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**LADISH CO. INC.**  
 CUDAHY, WISCONSIN 53110 • (414)777-2111

MATERIAL SAFETY DATA SHEET FOR FORGING PRODUCTS

SECTION I - MANUFACTURER DATA:

MANUFACTURING FACILITY: Ladish Co., Inc.  
 ADDRESS: 5481 S. Packard Avenue, Cudahy, WI 53110  
 PHONE (during normal business hours): Cudahy Facility 414-747-3020

DATE OF PREPARATION: November 10, 1985

CHEMICAL FAMILY: Steel  
 PRODUCT NAME: Carbon Steel and Low Alloy

SECTION II - COMPONENT DATA:

CHEMICAL COMPONENTS	C.A.S. NUMBER	% WT.
<u>Base Metals:</u>		
Iron	7439-89-6	0-99.5%
Nickel	7440-02-0	0-1%
Chromium	7440-47-3	0-1%
Molybdenum	7439-98-7	0-5.5%
Boron	7440-21-3	0-1.8%
Tungsten	7440-33-7	0-2.5%
Cobalt	7440-48-4	0-9.5%
Manganese	7439-96-5	0-1%

Coatings:

A thin coating of petroleum-based oil may be added to the surface as a corrosion inhibitor or preventative. A coating of paint may also be applied to this product, which will not exceed 1% of the total product by weight. However, when using this product, ensure that employees are protected from air contaminants that may be generated from the vaporization of heavy metals in the coating.

SECTION III - PHYSICAL DATA:

BOILING POINT (°F): Not Applicable (N/A)  
 SPECIFIC GRAVITY (H<sub>2</sub>O=1): Approx. 8  
 VAPOR PRESSURE (mmHg at 20°C): N/A  
 PERCENT VOLATILE BY VOLUME: N/A  
 VAPOR DENSITY (AIR=1): N/A  
 EVAPORATE RATE (ETHYL ETHER=1): N/A  
 SOLUBILITY IN WATER: N/A  
 PH INFORMATION: N/A  
 APPEARANCE AND ODOR: Odorless solid with metallic lustre.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT (°F): N/A  
 METHOD USED: N/A  
 FLAMMABILITY LIMITS (%VOL):  
 LEL: N/A UEL: N/A  
 AUTO-IGNITION TEMPERATURE (°F): N/A  
 EXTINGUISHING MEDIA: No fire or explosion hazards.  
 SPECIAL FIRE-FIGHTING INSTRUCTIONS: N/A  
 UNUSUAL FIRE AND EXPLOSION HAZARDS: N/A

SECTION V - REACTIVITY DATA:

STABILITY (CONDITIONS TO AVOID): Stable  
 INCOMPATIBILITY (MATERIALS TO AVOID): None