

MATERIAL SAFETY DATA SHEET

SECTION I

DATE November 22, 1985

MANUFACTURER'S NAME MARSHALL STEEL CO.		Telephone (312) 447-7420
ADDRESS (NUMBER, STREET, CITY, STATE & ZIP CODE) PO BOX 340 LAGRANGE, IL. 60525		
PRODUCT NAME Tool Steels	CHEMICAL FAMILY Steel	
GRADES Carbon (Water Hardening), Cold Work Die, Cold Work (Air Hardening), High Speed, Hot Work, Mold, Oil Hardening, Shock Resisting, Special Purpose.		

SECTION II - CHEMICAL COMPONENTS

	CAS NUMBER	RANGE %	TLV (UNITS)	OSHA PEL
Iron (limits for iron oxide fume)	1309-37-1	50-98	5 mg/m ³	10 mg/r. ³
Tungsten	7440-33-7	0-19	5 mg/m ³	None Listed
Chromium	7440-47-3	0-14	0.5 mg/m ³	1 mg/m ³
Cobalt	7440-48-4	0-12	0.1 mg/m ³	0.1 mg/m ³
Molybdenum	7439-98-7	0-9	5 mg/m ³	5 mg/m ³
Nickel	7440-02-0	0-5	1 mg/m ³	1 mg/r. ³
Vanadium (limits for dust)	1314-62-1	0-5	.05 mg/m ³	.05 mg/r. ³
			(limits for fume)	.05 mg/m ³
Manganese (limits for dust)	7439-96-5	0-3	5 mg/m ³	5 mg/m ³
			(limits for fume)	1 mg/m ³
Silicon	7440-21-3	0-3	None Listed	None Listed
Carbon	1333-86-4	0-3	3.5 mg/m ³	3.5 mg/m ³

SECTION III - PHYSICAL DATA

BOILING POINT (°F)	N/A	SPECIFIC GRAVITY (H ₂ O = 1)	8
VAPOR PRESSURE (MM HG)	N/A	PERCENT VOLATILE BY VOLUME (%)	N/A
VAPOR DENSITY (AIR = 1)	N/A	EVAPORATION RATE (_____ = 1)	N/A
SOLUBILITY IN WATER	N/A	MELTING POINT	2600-2800F
APPEARANCE & ODOR	Metallic and odorless solid		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED)	N/A	FLAMMABLE LIMITS	N/A	LEL	UEL
EXTINGUISHING MEDIA	N/A				
SPECIAL FIRE FIGHTING PROCEDURES	N/A				
UNUSUAL FIRE EXPLOSION HAZARDS	N/A				