## MATERIAL SAFETY DATA SHEET

#### MATERIAL IDENTIFICATION AND USE

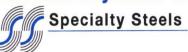
MATERIAL NAME: STAINLESS/SPECIALTY STEEL

SYNONYMS: INCLUDES ALL SHEET PRODUCTS, PLATE, STRIP, BAR,

INGOTS, SLABS AND TUBULAR PRODUCTS.

**MATERIAL USE:** MANUFACTURE OF ARTICLES

# Marmon/Keystone Canada Inc.



1220 Heritage Road Burlington ON L7L 4X9 (905) 319-4646

HAZARDOUS INGREDIENTS BASE METAL			(ALL VALUES ARE EXPRESSED AS WEIGHT PERCENT)			
COMPONENT *	CAS NUMBER	TLV ACGIH (mg/m³)	LD50/LC50	ELECTRIC ALLOY STEEL	TOOL STEELS	300, 400 SERIES STAINLESS STEELS
IRON	7438-89-5	5 (Fume)	NOT AVAILABLE	95	90	80
CHROMIUM	7440-47-3	0.5	NOT AVAILABLE	5	25	30
NICKEL	7440-02-0	1	>9 gm/kg (oral-rat)	5	5	35
MOLYBDENUM	7439-98-7	10	NOT AVAILABLE	2	5	6
VANADIUM	1314-62-1	0.05	NOT AVAILABLE	2	5	-
COBALT	7440-48-4	0.8	NOT AVAILABLE	75	8	1
MANGANESE	7439-96-5	1 (fume)	>9 gm/kg (oral-rat)	-	-	2.5
ALUMINUM	7429-90-5	10	NOT AVAILABLE	1.5	-	-
SILICON	7440-21-3	10	NOT AVAILABLE	2	2.5	-
COPPER	7440-50-8	.2 (fume)	NOT AVAILABLE	-	-	5

<sup>\*</sup> AS REQUIRED BY WHMIS INGREDIENT DISCLOSURE LIST. FOR EXACT COMPOSITION REFER TO ANALYSIS OR SPECIFICATIONS.

NON-METALLIC COATINGS

DRY-LUBE - MIXTURE OF BORATE AND CARBONATE SOAP LUBRICANTS

FOR METAL FORMING

- PETROLEUM BASED OIL COATING USED FOR METAL

FORMING.

PRE-LUBE

LUBE OIL - LUBRICATING PROTECTIVE PETROLEUM BASED OIL. SLUGHING OIL - MINERAL OIL BASED PROTECTIVE COATING CONTAINING SMALL QUANTITIES OF ANTI-OXIDANTS.

VANISHING OIL

LEAVING A WAX-LIKE PROTECTIVE COATING.

- SOLVENT APPLIED PETROLEUM OIL PROTECTIVE COATING

NOTE: INDIVIDUAL COATING COMPONENTS ARE PRESENT AT VALUES BELOW THE REPORTING REQUIREMENTS OF THE

WHMIS INGREDIENT DISCLOSURE LIST.

### **PHYSICAL DATA**

PHYSICAL STATE: SOLID ODOUR: na VAPOUR PRESSURE: na VAPOUR DENSITY: na

COEFFICIENT WATER/OIL DISTRIBUTION: na APPEARANCE: SILVER GREY METALLIC (STEEL) **EVAPORATION RATE:** na BOILING POINT: na FREEZING POINT: 1530 C **DENSITY 7.86** ODOUR THRESHOLD: na pH: na

SOLUBILITY IN WATER: na

FIRE AND EXPLOSION HAZARDS

-- NOT APPLICABLE --

CHEMICAL STABILITY: YES INCOMPATIBILITY TO OTHER SUBSTANCES: YES

CONDITIONS OF REACTIVITY: na CONTACT WITH MINERAL ACIDS WILL RELEASE HYDRAGEN GAS

HAZARDOUS DECOMPOSITION PRODUCTS: na

#### PAGE -1- LEGEND: na NOT APPLICABLE, U UNKNOWN

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS OBTAINED FROM THE USE THEREOF.

## MATERIAL NAME: STAINLESS/SPECIALTY STEEL

#### PREVENTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT: DEPENDENT UPON PROCESS BEING PERFORMED ON MATERIAL.

EACH OPERATION MUST BE ADDRESSED FOR SUITABLE

EQUIPMENT.

GLOVES (Specify): LEATHER FACED EYE ((Specify):

CLOTHING (Specify): na FOOTWEAR (Specify): na

RESPIRATORY (Specify): NA OTHER: (Specify): NA APPROVED FUME FILTER RESPIRATOR,

GLOVES & EYEWEAR REQUIRED DURING

WELDING.

ENGINEERING CONTROLS (e.g. ventilation, enclosures, specify): GENERAL OR LOCAL EXHAUST VENTILATION DURING WELDING.

LEAK AND SPILL PROCEDURES: na

STORAGE REQUIREMENTS: na SPECIAL SHIPPING INFORMATION: na

#### TOXICOLOGICAL PROPERTIES OF MATERIAL

ROUTE OF ENTRY: PROLONGED SKIN CONTACT WITH COATED STEEL MAY CAUSE SKIN IRRITATION IN SENSITIVE INDIVIDUALS.
INHALATION OF METAL PARTICULATE OR ELEMENTAL, OXIDE FUMES GENERATED DURING WELDING, BURNING, GRINDING OR MACHINING
MAY POSE ACUTE OR CHRONIC HEALTH EFFECTS.

EFFECTS OF ACUTE EXPOSURE TO MATERIAL: INHALATION OF OVEREXPOSURE TO MANGANESE, COPPER OR ZINC (COATED PRODUCTS)
MAY CAUSE METAL FUME FEVER CHARACTERIZED BY FEVER AND CHILLS (i.e. FLU-LIKE SYMPTOMS) APPEARS 4-6 HOURS AFTER
EXPOSURE WITH NO LONG-TERM EFFECTS.

EFFECTS OF CHRONIC EXPOSURE TO MATERIAL: PROLONGED INHALATION OVEREXPOSURE TO METAL FUME FROM PRODUCT MAY CAUSE THE FOLLOWING EFFECTS: BENIGN PNEUMONOCONIOSIS (SIDEROSIS) WITH FEW OR NO SYMPTOMS (IRON OXIDE); CERTAIN NICKEL AND CHROMIUM COMPOUNDS HAVE BEEN LISTED WITH IARC AS NASAL AND LUNG CARCINOGENS. COBALT DUST MAY RESULT IN AN ASTHAMA-LIKE CONDITION (COUGH/SHORTNESS OF BREATH).

IRRITANCY OF MATERIAL: na REPRODUCTIVE EFFECTS: na CARCINOGENICITY OF MATERIAL: SENSITIZATION TO MATERIAL: na
TERATOGENICITY OF MATERIAL: na
ARC LISTS CERTAIN HEXAVALENT CHROMILIM CO

IARC LISTS CERTAIN HEXAVALENT CHROMIUM COMPOUNDS UNDER ITS GROUP 1 CATEGORY -- "CONFIRMED HUMAN

CARCINOGEN".

IARC LISTS NICKEL AND CERTAIN NICKEL COMPOUNDS UNDER ITS GROUP 2A CATEGORY -- "SUSPECTED HUMAN CARCINOGEN".

SYNERGISTIC MATERIALS: na MUTAGENICITY OF MATERIAL: na

NOTE: PROLONGED SKIN CONTACT MAY CAUSE REDDENING AND DRYING OF SKIN OR DERMATITIS IN SENSITIVE INDIVIDUALS FROM NICKEL, CHOMIUM AND COBALT CONTENT IN STELL.

**FIRST AID MEASURES** 

SKIN: MAINTAIN GOOD PERSONAL HYGIENE, WASH WITH SOAP AND WATER,

SEEK MEDICAL ATTENTION IF NECESSARY.

INHALATION: REMOVE TO FRESH AIR, SEEK MEDICAL ATTENTION IF NECESSARY.

PREPARATION OF MATERIAL SAFETY DATA SHEET

PREPARED BY: CSSCI Preparation Date: March 1, 2003

NOTE: CONTACT SUPPLIER FOR ADDITIONAL PRODUCT INFORMATION.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE, HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS OBTAINED FROM THE USE THEREOF.