


## 1 Identification

- **Product identifier**
- **Trade name: MS2 LF ALL SERIES**
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the preparation**  
Intermediate  
Commerical Description – MS2® Molten Solder Surfactant for use with Lead-Free (RoHS-compliant) & Tin/Lead solder processes
- **Details of the supplier of the safety data sheet**  
P. Kay Metal, Inc.  
2448 E. 25th Street  
Los Angeles, CA 90058  
Telephone 323-585-5058

## 2 Hazard(s) identification

- **Classification of the substance or mixture**  
H320 Causes eye irritation.

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- **Label elements**
- **GHS label elements**  
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms** Void
- **Signal word** Warning
- **Hazard statements**  
Causes eye irritation.
- **Precautionary statements**  
If medical advice is needed, have product container or label at hand.  
Keep out of reach of children.  
Read label before use.  
Wash thoroughly after handling.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical advice/attention.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**  

  - Health = 0
  - Fire = 1
  - Reactivity = 0
- **HMIS-ratings (scale 0 - 4)**  

HEALTH	0
FIRE	1
REACTIVITY	0

  - Health = 0
  - Fire = 1
  - Reactivity = 0
- **Other hazards**
- **Results of PBT and vPvB assessment** Not applicable.
- **PBT:** Not applicable.

(Contd. on page 2)

**Safety Data Sheet**  
acc. to OSHA HCS

Revised on 02/11/2016

**Trade name: MS2 LF ALL SERIES**

(Contd. of page 1)

· **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterization:** Mixtures
- **Description:** None
- **Dangerous components:** Void

### 4 First-aid measures

- **Description of first aid measures**
- **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 wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media** Dry chemical, water spray, foam, carbon dioxide
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

USA

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Revised on 02/11/2016

**Trade name: MS2 LF ALL SERIES**

(Contd. of page 2)

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Handle in accordance with good industrial hygiene and safety practices
- **Information about protection against explosions and fires:**
- **Conditions for safe storage, including any incompatibilities** No special measures required
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Keep containers tightly closed
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Storage class:** Shelf life 5 years from date of manufacturing
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components 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.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **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.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **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)

# Safety Data Sheet

acc. to OSHA HCS

Revised on 02/11/2016

**Trade name: MS2 LF ALL SERIES**

(Contd. of page 3)

· **Eye protection:**



Tightly sealed goggles

## 9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

**Form:** Liquid

**Color:** Green

· **Odor:** None

· **Odour threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:** 300 °C (572 °F)

· **Flash point:** 315 °C (599 °F)

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** 400 °C (752 °F)

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

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

· **Explosion limits:**

**Lower:** Not determined.

**Upper:** Not determined.

· **Vapor pressure:** Not determined.

· **Density:** Not determined.

· **Relative density** Not determined.

· **Vapour density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with**

**Water:** Not miscible or difficult to mix.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

**Dynamic:** Not determined.

**Kinematic:** Not determined.

(Contd. on page 5)

**Safety Data Sheet**  
acc. to OSHA HCS

Revised on 02/11/2016

**Trade name: MS2 LF ALL SERIES**

(Contd. of page 4)

- **Solvent content:**
- Organic solvents:** 0.0 %
- **Other information** No further relevant information available.

### 10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritating effects on skin and mucous
- **on the eye:** No irritating effects.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

(Contd. on page 6)

USA

**Safety Data Sheet**  
acc. to OSHA HCS

Revised on 02/11/2016

**Trade name: MS2 LF ALL SERIES**

(Contd. of page 5)

- **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
- **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

· <b>UN-Number</b>	The good are not regulated for transport by IATA
· <b>UN proper shipping name</b>	The good are not regulated for transport by IATA
· <b>Transport hazard class(es)</b>	The good are not regulated for transport by IATA
· <b>Packing group</b>	The good are not regulated for transport by IATA
· <b>Environmental hazards:</b>	
· <b>Marine pollutant:</b>	No
· <b>Special precautions for user</b>	Not applicable.
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

- **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

- **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

- **TSCA (Toxic Substances Control Act):**

None of the ingredients is listed.

- **Proposition 65**

- **Chemicals known to cause cancer:**

None of the ingredients is listed.

(Contd. on page 7)

**Safety Data Sheet**  
acc. to OSHA HCS

Revised on 02/11/2016

**Trade name: MS2 LF ALL SERIES**

(Contd. of page 6)

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

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.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms** Void

· **Signal word** Warning

· **Hazard statements**

Causes eye irritation.

· **Precautionary statements**

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

Wash thoroughly after handling.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other

· **Department issuing MSDS:** Product safety department

· **Contact:** Compliance Department

· **Abbreviations and acronyms:**

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

(Contd. on page 8)

USA

**Safety Data Sheet**  
acc. to OSHA HCS

Revised on 02/11/2016

**Trade name: MS2 LF ALL SERIES**

(Contd. of page 7)

***. \* Data compared to the previous version altered.***

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