



A Milacron Company

Dear Customer:

Enclosed in the **REVISED** Material Safety Data Sheet for our product:

D-M-E Toggle Lok (Early Ejector Returns)

The products we distribute are not normally hazardous in their natural state. However, steel does contain elements deemed by OSHA to be hazardous when released by manufacturing, such as brazing, burning, grinding, sawing or welding, etc. Failure to control dust and fumes can result in chronic health problems.

We believe the information, supplied by the Manufacturer, on the enclosed MSDS to be accurate; however, D-M-E makes no warranty with respect to the accuracy of the information or the suitability of the recommendations, and assumes no liability for the information so presented.

Should you require additional information, please call or write the Manufacturer listed on the MSDS.

Sincerely yours,

D-M-E Company
Director of Operations
Ken Jasina

Revised: December, 1999

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Bermer Tool & Die, Inc.
 P.O. Box 152, 94 Ashland Ave.
 Southbridge MA 01550

Sold by: D-M-E Company
 29111 Stephenson hwy.
 Madison Heights, Mi. 48071
 313-398-6000

MATERIAL SAFETY DATA SHEET

1. MATERIAL IDENTIFICATION

Manufacturer's Name: Bermer Tool & Die, Inc.
 94 Ashland Ave.
 Southbridge, Ma. 01550

Telephone Number: (617)-764-2521

Material Name: Cold Finished Steel used in TLL15, TLL20D, TLL30, TLL20S, TLSM200, TLSM125, TLTM100, TLCP200, TLCP125, TLCP100.

II. HAZARDOUS INGREDIENTS

	<u>CAS NUMBER</u>	<u>%</u>	<u>OSHA</u> <u>8-hr TWA</u>	<u>ACGIH</u> <u>8-hr TWA</u>
Carbon	1333-86-4	00	3.5 mg/m3 as Carbon Black	3.5 mg/m3 as Carbon Black
Chromium	7440-47-3	00	1 mg/m3	0.5 mg/m3
Copper	7440-50-8	00	Dust=1 mg/m3 Fume=0.1 mg/m3	1 mg/m3 0.2 mg/m3
Manganese	7439-96-5	00	Dust=5 mg/m3 Fume=None	Dust=5 mg/m3 Fume=1mg/m3
Nickel	7440-02-0	00	1mg/m3	1mg/m3
Molybdenum	7439-98-7	00	15mg/m3	10mg/m3
Phosphorus	7723-14-0	00	0.1mg/m3 10mg/m3	0.1mg/m3 5mg/m3
Iron	1309-37-1	00	as oxide fume	as oxide fume
Lead	7439-92-1	00	50mg/m3 C=0.1mg/m3	150mg/m3 0.05mg/m3 TWA
Vanadium	7440-62-2	00	Fume Ceiling	
Sulfur	7704-34-8			

II. PHYSICAL DATA

Boiling Point (C): 3000	Specific Gravity: 7.83
Vapor Pressure (as Hg): NA	% Volatile by Volume: NA
Vapor Density (Aie=1): NA	Evaporation Rate: NA
Solubility in Water: Insoluble	
Appearance and Odor: Grey Solid with no odor	

MATERIAL SAFETY DATA SHEET

IV. FIRE AND EXPLOSION HAZARD DATA

Flash Point: NA
Flammable Limits: LEL=NA
Extinguishing Media: See Below

Method Used: NA
UEL: NA

Special Fire Fighting Procedures: Solid, massive form is not combustible. Fire and explosion hazards are moderate when material is in the form of dust and exposed to heat, flames, chemical reaction, or contact with powerful oxidizers. Use special mixtures of dry chemical or sand. Firefighters should wear self contained breathing apparatus and protective clothing.

V. HEALTH HAZARD DATA

Permissible Exposure Limits and Threshold Limit Values: See Section II

Route(s) of Entry:
Inhalation: Yes
Skin: Yes
Ingestion: Yes

Effects of Overexposure:

Chromium

In some workers, chromium compounds act as allergen and may cause dermatitis and may also produce pulmonary sensitization. Chronic acid and chromates have a direct corrosive effect on the skin and the mucous membranes of the upper respiratory tract. Although rare, there may be the possibility of skin and pulmonary sensitization. Water insoluble chromates have been linked to cancer and are identified as potential human carcinogens.

Manganese

Chronic manganese poisoning may result from inhalation of dust or fume. The central nervous system is the chief site of the injury. Chronic manganese poisoning is not a fatal disease although it is extremely disabling. Some individuals may be hypersusceptible to manganese. Freshly formed manganese fume has caused fever and chills similar to metal fume fever.

Nickel

The most common ailment arising from contact with nickel or its compounds is an allergic dermatitis known as "nickel itch" which usually occurs when the skin is moist. Generally nickel and most salts of nickel do not cause systemic poisoning, but nickel has

been identified as a suspected cancer causing agent.

Iron

The inhalation of iron oxide fumes or dust may cause an apparent benign pneumoconiosis which is called siderosis. The disease is reported not to be disabling, but makes x-ray diagnosis of other lung conditions difficult or impossible.

Copper

Melting, grinding, cutting of copper may produce fumes or dust exposure and breathing these fumes or dust may present potentially significant health hazards. Fumes of copper may cause metal fume fever with flu-like symptoms and skin and hair discoloration. While industrial dermatitis has not been reported, keratinization of the hands and the soles of the feet has been reported. Systemically as well, copper dust and fume cause irritation of the upper respiratory tract, metallic taste in the mouth, and nausea.

Lead

Short Term Exposure-

Lead is an accumulative poison. Inhalation effects of exposure to fumes or dust of inorganic lead may not develop quickly. Symptoms may include decreased physical fitness, fatigue, sleep disturbance, headache, aching bones and muscles, constipation, abdominal pains, and decreasing appetite. The effects are reversible and complete recovery is possible. Inhalation of large amounts of lead may lead to seizures, coma, and death.

Long Term Exposure-

Long term exposure can result in a buildup of lead in the body and more severe symptoms. These may include anemia, pale skin, a blue line at the gum margin, decreased hand-grip strength, abdominal pain, severe constipation, nausea, vomiting, and paralysis of the wrist joint. Prolonged exposure may also result in kidney damage. If the nervous system is affected, usually due to very high exposures, the resulting effects include severe headache, convulsions, coma, delirium, and death. Alcohol ingestion and physical exertion may bring on symptoms. Continued exposure can result in decreased fertility and/or increased chances of miscarriage or birth defects.

Molybdenum

Inhalation of the dust or fumes of this metal can cause upper respiratory system irritation. While no cases of industrial poisoning have been reported, laboratory experiments with animals have shown cumulative liver and kidney damage (fatty changes) and blood disorders.

Vanadium

Vanadium pentoxide is moderately hazardous for both acute and chronic exposures. Effects of overexposure are chiefly severe irritation of the throat, bronchopneumonia, and mild chronic bronchitis. Eczematous lesions of the skin and discoloration of the tongue may occur.

Emergency and First Aid Procedures:

Eye Contact: Flush well with running water to remove particulate. Get medical attention.

Skin Contact: Brush or vacuum off excess dust. Wash well with soap and water, Avoid blowing particulate into the atmosphere.

Inhalation: Remove to fresh air. Get medical attention.

Ingestion: Seek medical attention if large quantities of material have been ingested. In the form of the product (steel bars) this should be most unlikely.

VI. REACTIVITY DATA

Stability: Stable

Conditions to Avoid: Stable under normal conditions of transport and storage. Molten metal may result violently with water.

Incompatibility (Materials to avoid): Acids, bases, and oxidizers.

Hazardous Decomposition or Byproducts: Metal fume.

Hazardous Polymerization: Will not occur.

VII. PRECAUTIONS FOR SAFE HANDLING OR USE

Steps to be taken in Case Material is Released or Spilled: No special precautions are necessary for spills of bulk material. If large quantities of dust are spilled, remove by vacuuming or wet sweeping to prevent heavy concentrations of airborne dust. Follow federal, state, and local regulations concerning the disposal of waste.

Waste Disposal Method: Dispose of in accordance with federal, state, and local regulations. Cleanup personnel should wear respirators and protective clothing.

Precautions to be Taken in Handling and Storing: Store material away from incompatible materials and keep dust from sources of ignition.

Other Precautions: See all other sections of this MSDA.

VIII. CONTROL MEASURES

Respiratory Protection: If exposure above the PEL or TLV, NIOSH, approved respirator for fume or dust, dependent upon the source of airborne contaminant.

Ventilation: Required if dust or fume created in handling or working on this steel.

Local Exhaust: Required if dust or fume created in handling or working on steel.

Mechanical (general): As above to reduce airborne dust or fume levels.

Protective gloves: Required for melt, grind, cut, weld

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operations. Select glove approved for the specific operation.

Eye Protection: Required for melt, gring, cut, or weld operations. Minimum requirement of safety glasses with wide shields for these operations. Melting and welding may require special eye protection including face shields and specially tinted glass. Grinding operation may also require faceshield.

Other Protective Clothing or Equipment: As required for the work done on or with the steel.

Work Hygiene Practices: As required for the done on the steel. Always evaluate the jobs done on this product in accordance with OSHA or relavent state, federal, or local standards.

---Use precautions in lifting and prevent dropping---