Wieland Techni-Cast
11220 South Garfield Avenue
South Gate, California 90280
800.956.6500 | 562.923.4585
www.wieland.com

SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Nickel Alloys
Company Name: Wieland Techni-Cast
11220 South Garfield Avenue
South Gate, CA 90280
Phone Number: (562) 923-4585
Website Address: www.techni-cast.com
Emergency Contact: 800-923-4585
Intended Use: Manufacturing
Synonyms: Ni
Trade Names: Monel, Hasteloy, Copper-Nickel, Inconel, Rene, Superalloys

2. HAZARDOUS IDENTIFICATION

General Hazard Statement: Solid metallic products are generally classified as "articles" and do not constitute a hazardous material in solid form under the definitions of OSHA Hazard Communications Standard (29 CFR 1910.1200). However some hazardous elements contained in these products can be emitted under certain processing conditions such as but not limited to: burning, melting, cutting, sawing, brazing, grinding, machining, milling, and welding. Products in the solid state present no fire or explosion hazard. Small chips, fines and dust may ignite readily, though.

California Proposition 65: ⚠ **WARNING:** CANCER AND REPRODUCTIVE HARM – P65Warnings.ca.gov

3. COMPOSITION/INFORMATION ON INGREDIENTS

MATERIAL	FORMULA	CAS NO	PERCENT BY WEIGHT
*Nickel	Ni	7440-020-0	Base
*Copper	Cu	7440-50-8	0 – 35
Iron	Fe	15438-31-0	0 – 30
**Aluminum	Al	7429-90-5	0 – 5
*Cobalt	Co	7440-48-4	0 - 30
Manganese	Mn	7439-96-5	0 – 15
Silicon	Si	740-21-3	0 – 5
Chromium	Cr	7440-47-3	0 – 30
Tungsten	W	7440-33-7	0 - 20
Niobium	Nb	7440-03-1	0 – 20
Carbon	C	7440-44-0	0 – 8
Molybdenum	Mo	7439-98-7	0 – 20
Titanium	Ti	7440-32-6	0 – 10
Vanadium	V	7440-62-2	0 – 10
Magnesium	Mg	7439-95-4	0 – 1
Tin	Sn	7440-31-5	< 1.0
Palladium	Pb	7440-05-3	< 1.0

Zinc	Zn	7440-66-6	< 1.0
Phosphorus	P	7723-14-0	< 1.0
Sulfur	S	7704-34-9	< 1.0
Boron	B	7440-42-8	< 1.0
Arsenic	As	7440-38-2	< 1.0
Tantalum	Ta	7440-25-7	< 1.0

Note: The elements identified by an * and those elements capable of generating highly toxic fumes or dusts (identified by a **) are classified as toxic by EPA in 40 CFR 372.65 and subject to reporting requirements of SARA Title III Section 313 and 40 CFR 372.

4. FIRST AID MEASURES

After eye contact:
Flush eyes with water to remove particles. If discomfort continues, consult a physician.

After skin contact:
Wash with soap and water promptly. If skin irritation or rash occurs, consult a physician.

After inhalation:
In case of discomfort, remove to ventilated area. If discomfort persists, consult physician.

After swallowing:
Not an expected route of exposure. Immediate medical attention is not required. Consult a physician if necessary.

5. FIRE FIGHTING MEASURES

Flash Point *(method used)*:
Nonflammable.

Extinguishing Media:
Use a Class D dry-powder extinguisher. Do not use water or halogenated extinguishing media.

Special Fire Fighting Procedures:
As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.

Unusual Fire and Explosion Hazards:
Not a fire hazard unless in particle form (small chips, fine turnings, dusts). Avoid generating dust in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard, especially in a confined atmosphere. Avoid sparks and prevent electrostatic charges from accumulating. NEVER PUT WATER ON MOLTEN METAL – THIS WILL CAUSE AN EXPLOSION

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6. ACCIDENTAL RELEASE MEASURES

Solid Form (castings):
No special precautions are necessary for spills of large product fragments. Wear protective gloves when handling to prevent metal cuts.

Dust Form:
If large quantities of dust are spilled, remove by vacuuming or wet sweeping to prevent heavy concentrations of airborne dust. Cleanup personnel should wear respirators and protective clothing.

7. HANDLING AND STORAGE

Handling:
Minimize dust generation and accumulation. Dry powders can build static electricity changes when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.

Storage:
Keep in a dry and cool area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Permissible Exposure Limits (PELs):
0.5 mg/m³

Threshold Limit Value (TLV) for Nickel:
1.5 mg/m³

Engineering Controls:
Where feasible, enclose processes to prevent dust dispersion into the work area. Provide local exhaust when possible, and general ventilation as necessary, to keep airborne concertation's below exposure limits and as low as possible.

Personal Protective Equipment
Eyes/ Face:
Wear safety glasses with side shields and /or goggles as necessary to prevent dust from entering eyes. Where face shields when welding or burning.

Skin & Body:
Use appropriate body protection for the task.

Respiratory:
Wear NIOSH approved dust/mist/fume respirator when welding or burning this metal.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:
Nickel is a silvery-white metal. It has a shiny surface common to most metals and is both ductile and malleable.

Odor:
Odorless

Melting Point:
1,452°C

Specific Gravity:
8800 kg/m³

Other physical data such as vapor density, evaporation rate, and vapor pressure are not applicable to solid metals. The dust form the metals are not soluble in water and there are no volatiles in the mixture.

10. STABILITY AND REACTIVITY

Stability:
Stable under normal conditions of use, storage and transport.

Hazardous Reaction Potential:
Will not occur.

Reactivity/ Incompatibility:
When molten: Protect from water. Molten metal may explode on contact with water, particularly if water is entrapped. Strong acids, strong bases, strong oxidizers, alkalis and metal oxides.

Hazardous Polymerization:
Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Potential Health Effects:

Inhalation:
Products as shipped do not present an inhalation hazard; however subsequent operations may create dust or fumes which could be inhaled. Inhalation of dust in high concentration may cause irritation of respiratory systems.

Skin Contact:
Contact with dust can cause irritation or drying of the skin. Contact with oils from processing may cause irritation. Repeated or prolonged skin contact may cause allergic reactions to susceptible people.

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Eyes Contact:
Not expected to be a hazard unless dust particles are present. Exposure to dust may lead to mechanical irritation.

Ingestion:
Not applicable

Carcinogenic:
By NTP, IARC, OSHA – Fumes, dust, and mist from this material may be carcinogenic if inhaled over long periods of time.

12. ECOLOGICAL INFORMATION

Biodegradability:
Not relevant for metals.

13. DISPOSAL CONSIDERATIONS

Reuse or recycle material wherever possible. Dispose of waste in accordance with federal, state, or local regulations.

14. TRANSPORT INFORMATION

No special DOT regulations pertaining to this material.

15. REGULATORY INFORMATION

SARA:
Some components of this product are classified as toxic by the EPA in 40 CFR 372.65 and subject to reporting requirements of SARA Title III § 313 and CFR 372.45.

16. OTHER INFORMATION

NOTICE: Information included in this SDS was obtained from sources which we believe to be reliable. However, the information is provided without any representation or warranty, expressed or implied regarding its accuracy or correctness. In addition, this information may be used in a manner beyond our knowledge or control. The conditions or methods of handling, storage, use and/ or disposal of this product are beyond the control and knowledge of the manufacturer. Therefore, the manufacturer cannot assume responsibility for adverse events which may occur in the use and/ or misuse of this product and expressly disclaims liability for loss, damage and/ or expense arising out of or in any way connected with the handling, storage, use and/ or disposal of this product. The information is therefore provided for advice purposes only, without any representation or warranty, either express or implied.