** 3264**Label** 8**Packaging group:** III**Proper shipping name:** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (HYDROGEN BROMIDE, zinc bromide)**15 Regulatory information****Code letter and hazard designation of product:**

C Corrosive

Hazard-determining components of labelling:

zinc bromide

hydrogen bromide

Risk phrases:

34 Causes burns.

Safety phrases:

1/2 Keep locked up and out of the reach of children.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

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*36/37/39 Wear suitable protective clothing, gloves and eye/face protection.**45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).**56 Dispose of this material and its container to hazardous or special waste collection point.***National regulations:****Technical instructions (air):**

Class	Share in %
Water	84.2
II	1.3
NK	4.8

Waterhazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.**16 Other information**

The information contained herein is based on data considered accurate and is offered solely for information, consideration and investigation. Kester extends no warranties, makes no 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, or 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 on how to use a Material Safety Data Sheet as a source for hazard information.

Relevant R-phrases*10 Flammable.**23 Toxic by inhalation.**34 Causes burns.**35 Causes severe burns.**37 Irritating to respiratory system.**50 Very toxic to aquatic organisms.***Department issuing MSDS:** Product Safety**Contact:** Heather Holich, MSDS Coordinator

Tel. (847)699-5755