

KALCO METALS, INCORPORATED

MATERIAL SAFETY DATA SHEET

We believe the following information is accurate. It is offered in good faith but without warranty – express or implied. Since conditions of use are beyond our control, all risks of use are assumed by the user. Nothing herein shall be construed as a recommendation for uses which infringe on valid patents.

SECTION I – GENERAL INFORMATION

<i>Manufacturer</i>	Kalco Metals, Incorporated 40 Council Ave. Wheatland, Pennsylvania 16161	<i>Date Prepared</i>	11/ 11/ 2003
		<i>Emergency Telephone Number</i>	(724) 347-2208
<i>Identity/ Trade Name</i>	Shock-resisting (S) Tool Steel (All Sizes)		

SECTION II – INGREDIENTS / IDENTITY INFORMATION

<i>Material or Component</i>				
<i>BASE METAL</i>	<i>CAS NUMBER</i>	<i>% COMPOSITION BY WEIGHT</i>	<i>OSHA PEL (mg/m³)</i>	<i>ACGIH TLV (mg/m³)</i>
Iron, Fe		88 – 94	10.0	10.0
Carbon, C		0.40 – 0.70	10.0	10.0
Chromium, Cr		0.10 – 3.50	10.0	10.0
Vanadium, V		0.10 – 0.50	5.0	5.0
Molybdenum, Mo		0.10 – 1.90	5.0	5.0

SECTION III – PHYSICAL / CHEMICAL CHARACTERISTICS

<i>Material at Normal Conditions</i>	SOLID	<i>Boiling Pt.</i>	4900 - 5300 F	<i>Melting Pt.</i>	2500 – 2850 F
<i>Specific Gravity</i>	App. 6.0 – 6.5	<i>Solubility in Water</i>	Insoluble	<i>pH</i>	NA
<i>Reactivity in Water</i>	None		<i>Appearance /Odor</i> Metallic appearance; no odor		

SECTION IV – FIRE and EXPLOSION HAZARD DATA

<i>Flash Point</i>	NA	<i>Flammable Limits</i>	NA	<i>Extinguishing Media</i>	Non Flammable; Preferably Dry Powder
<i>Unusual Fire and Explosion Hazards</i> None					

NA = Not Applicable

SECTION V – REACTIVITY DATA

<i>Stable Under Normal Conditions</i>	YES	<i>Conditions to Avoid</i>	NONE
<i>Materials to Avoid</i>	Anhydrous Bromine; Chlorine; Fluorine; Strong Oxidizers & Acids		
<i>Hazardous Decomposition Products</i>	May Release Metal Oxide Fumes By Thermal Decomposition		
<i>Hazardous Polymerization Possible</i>	NO		

SECTION VI – HEALTH HAZARDS DATA

<i>Routes of Entry</i>	Inhalation, Ingestion, Skin, and Eyes if material machined
<i>Acute and Chronic Health Hazards</i>	No Known Chronic or Acute Hazards
<i>Signs and Symptoms of Exposure</i>	Eye – Irritation; Skin – Possible Irritation to Sensitive Skin; Respiratory – Possible Irritation
<i>Emergency and First Aid Procedures</i>	Eye and Skin – Flush with Copious Amounts of Water Respiratory – Remove to Fresh Air; Consult Physician If Necessary

SECTION VII – PRECAUTIONS FOR SAFE HANDLING AND USE

<i>Precautions Taken in Handling and Storage</i>	Material Oxides in Air to Form Rust so Keep Material Covered and Dry; Do Not Mix Wet Material with Molten Metal
<i>Steps to be Taken if Material is Spilled</i>	Normal Cleanup
<i>Waste Disposal Method</i>	According to the Requirements of 40 CFR Subtitle C and other Applicable Federal, State, and Local Regulations

SECTION VIII – CONTROL MEASURES

<i>Respiratory Protection:</i>	Select and Use Respirators According to OSHA Regulations 29 CFR 1910.134
<i>Ventilation Requirements:</i>	Local Exhaust and General Ventilation
<i>Local Exhaust:</i>	Use Local Exhaust During Welding, Cutting, or Milling to Avoid Exposure to Metal Oxide Fumes
<i>Mechanical:</i>	Good General Ventilation During Handling of Solid Material Should be Used to Control Dust Generated
<i>Protective Gloves:</i>	Gloves Recommended During Handling to Prevent Cuts and Abrasions
<i>Eye Protection:</i>	Safety Glasses or Goggles
<i>Other Protective Clothing:</i>	Safety Toe Footwear