



SAFETY DATA SHEET

1. Identification

Product identifier **Leaded Solder with Rosin Core**

Other means of identification

SDS number WC008

Product code Varies

Recommended use Solder.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer/Supplier Worthington Cylinder Corporation

Address 200 Old Wilson Bridge Road

Columbus, OH 43085

United States

Email: cylinders@worthingtonindustries.com

Telephone Number: 866-928-2657

CHEMTREC - 24 HOURS:

Within US and Canada 800-424-9300

Outside US and Canada +1 703-741-5970 (collect calls accepted)

2. Hazard(s) identification

Physical hazards Not classified.

Category 2

Chemical name	CAS number	%
Lead	7439-92-1	30-70
Tin	7440-31-5	30-70
Rosin, hydrogenated	65997-06-0	1-4

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation

Immediately remove from further exposure. Get immediate medical assistance. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. Give supplemental oxygen, if available. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

Skin contact

Remove contaminated clothes and rinse skin thoroughly with water for at least 15 minutes. If skin rash or an allergic skin reaction develops, get medical attention.

Eye contact

Rinse immediately with plenty of water for at least 15 minutes. Remove any contact lenses. Get medical attention if irritation develops or persists.

Ingestion

Immediately rinse mouth and drink a cupful of water. Never give anything by mouth to a victim who is unconscious or is having convulsions. Only induce vomiting at the instruction of medical personnel. Get medical attention immediately.

Most important symptoms/effects, acute and delayed

Dust and fumes may irritate eyes, skin and upper respiratory tract. Contact with molten material may cause thermal burns.

Treat symptomatically. Exposure may aggravate pre-existing lungs, diseases of the blood and

7. Handling and storage

Precautions for safe handling

Wear appropriate personal protective equipment (See Section 8). Keep formation of airborne dusts to a minimum. Provide appropriate exhaust ventilation at places where dust is formed. Avoid inhalation of dust and fumes. Avoid contact with skin and eyes. Do not get this material on clothing. Do not eat, drink or smoke when using the product. Wash thoroughly after handling. Avoid release to the environment. Follow special national provisions related to work with lead and its compounds. Pregnant women should not work with the product, if there is the least risk of lead exposure.

Any surface that comes in contact with molten metal must be preheated or specially coated and rust free. Inadvertent contaminants to product such as moisture, ice, snow, grease, or oil can cause an explosion when charged to a molten metal bath or metal furnace (preheating metal will remove moisture from product).

Conditions for safe storage, including any incompatibilities

Store in tightly closed original container in a dry, cool and well-ventilated place. Store in a closed container away from incompatible materials. Keep out of reach of children. Keep away from food, drink and animal feedingstuffs.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Components	Type	Value
Lead (CAS 7439-92-1)	TWA	0.05 mg/m ³

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Tin (CAS 7440-31-5)	PEL	2 mg/m ³

US. ACGIH Threshold Limit Values

Components	Type	Value
Lead (CAS 7439-92-1)	TWA	0.05 mg/m ³
Tin (CAS 7440-31-5)	TWA	2 mg/m ³

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Lead (CAS 7439-92-1)	TWA	0.05 mg/m ³
Tin (CAS 7440-31-5)	TWA	2 mg/m ³

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Lead (CAS 7439-92-1)	300 µg/l	Lead	Blood	*

* - For sampling details, please see the source document.

Exposure guidelines

No exposure standards allocated.

Appropriate engineering controls

Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of dust. Keep melting/soldering temperatures as low as possible to minimize the generation of fume. Shower, hand and eye washing facilities near the workplace are recommended.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles). Wear a face shield when working with molten material.

Skin protection

Hand protection

Wear protective gloves (i.e. latex, nitrile, neoprene).

Other

Chemical resistant clothing is recommended.

Respiratory protection

Use a respirator when local exhaust or ventilation is not adequate to keep exposures below the OEL. In a confined space a supplied respirator may be required. Selection and use of respiratory protective equipment should be in accordance with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.

Thermal hazards

Heat resistant/insulated gloves and clothing are recommended when working with molten material.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	Silver-gray metal in wire form with rosin core.
Physical state	Solid.
Form	Wire.
Color	Silver to gray.
Odor	Odorless.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	361.4 - 437 °F (183 - 225 °C) Depending on composition
Initial boiling point and boiling range	Not Available
Flash point	Not applicable.
Evaporation rate	Not available.
Flammability (solid, gas)	Non flammable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	8 - 11 Depending on composition
Solubility(ies)	
Solubility (water)	Not soluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not available.
Viscosity	Not applicable.
Other information	
Flammability	Not flammable.

10. Stability and reactivity

Reactivity	The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Contact with incompatible materials. Avoid molten metal contact with water.
Incompatible materials	Strong acids. Strong oxidizing agents. Reducing agents.
Hazardous decomposition products	Toxic metal oxides are emitted when heated above the melting point. Lead oxide fumes may be formed at elevated temperatures.

11. Toxicological information**Information on likely routes of exposure**

Inhalation	Elevated temperatures or mechanical action may form dust and fumes which may be irritating to the mucous membranes and respiratory tract.
Skin contact	Dust may irritate skin.
Eye contact	Elevated temperatures or mechanical action may form dust and fumes which may be irritating to the eye.
Ingestion	May cause discomfort if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Elevated temperatures or mechanical action may form dust and fumes which may be irritating to the eye, mucous membranes and respiratory tract. Contact with molten material may cause thermal burns.

Information on toxicological effects

Acute toxicity

High concentrations of freshly formed fumes/dusts of metal oxides can produce symptoms of metal fume fever. When heated, the vapors/fumes given off may cause respiratory tract irritation. Overexposure to Lead may lead to central nervous system disorders, characterized by drowsiness, seizures, coma and death. It should be recognized that exposures of this magnitude in an industrial setting are extremely unlikely. so an industl

Waste from residues / unused products

Dispose of in accordance with local regulations. Scrapped material should be sent for refining to recover precious metal content. Solid metal and alloys in the form of particles may be reactive. Its hazardous characteristics, including fire and explosion, should be determined prior to disposal.

Contaminated packaging

Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Not applicable.

US. New Jersey Worker and Community Right-to-Know Act

Lead (CAS 7439-92-1)

Tin (CAS 7440-31-5)

US. Pennsylvania Worker and Community Right-to-Know Law

Lead (CAS 7439-92-1)

Tin (CAS 7440-31-5)

US. Rhode Island RTK

Lead (CAS 7439-92-1)

US. California Proposition 65**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

Lead (CAS 7439-92-1)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 30-June-2015

Revision date -

Version # 01

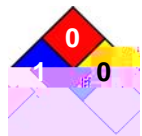
Further information See U.S. OSHA Lead Standard, 29 CFR 1910.1025 for specific guidance, medical evaluation requirements and other information related to the handling of this product.

HMIS® is a registered trade and service mark of the NPCA.
A HMIS® Health rating including an * indicates a chronic hazard.

HMIS® ratings

Health: 1*
Flammability: 0
Physical hazard: 0

NFPA ratings



References

ACGIH
EPA: AQUIRE database
NLM: Hazardous Substances Data Base
US. IARC Monographs on Occupational Exposures to Chemical Agents
HSDB® - Hazardous Substances Data Bank
IARC Monographs. Overall Evaluation of Carcinogenicity
National Toxicology Program (NTP) Report on Carcinogens
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices

Disclaimer

All information in this Material Safety Data Sheet is believed to be accurate and reliable. However, no guarantee or warranty of any kind is made with regard to the accuracy of information or the suitability of the recommendations contained herein. It is the user's responsibility to assess the safety and toxicity of this product under their own conditions of use and to comply with all applicable laws and regulations.