

Material Safety Data Sheet

According to 91/155 EC

Printing date 24.07.2003

Reviewed on 23.07.2003

1 Identification of the substance/preparation and of the company/undertaking**Product details****Trade name: 450-NF***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: 12124-97-9	ammonium bromide	≤ 2.5%
EINECS: 235-183-8		

3 Hazards identification**Hazard description:** *Not applicable.***Information concerning particular hazards for human and environment:***The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.***4 First-aid measures****After inhalation:** *Supply fresh air; consult doctor in case of complaints.***After skin contact:** *Rinse with warm water.***After eye contact:** *Rinse opened eye for several minutes under running water.***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:**Carbon monoxide (CO)**Carbon dioxide (CO₂)**Aliphatic aldehydes*

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Trade name: 450-NF**Protective equipment:** *Wear self-contained respiratory protective device.*

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6 Accidental release measures**Person-related safety precautions:** *Ensure adequate ventilation***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:***The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.***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.***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.*

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Eye protection:*Tightly sealed goggles**Safety glasses***9 Physical and chemical properties****General Information**

Form: *Liquid*
Colour: *Blue*
Odour: *Mild*

Change in condition

Melting point/Melting range: *Undetermined.*
Boiling point/Boiling range: *104°C*

Flash point: *Not applicable.*

Danger of explosion: *Product does not present an explosion hazard.*

Vapour pressure at 20°C: *19 mm Hg*

Density at 20°C: *1.082 g/cm³*

Solubility in / Miscibility with water: *Fully miscible.*

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:

Carbon monoxide and carbon dioxide

Aldehyde

11 Toxicological information**Acute toxicity:****Primary irritant effect:**

on the skin: Possible local irritation by contact with flux or fumes.

on the eye: Smoke during soldering can cause eye irritation.

Sensitization: *No sensitizing effects known.*

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12 Ecological information**General notes:** Do not allow product to reach ground water, water course or sewage system.**13 Disposal considerations****Product:****Recommendation** Disposal must be made according to official regulations.**European waste catalogue**

16 10 02 | aqueous liquid wastes other than those mentioned in 16 10 01

Uncleaned packaging:**Recommendation:** Disposal must be made according to official regulations.**14 Transport information****Land transport ADR/RID (cross-border)****ADR/RID class:** -
Not regulated.**Maritime transport IMDG:****IMDG Class:** -
Not regulated.**Marine pollutant:** No**Air transport ICAO-TI and IATA-DGR:****ICAO/IATA Class:** -
Not regulated.**15 Regulatory information****National regulations:****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.

Department issuing MSDS: Product Safety**Contact:** Heather Holich, MSDS Coordinator

Tel. (847)699-5755