MATERIAL SAFETY DATA SHEET

MSDS Number: 1602E

Section 1  PRODUCT AND COMPANY IDENTIFICATION

Trade Name: OATEY LEADED WIRE SOLDER
        OATEY LEADED ACID CORE WIRE SOLDER
        OATEY LEADED ROSIN CORE WIRE SOLDER

Product Nos.: 40/60 - 21018, 21021 40/60 AC - 29032, 50193, 21115, 53011, 53183, 53015, 53192, 50429, 53196, 48301, 48305, 48316 40/60 RC - 29033, 21212, 53012, 53184, 53016, 53193, 48302, 48306 50/50 - 20015, 20019, 50182, 50192, 50490, 53010, 53014, 53191, 48300, 48304, 48315 50/50 AC 20116 50/50 RC - 21305, 20307 60/40 RC - 50194, 53023, 50678, 48310, 48317

Product Use: General Purpose Solder

Formula: See Section 3

Synonyms: Leaded Solder

Firm Name & Address: Oatey Company 4700 West 160th Street, Cleveland, Ohio 44135

Firm Phone No: (216) 267-7100

Emergency No.: For Emergency First Aid call 1-877-740-5015. For chemical transportation emergencies ONLY, call Chemtrec at 1-800-424-9300. Outside the U.S. 1-703-527-3887.

Prepared by: Technical Department

Preparation Date: 04/07/10

Section 2  HAZARDS IDENTIFICATION

Emergency Overview: Silver-gray wire metal. The fumes may be hazardous during soldering operations. Fumes can cause eye irritation and may cause headache and respiratory system irritation. Chronic inhalation of heated lead fumes causes brain, liver, and kidney damage. Lead is a reproductive toxin and a possible cancer hazard. Ingestion of metal alloys may be harmful.

OSHA Hazard Classification: Not hazardous as is. In use, irritant and organ effects.

Section 3  COMPOSITION/INFORMATION ON INGREDIENTS

For 40/60, 50/50 solid wire

<table>
<thead>
<tr>
<th>INGREDIENTS</th>
<th>%wt/wt</th>
<th>CAS NUMBER</th>
<th>ACGIH TLV TWA</th>
<th>OSHA PEL TWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tin</td>
<td>30 – 60%</td>
<td>7440-31-5</td>
<td>2 mg/m3</td>
<td>2 mg/m3</td>
</tr>
<tr>
<td>Lead</td>
<td>30 – 60%</td>
<td>7440-92-1</td>
<td>0.05 mg/m3</td>
<td>0.05 mg/m3</td>
</tr>
</tbody>
</table>

For 40/60, 50/50 acid core wire

<table>
<thead>
<tr>
<th>INGREDIENTS</th>
<th>%wt/wt</th>
<th>CAS NUMBER</th>
<th>ACGIH TLV TWA</th>
<th>OSHA PEL TWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tin</td>
<td>30 – 60%</td>
<td>7440-31-5</td>
<td>2 mg/m3</td>
<td>2 mg/m3</td>
</tr>
<tr>
<td>Lead</td>
<td>30 – 60%</td>
<td>7440-92-1</td>
<td>0.05 mg/m3</td>
<td>0.05 mg/m3</td>
</tr>
<tr>
<td>Acid Flux</td>
<td>0.1 – 1%</td>
<td>Unknown</td>
<td>None Established</td>
<td>None Established</td>
</tr>
</tbody>
</table>

For 40/60, 60/40 rosin core wire

<table>
<thead>
<tr>
<th>INGREDIENTS</th>
<th>%wt/wt</th>
<th>CAS NUMBER</th>
<th>ACGIH TLV TWA</th>
<th>OSHA PEL TWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tin</td>
<td>30 – 60%</td>
<td>7440-31-5</td>
<td>2 mg/m3</td>
<td>2 mg/m3</td>
</tr>
<tr>
<td>Lead</td>
<td>30 – 60%</td>
<td>7440-92-1</td>
<td>0.05 mg/m3</td>
<td>0.05 mg/m3</td>
</tr>
<tr>
<td>Rosin Flux</td>
<td>0.1 – 1%</td>
<td>Unknown</td>
<td>None Established</td>
<td>None Established</td>
</tr>
</tbody>
</table>

Section 4  FIRST AID MEASURES
Skin: If irritation arises, wash thoroughly with soap and water. Seek medical attention if irritation persists.

Eyes: If material gets into eyes, immediately flush eyes with water while holding eyelids open until material is removed. If irritation persists, seek medical attention.

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Keep victim quiet and warm. Call a poison control center or physician immediately.

Ingestion: DO NOT INDUCE VOMITING. Ingestion is not a likely route of entry. Never give anything by mouth to a person who is unconscious or drowsy. Get medical attention by calling a Poison Control Center, or hospital emergency room.

Section 5 FIRE FIGHTING MEASURES
Flashpoint / Method: Not applicable
Flammability: LEL = Not applicable, UEL = Not applicable
Extinguishing Media:
Special Fire Fighting Procedure: Not applicable
Unusual Fire And Explosion Hazards:
Hazardous Decomposition Products: Material will not decompose under normal conditions. If overheated, oxides of tin and lead may result.

Section 6 ACCIDENTAL RELEASE MEASURES
Spill or Leak Procedures: Collect solid and place in properly labeled containers for recycle or disposal.

Section 7 HANDLING AND STORAGE
Handling: Avoid inhalation of fumes, vapors or dust. Keep away from children. Wash thoroughly after handling before eating, drinking, or smoking.
Storage: Store in a cool, dry place away from heat or open flame.
Other: None

Section 8 EXPOSURE CONTROLS/PERSONAL PROTECTION
Ventilation: Good general ventilation (equivalent to outdoors) should be adequate for normal use. For operations where the TLV may be exceeded, mechanical ventilation such as local exhaust may be needed to maintain exposure levels below applicable limits.

Respiratory Protection: For operations where the TLV may be exceeded, a NIOSH approved organic vapor respirator or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration, select in accordance with 29 CFR 1910.134 and good industrial hygiene practice.

Skin Protection: Wear gloves and long sleeves to avoid direct contact with skin.
Eye Protection: Safety glasses with side shields or safety goggles.
Other: Eye wash and safety shower should be available.

Section 9 PHYSICAL AND CHEMICAL PROPERTIES
Boiling Point: Not determined
Melting Point:
50/50 - 361 to 421 Degrees F (183 to 216 Degrees C)
40/60 - 361 to 460 Degrees F (183 to 238 Degrees C)
60/40 - 361 to 375 Degrees F (183 to 191 Degrees C)
Vapor Pressure: Not determined
Vapor Density: (Air = 1) Greater than 1
Volatile Components: None
Solubility In Water: Negligible
pH: Not applicable
Specific Gravity: 9 to 11.5
Evaporation Rate: Not applicable
Appearance: Silver-gray wire metal
Odor: None
Will Dissolve In: Not applicable
Material Is: Solid

Section 10 STABILITY AND REACTIVITY
Stability: Stable.
Conditions To Avoid: Do not heat over 480 degrees F (250 degrees C).
Hazardous Decomposition Products: If overheated, oxides of tin and lead.
Incompatibility/ Materials To Avoid: Strong acids and strong oxidizing agents.
Polymerization: Will not occur.

Section 11 TOXICOLOGICAL INFORMATION
Inhalation: Fumes from soldering operations may be irritating to the respiratory system. Prolonged exposure to fumes may cause stannosis, a mild benign pneumoconiosis. Repeated inhalation of fumes may cause occupational asthma. Symptoms may be delayed.
Skin: Fumes may cause irritation.
Eye: Fumes may cause irritation.
Ingestion: Ingestion may cause abdominal pain, nausea, vomiting, diarrhea, gastrointestinitis, or internal cuts. Long term chronic ingestion may damage the liver, kidneys, nervous system and gastrointestinal system.
Toxicity Data: No data available.
Sensitization: None of the components are known to cause sensitization.
Carcinogenicity: Lead is listed as an IARC Group 2B carcinogen (possibly carcinogenic to humans). This classification is based primarily on the carcinogenicity of certain soluble lead salts in lab animals. Neither lead nor its insoluble salts appear to be carcinogenic to humans or lab animals. ACGIH has classified lead as an A3 carcinogen, Confirmed Animal Carcinogen with Unknown Relevance to Humans.
Mutagenicity: None of the components have been found to be mutagenic.
Reproductive Toxicity: Lead causes reproductive harm in males and females. It exhibits embryotoxicity in animals.
Medical Conditions Aggravated By Exposure: Persons with pre-existing skin, lung, kidney or liver disorders may be at increased risk from exposure to the fumes of this product.

Section 12 ECOLOGICAL INFORMATION
No data available. Keep out of waterways.

Section 13 DISPOSAL CONSIDERATIONS
Waste Disposal: Dispose of in accordance with federal, state, and local regulations. It is the responsibility of the end-user to determine at the time of disposal of the product.
RCRA Hazardous Waste Number: None
**Section 14 TRANSPORT INFORMATION**

DOT

UN/NA Number: None
Proper Shipping Name: Not regulated unless containing more than 10 lbs. Lead, then: Environmentally Hazardous Substance, Solid, n.o.s. (contains lead)
Hazard Class: Class 9 / PG III
Packing Group: UN3077
Hazard Labels: 9 - Miscellaneous

IMDG
UN Number: None
Proper Shipping Name: Not regulated
Hazard Class: None
Packing Group: None
Label: None

2008 North American Emergency Response Guidebook Number: 171

**Section 15 REGULATORY INFORMATION**

Hazard Category for Section 311/312: Acute and chronic health hazards.

Section 302 Extremely Hazardous Substances (TPQ): This product does not contain chemicals regulated under SARA Section 302.

Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements:

<table>
<thead>
<tr>
<th>Chemical</th>
<th>CAS #</th>
<th>% wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>7439-92-1</td>
<td>30 - 60%</td>
</tr>
</tbody>
</table>

CERCLA 103 Reportable Quantity: This product contains the following chemicals subject to CERCLA Reporting requirements:

<table>
<thead>
<tr>
<th>Chemical</th>
<th>RQ, lbs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>10</td>
</tr>
</tbody>
</table>

California Proposition 65: Lead is listed by the state of California as known to cause cancer and birth defects, or other reproductive harm. If this product is further manufactured, processed or repackaged, notification must be clearly communicated for occupational exposure through MSDS’s and labels and for consumers by a conspicuous label or in-store display.

TSCA Inventory Canadian WHIMS Classification: All of the components of this product are listed on the TSCA inventory. D2A - Materials Causing Other Toxic Effects - Very Toxic This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

**Section 16 OTHER INFORMATION**

NFPA and HMIS:
NFPA Hazard Signal: Health: 1 Flammability: 0 Reactivity: 0 Special: None
HMIS Hazard Signal: Health: 1 Flammability: 0 Reactivity: 0 PPE: B
Disclaimer:
The information herein has been compiled from sources believed to be reliable, up-to-date, and is accurate to the best of our knowledge. However, we cannot give any guarantees regarding information from other sources, and expressly do not make warranties, nor assume any liability for its use.

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