

**Material Safety Data Sheet**

acc. to ISO/DIS 11014

Printing date 01/27/2009

Reviewed on 01/27/2009

**1 Identification of substance****Product details****Trade name:** 44 core Sn96.5Ag3.0Cu0.5

Application of the substance / the preparation: Flux cored solder

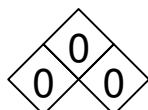
**Manufacturer/Supplier:**Kester  
800 W. Thorndale Ave.  
Itasca, IL 60143Tel.(847) 297-1600  
Fax.(847) 390-9338**Information department:****2 Hazards identification****WHMIS Hazard Symbols**

D2B - Toxic material causing other toxic effects

**Information pertaining to particular dangers for man and environment:**

The product has to be labelled due to the calculation procedure of international guidelines.

May cause sensitisation by skin contact.

**NFPA ratings (scale 0 - 4)**

Health = 0

Fire = 0

Reactivity = 0

**HMIS-ratings (scale 0 - 4)**

HEALTH	0
FIRE	0
REACTIVITY	0

Health = 0

Fire = 0

Reactivity = 0

**GHS label elements****Warning**

3.4/1 - May cause an allergic skin reaction.

**Prevention:**

Avoid breathing dust/fume/gas/mist/vapours/spray.

Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

**Response:**

IF ON SKIN: Wash with plenty of soap and water.

Specific treatment (see label).

If skin irritation or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

(Contd. on page 2)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 01/27/2009

Reviewed on 01/27/2009

**Trade name:** 44 core Sn96.5Ag3.0Cu0.5

(Contd. of page 1)

## **Disposal:**


*Dispose of contents/container in accordance with local/regional/national/international regulations.*

## 3 Composition/Data on components

### **Chemical characterization**

**Description:** Mixture of the substances listed below with nonhazardous additions.

#### **Dangerous components:**

7440-31-5	tin		50-100%
7440-22-4	silver		2.5-10%
8050-09-7	Rosin	Warning:  3.4.S/1	2.5-10%

## 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:** Seek immediate medical advice.

## 5 Fire fighting measures

### **Suitable extinguishing agents:**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

### **Special hazards caused by the material, its products of combustion or resulting gases:**

*In case of fire, the following can be released:*

**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:** Ensure adequate ventilation.

## 7 Handling and storage

### **Handling:**

**Information for safe handling:** Prevent formation of aerosols.

**Information about protection against explosions and fires:** No special measures required.

### **Storage:**

**Requirements to be met by storerooms and receptacles:** No special requirements.

**Information about storage in one common storage facility:** Not required.

(Contd. on page 3)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 01/27/2009

Reviewed on 01/27/2009

**Trade name:** 44 core Sn96.5Ag3.0Cu0.5

(Contd. of page 2)

**Further information about storage conditions:** None.

## 8 Exposure controls and personal protection

**Additional information about design of technical systems:** No further data; see item 7.

**Components with limit values that require monitoring at the workplace:**

### 7440-31-5 tin

PEL	2 mg/m <sup>3</sup>
	metal
REL	2 mg/m <sup>3</sup>
TLV	2 mg/m <sup>3</sup>
	metal

### 7440-22-4 silver

PEL	0.01 mg/m <sup>3</sup>
REL	0.01 mg/m <sup>3</sup>
TLV	0.1 mg/m <sup>3</sup>
	metal

### 8050-09-7 Rosin

TLV	SEN; L
-----	--------

### 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:

The usual precautionary measures for handling chemicals should be followed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

#### Breathing equipment:

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.

(Contd. on page 4)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 01/27/2009

Reviewed on 01/27/2009

Trade name: 44 core Sn96.5Ag3.0Cu0.5

(Contd. of page 3)

## Eye protection:

Safety glasses



Tightly sealed goggles

## 9 Physical and chemical properties

### General Information

**Form:** Solid  
**Color:** According to product specification  
**Odor:** Mild

### Change in condition

**Melting point/Melting range:** Undetermined.  
**Boiling point/Boiling range:** 2362 °C (4284 °F)

**Flash point:** Not applicable.  
**Auto igniting:** Product is not selfigniting.  
**Danger of explosion:** Product does not present an explosion hazard.  
**Density:** Not determined.  
**Solubility in / Miscibility with Water:** Not miscible or difficult to mix.  
**Solvent content:**  
**Organic solvents:** 0.1 %  
**Solids content:** 99.9 %

## 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 products of decomposition:** No dangerous decomposition products known.

— USA —

(Contd. on page 5)

**Material Safety Data Sheet**

acc. to ISO/DIS 11014

Printing date 01/27/2009

Reviewed on 01/27/2009

**Trade name: 44 core Sn96.5Ag3.0Cu0.5**

(Contd. of page 4)

**11 Toxicological information****Acute toxicity:****Primary irritant effect:***on the skin: No irritant effect.**on the eye: No irritating effect.***Sensitization:** *Sensitization possible through skin contact.***Additional toxicological information:***The product shows the following dangers according to internally approved calculation methods for preparations:  
Irritant***12 Ecological information****General notes:***Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.***13 Disposal considerations****Product:****Recommendation:***Must not be disposed of together with household garbage. Do not allow product to reach sewage system.**Disposal must be made according to official regulations.***Uncleaned packagings:****Recommendation:** *Disposal must be made according to official regulations.***14 Transport information****DOT regulations:***Hazard class: -***Land transport ADR/RID (cross-border):****ADR/RID class:** -**Maritime transport IMDG:****IMDG Class:** -**Marine pollutant:** No**Air transport ICAO-TI and IATA-DGR:****ICAO/IATA Class:** -**UN "Model Regulation":** -

USA

(Contd. on page 6)

**Material Safety Data Sheet**

acc. to ISO/DIS 11014

Printing date 01/27/2009

Reviewed on 01/27/2009

**Trade name: 44 core Sn96.5Ag3.0Cu0.5**

(Contd. of page 5)

**15 Regulations***USA The following information relates to product regulation specific to the USA.***SARA (Superfund Amendments and Reauthorization Act)***Section 355 (extremely hazardous substances):**None of the ingredient is listed.**Section 313 (Specific toxic chemical listings):*

7440-22-4 | silver

7440-50-8 | copper

**TSCA (Toxic Substances Control Act):***All ingredients are listed or exempt from listing.***California Proposition 65***Chemicals known to cause cancer:**None of the ingredients is listed.**Chemicals known to cause reproductive toxicity:**None of the ingredients is listed.***Carcinogenicity categories***EPA (Environmental Protection Agency)*

7440-22-4 | silver

D

7440-50-8 | copper

D

*IARC (International Agency for Research on Cancer)**None of the ingredients is listed.**NTP (National Toxicology Program)**None of the ingredients is listed.**NIOSH-Ca (National Institute for Occupational Safety and Health)**None of the ingredients is listed.**OSHA-Ca (Occupational Safety & Health Administration)**None of the ingredients is listed.**CANADA: The following information relates to product regulation specific to Canada.***Workplace Hazardous Materials Identification (WHMIS):***This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation (CPR) and the MSDS contains all of the information required by the CPR.**WHMIS Classification: No substances are considered a Controlled Product under WHMIS.***EUROPEAN UNION***The following information relates to product regulation specific to the directives of the European Union.*

(Contd. on page 7)

USA

**Material Safety Data Sheet**

acc. to ISO/DIS 11014

Printing date 01/27/2009

Reviewed on 01/27/2009

**Trade name: 44 core Sn96.5Ag3.0Cu0.5**

(Contd. of page 6)

**Risk phrases:***May cause sensitisation by skin contact.***Safety phrases:***Keep out of the reach of children.**Avoid contact with skin.**Wear suitable gloves.**If swallowed, seek medical advice immediately and show this container or label.**Dispose of this material and its container to hazardous or special waste collection point.***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.*

**Abbreviations and acronyms:**

*ADR: Accord européen sur le transport des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)*

*RID: Reglement internationale concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)*

*IMDG: International Maritime Code for Dangerous Goods*

*DOT: US Department of Transportation*

*IATA: International Air Transport Association*

*IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)*

*ICAO: International Civil Aviation Organization*

*ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)*

*GHS: Globally Harmonized System of Classification and Labelling of Chemicals*

*NFPA: National Fire Protection Association (USA)*

*HMIS: Hazardous Materials Identification System (USA)*

*WHMIS: Workplace Hazardous Materials Information System (Canada)*

—USA—