



International Specialty Alloys, Inc  
Northgate Industrial Park  
New Castle, PA 16105  
Phone: 724-657-1566 Fax: 724-657-5209  
web: specialtyalloys.com

## MATERIAL SAFETY DATA SHEET

### Section #1 - Product Identification

<b>MSDS Number: 006</b>	<b>Issue Date:</b> 02/24/2003 <b>Revision Date:</b>
<b>Trade Name:</b> <b>Ni-Zr</b>	<b>Synonyms:</b> 30Ni-70Zr Zirconium-Nickel Zirconium Master Alloy
<b>Chemical Family:</b> Metal	

### Section #2 - Product Composition

Element	Concentration	CAS Number	RTECS Number	OEL's TLV (mg/m <sup>3</sup> ) as TWA
Nickel	10-50%			1
Zirconium	50-90%	7440-67-7	ZH7070000	5

### Section #3 - Physical Properties

<b>Appearance:</b> Odorless, silver gray solid	<b>Relative Density (water):</b> ~6.8
<b>Melting Point:</b> ~1700 degrees C	<b>Solubility (water):</b> none

### Section #4 - Fire, Explosion, and Reactivity Data

1. This material is not flammable in the form in which it is supplied however fine dust is flammable.
2. This material is stable, however, it should not be stored with strong acids. Contact with such materials may cause release of hazardous compounds.

### Section #5 - Health Hazard Information

Specific information for this alloy does not exist, so information is included for each major constituent.

Nickel

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	<b>Eyes</b>	<b>Skin</b>	<b>Inhalation</b>	<b>Ingestion</b>
<b>Symptoms</b>	None listed	None listed	None listed	None listed
<b>Prevention</b>	Face shield or goggles in combination with respiratory protection	Protective gloves and clothing	Local exhaust equipment or approved respirator	Do not eat, drink or smoke during work.
<b>First Aid</b>	First, Rinse with plenty of water for several minutes (remove contact lenses, if possible), then take to a doctor	Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer to doctor for medical attention	Fresh air, rest	Rinse mouth, seek medical attention

### Zirconium

	<b>Eyes</b>	<b>Skin</b>	<b>Inhalation</b>	<b>Ingestion</b>
<b>Symptoms</b>	None listed	Redness, itching	irritation of mucus membranes, lung granuloma	None listed
<b>Prevention</b>	Face shield or goggles in combination with respiratory protection	Protective gloves and clothing	Local exhaust equipment or approved respirator	Do not eat, drink or smoke during work.
<b>First Aid</b>	First, Rinse with plenty of water for several minutes (remove contact lenses, if possible), then take to a doctor	Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer to doctor for medical attention	Fresh air, rest	Rinse mouth, seek medical attention

## Section # 6 - Spill, Leak, & Disposal Information

Specific information for this alloy does not exist, so information is included for each major constituent.

### Nickel

Vacuum or otherwise collect spilled material, then remove to a safe place. Use a P2 filter respirator or a supplied air respirator for harmful particles.

### Zirconium

Vacuum or otherwise collect spilled material, then remove to a safe place. Use a P2 filter respirator or a supplied air respirator for harmful particles.

## Section #7 - Special Precautions

The information listed above is given in good faith, but no warranty expressed or implied is made. The information is based upon data believed to be correct when the MSDS was written. ISA accepts no responsibility or liability for any harmful effects which may be caused by purchase, sale, use or exposure to our product.

### References:

International Chemical Safety Cards downloaded from [www.cdc.gov/niosh/ipcs](http://www.cdc.gov/niosh/ipcs)