

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: 163-18**

Application of the substance / the preparation Intermediate

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: 56-81-5 EINECS: 200-289-5	glycerol		50-100%
CAS: 50-01-1 EINECS: 200-002-3	guanidinium chloride	Xn; R 22-36/38	10-25%

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:** Immediately wash with water and soap and rinse thoroughly.**After eye contact:** Rinse opened eye for several minutes under running water.**After swallowing:** Induce vomiting, if person is conscious. Seek medical help.**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)

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*Carbon dioxide (CO₂)**Aliphatic aldehydes***Protective equipment:** *Wear self-contained respiratory protective device.***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:****56-81-5 glycerol**OES | Long-term value: 10 mg/m³**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.**Wash hands before breaks and at the end of work.**Store protective clothing separately.***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.*

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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: Pink
Odour: Mild

Change in condition**Melting point/Melting range:** Undetermined.**Boiling point/Boiling range:** Undetermined.**Flash point:** 190°C**Danger of explosion:** Product does not present an explosion hazard.**Density at 20°C:** 1.266 g/cm³

Solubility in / Miscibility with water: Not miscible or difficult to mix.

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:**

When heated to soldering temperatures, the solvents are evaporated and organic materials may be thermally degraded to liberate aliphatic aldehydes and acids.

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11 Toxicological information**Acute toxicity:****Primary irritant effect:***on the skin: Irritant to skin and mucous membranes.**on the eye: Irritating effect.***Sensitization:** *No sensitizing effects known.***Additional toxicological information:***The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.***12 Ecological information****General notes:** *Do not allow product to reach ground water, water course or sewage system.***13 Disposal considerations****Product:****Recommendation***Must not be disposed together with household garbage. Do not allow product to reach sewage system.***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****Special labelling of certain preparations:***Safety data sheet available for professional user on request.*

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National regulations:**Technical instructions (air):**

Class	Share in %
NK	89.3

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

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Relevant R-phrases

22 Harmful if swallowed.

36/38 Irritating to eyes and skin.

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

Tel. (847)699-5755