



MATERIAL SAFETY DATA SHEET

MSDS-0182
Platinum Wire
REV. DATE: 7/16/93

SECTION 1 - IDENTIFICATION

PRODUCT (TRADE) NAME: Platinum Wire

CHEMICAL FAMILY: Platinum (metal, sponge, powder, granules)

SUPPLIER: OMEGA ENGINEERING INC.
PO BOX 4047
STAMFORD, CT 06907

DATE PREPARED: 4/89
SUPERSEDES:

TELEPHONE: (203) 359-1660

SECTION 2 - HAZARDOUS INGREDIENTS

Material/Component	%	TLV (Units):
Not Applicable		

SECTION 3 - PHYSICAL DATA

Chemical Family:	Platinum Group Metal
Chemical Formula:	Pt
CAS Registry Number:	7440-06-4
Boiling Point:	3827°C
Melting Point:	1772°C
Vapor Pressure (mm Hg):	Not Applicable
Vapor Density (Air = 1):	Not Applicable
Specific Gravity (H₂O = 1):	21.45 @ 20°C for the massive metal
Solubility In Water:	Insoluble (Soluble in aqua regia, fused alkalis)
Evaporation Rate:	Not Applicable
Appearance and Odor:	Silver-gray lustrous, malleable and ductile metal

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

Flash Point:	Not Applicable
Flammable Limits:	Not known
LEL:	Not Applicable
UEL:	Not Applicable
Extinguishing Media:	Water, dry chemical or carbon dioxide

Special Fire Fighting Procedures: Fire fighters should wear NIOSH/MSHA approved pressure demand self-contained breathing apparatus.

Unusual Fire and Explosion Hazards: The massive metal is not flammable but powders may be subject to self-heating if hydrogen or carbon monoxide are occluded. Finely divided platinum dust may ignite if contacted with flammable or combustible liquids or vapors.



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SECTION 5 - HEALTH HAZARD DATA

Effects of Overexposure: Platinum metal is very low in oral toxicity. Inhalation of dust and fumes may cause irritation of the respiratory system. Dust and fumes may cause eye irritation but are not likely to cause skin irritation or be absorbed through the skin.

The metal is not likely to be allergenic, but if ionized platinum halogen complexes are prepared from it, they are likely to be allergenic. Repeated inhalation exposure to low levels of these compounds or occasional exposure to higher levels may lead to sensitization. On further exposure, a sensitized person may develop clinical features such as rhinitis, conjunctivitis, asthma, and urticaria. This material is not listed by NTP, IARC, or OSHA as a potential carcinogen.

Emergency and First Aid Procedures:

Inhalation: Remove from exposure, provide fresh air. If breathing has stopped, perform artificial respiration. If breathing is difficult, provide oxygen. Get medical attention.

Skin: Flush affected area with plenty of water. If irritation persists, get medical attention.

Eyes: Flush eyes with plenty of water. If irritation persists, get medical attention.

Ingestion: Get medical attention.

SECTION 6 - REACTIVITY DATA

Stability:	Stable
Conditions to Avoid:	Not Applicable
Incompatibility (Materials to Avoid):	Combustible and flammable liquids.
Hazardous Decomposition Products:	Not Applicable
Hazardous Polymerization:	Will Not Occur
Conditions to Avoid:	Not Applicable

SECTION 7 - SPILL OR LEAK PROCEDURES

Steps to be Taken in Case Material is Released or Spilled: While wearing protective equipment as described in Section 8, collect the material in a plastic-lined drum for metal recovery.

Waste Disposal Method: Return accumulated residues, wipes, mops, sand and vermiculite to refinery for recovery of precious metal. Store material in appropriate containers which have chemical identification and hazard warning information. Follow local, State and Federal regulations for packaging.



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SECTION 8 - SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type): If there is a possibility that the TLVs or PELs may be exceeded, a NIOSH/MSHA approved full-face piece respirator with a high-efficiency particulate filter cartridge is the recommended minimum level of respiratory protection. To ensure proper respiratory selection and use, refer to the requirements of 29CFR 1910.134 and the latest section of ANSI Z 88.2.

Local Exhaust: Local exhaust ventilation at the generation points for dust or fume, sufficient to remove the material from the breathing zone. The exhaust air should be vented through suitable collectors or scrubbers to control emissions to the atmosphere.

Mechanical (General): Not Applicable
Special: None
Other: None
Protective Gloves: Impervious gloves

Eye Protective Equipment: AS a minimum, wear safety glasses. Where there is a possibility that an employee's eyes may be exposed to the product, an eye wash fountain should be provided within the immediate work area for emergency use.

Other Protective Equipment: Wear disposable protective clothing to facilitate recovery of precious metal where risk of exposure is high such as in a spill situation.

SECTION 9 - SPECIAL PRECAUTIONS

Special Handling and Storage Recommendations: Store in a cool, dry place away from incompatible materials identified in the reactivity section.

Other Recommendations and Precautions: Follow good industrial hygiene and housekeeping practices. Do not eat, drink, or smoke while working with this material. Wash hands before eating, drinking, smoking, or applying cosmetics and at the end of the work shift. Do not breathe dust or fumes and avoid contact with eyes, skin, and clothing.

SECTION 10 - REFERENCES

- Registry of Toxic Effects of Chemical Substances, Chemical Information System (CIS), Chemical Information Systems Inc., Baltimore, MD 1987.
- Patty, F.A.: Industrial Hygiene and Toxicology, 3rd Revised Edition. Interscience Publishers, Inc., New York 1978.
- Windholz, M. (Editor): The Merck Index, Merck and Co. Inc., Rahway, N.J. 1983.
- Bailer, H.G., Sigel, K. and Sigel, A.: Handbook on Toxicity of Inorganic Compounds, Marcel Dekker, Inc. 1988.
- IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans, Chemical Industrial Processes and Industries Associated with Cancer in Humans, IARC Monographs, Volumes 1-29, supplement 4, International Agency for Research on Cancer, Lyon, France 1982.
- Fourth Annual Report on Carcinogens, Summary, U.S. Dept. of Health and Human Services, National Toxicology Program, 85-002 1985.

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SECTION 10 - REFERENCES (CONT'D)

U.S. Department of Labor OSHA: General Industry OSHA Standards (29CFR 1910) OSHA, Washington, D.C.
Sax, IN.I.: Dangerous Properties of Industrial Materials, 6th Edition, VanNostrand Reinhold Co., New York 1984.
"Documentation of the Threshold Limit Values," 5th Edition, American Conference of Governmental Industrial Hygienists, Cincinnati, OH, copyright 1986.
Bransford, J.S., Occupational Health Services Inc., Material Safety Data Sheet for Platinum No. OHS 1920, Secaucus, N.J. 07094, December 11, 1985.

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