EV Technologies, Inc.
DBA Tight Fit® Tools

January, 2016

PRODUCT: Threaded Shank High Speed Steel Cutting Tools

General Comments: We do not consider this product in the form it is sold to constitute a physical or health hazard. Subsequent operations such as heating, cutting or grinding may cause some of the ingredients to change to a form which could affect exposed workers. **EV Technologies, Inc.** does not manufacture or formulate any of the steel or materials used in its products. The information set forth herein has been summarized from MSDS supplied **EV Technologies, Inc.** by its various steel and drill suppliers. No threshold limit values (TLV's) exist for cutting tools. TLV may be applicable to constituent elements.

HAZARDOUS INGREDIENTS:

Component Elements	CAS No.	PEL (mg/mc3	TLV (mg/m 3)	Component Elements	CAS No.	PEL (mg/m 3)	TLV (mg/m 3)
Carbon (C)	1333-86-4	3.5	3.5	*Nickel (Ni)	7440-02-0	1.0	1
*Chromium (Cr)(+3)	7440-47-3	1.0	.05	Silicon (Si)	7440-21-3	5.0	5.0
*Chromium Carbide (+3)	12012-35-0	1.0	0.5	Tantalum (Ta)	7440-25-7	5.0	5
*Cobalt (Co)	7440-48-4	0.1	.1	Titanium (TiO2)	13463-67-7	15.0	5
*Copper (Cu)	7440-50-8	0.1	0.1	Tungsten (W)	7440-33-7	N/A	5
Iron (Fe)(Fume)	1309-37-1	10.0	5.0	Tungsten Carbide (WC)	12070-12-1	N/A	5
*Manganese (Mn)	7439-96-5	5.0	5.0	Vanadium (V)	1314-62-1	0.1	0.5
Molybdenum (Mo)	7439-98-7	15.0	10.0	Vanadium Carbide (VC)	11130-21-5	0.1	0.5

*Identifies substances that are subject o the requirements of S ection 313 of Title III Super fund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

PHYSICAL DATA:

Appearance and Odor:	Various shapes, solid, odorless metal
Boiling Point:	5000° F.
Melting Point:	Approximately 2500°F.
Vapor Density (AIR=1):	N/A
Specific Gravity:	(H 2 0 =1)
Vapor Pressure:	N/A
% Volatiles by Volume:	N/A
Solubility in Water:	Insoluble
How Best Monitored:	Air Sample
Evaporation (Butyl Acetate=1):	N/A

FIRE, EXPLOSION AND REACTIVITY DATA:

Flash Point:	None
Fire Point:	None
Stability:	Chemically Stable
Incompatibility:	Reacts with strong acids to generate hydrogen gas
Hazardous Decomposition Product:	Metallic Oxides
Conditions to Avoid:	Avoid generation of airborne dust

HEALTH HAZARD DATA:

Primary Route of Entry:	Emergency First Aid:
Inhalation:	Remove to fresh air, if condition continues, consult Doctor

Eye Contact:	Flush well with running water to remove particulate, consult Doctor.
Skin Contact:	Brush off excess dust, wash area well with soap and water.
Ingestion:	Seek medical help if large quantities of material have been ingested (ingestion of significant amounts of metal is unlikely)

MATERIAL SAFETY DATA SHEET

EFFECTS OF EXPOSURE:

No toxic effects would be expected from exposure to the solid form of specialty steel. Prolonged, repeated exposure to fumes or dusts generated during subsequent operations involving heating, cutting, grinding or welding may or may not cause adverse health effects associated with the listed component elements in excess of OSHA permissible exposure limits established in 29CFR 1910.1200.

EMERGENCY PHONE NUMBER: 951/520-8549 Contact: Morgan Lloyd, Plant Manager
12164 Severn Way • Riverside, California 92503 • FAX 951/520-8909

POSSIBLE SIGNS AND SYMPTOMS OF EXPOSURE:

Short-Term Exposures: Metallic taste, nausea, tightness of chest, fever, irritation of eyes, nose, throat and skin.

Long-Term Exposures: Some studies would associate one (or more) of the component elements with the potential for neurologic, pulmonary, respiratory, skin or other disease. None of the component elements of these materials have been identified as know or suspected carcinogens by NTP, IARC or OSHA, except chromium and nickel. We believe there are no reliable scientific studies which show that workers using high-speed or carbide cutting tools suffer increased incidence of lung cancer or other disease because of their exposure to the forms of chromium, nickel or other elements in our product. **SPECIAL PROTECTION INFORMATION:**

1. **Ventilation Requirements:** Use general or local exhaust ventilation to keep airborne concentrations of dust and fumes below the TLV. Consult a professional hygienist.
2. **Personal Protection Equipment:** Always consult a professional hygienist.
3. **Respiratory Protection:** If fumes, misting or dust conditions occur, consult a professional hygienist. Provide NIOSH approved respirators.
4. **Eye Protection:** Safety glasses or goggles should always be worn when grinding or cutting. Face shields should be worn when welding or burning.
5. **Gloves:** Gloves and barrier creams may be necessary to prevent skin sensitization and dermatitis.
6. **Other Clothing or Equipment:** As required.

SPILL OR LEAK PROCEDURES:

Solid:	N/A
Dust:	Clean up using methods to avoid dust generation. If airborne dust is generated, used an appropriate NIOSH approved respirator.
Waste Disposal Method:	Solid--Sell as scrap for reuse. Dust, etc.--Follow Federal, State and Local regulations regarding disposal.

INDUSTRY CHEMICAL ANALYSIS DATA (Percent By Weight):

HIGH SPEED STEEL TOOLS

AISI		C	Co	Cr	Cu	Fe	Mn	Mo	Ni	Si	V
		W M-1	<1.0	<1.0	<5.0 -	Bal.	<1.0	<10.0	<1.0	<1.0	<2.0 <3.0
M-2		<1.0	<1.0	<5.0	<1.0	Bal.	<1.0	<6.0	<1.0	<1.0	<3.0 <7.0
M-3	class	1	<2.0	-	<5.0	-	Bal.	<1.0	<7.0	-	<1.0 <3.0
<7.0											
M-3	class	2	<2.0	<1.0	<5.0	<1.0	Bal.	<1.0	<7.0	<1.0	<1.0 <4.0
<7.0											
M-4		<2.0	-	<5.0	-	Bal.	<1.0	<5.0	-	<1.0	<5.0 <7.0
M-7		<2.0	<1.0	<5.0	-	Bal.	<1.0	<10.0	<1.0	<1.0	<3.0 <3.0
M-10		<2.0	<1.0	<5.0	<1.0	Bal.	<1.0	<9.0	<1.0	<1.0	<3.0 <2.0
M-41		<2.0	<6.0	<5.0	-	Bal.	<1.0	<5.0	<2.0	<1.0	<3.0 <7.0
M-42		<2.0	<9.0	<5.0	<1.0	Bal.	<1.0	<10.0	<1.0	<1.0	<2.0 <3.0
M-48		<2.0	<10.0	<4.0	-	Bal.	<1.0	<6.0	-	<1.0	<4.0 <4.0
M-62		<2.0	-	<4.0	-	Bal.	<1.0	<11.0	-	<1.0	<3.0 <3.0
T-15		<2.0	<6.0	<5.0	-	Bal.	<1.0	<1.0	-	<1.0	<6.0 <6.0
A-2		<1.5	-	<6.0	-	Bal.	<1.0	<1.5	-	<1.0	<1.0 -
D-2		<2.0	-	<13.0	-	Bal.	<1.0	<1.0	-	<1.0	<1.0 -
35 Spring		Steel*	<1.0	-	<1.0	-	Bal.	<1.0	-	<3.0	<1.0 - -
TC*		<1.0	-	<1.0	-	Bal.	<1.0	-	<2.0	<1.0	- -

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