

WARD MANUFACTURING LLC  
**MATERIAL SAFETY DATA SHEET (MSDS) Page 1 of 5**  
DATE: April, 1997  
**UPDATED July, 2008**

CONFORMS TO REQUIREMENTS OF OSHA STANDARD 1910.1200 "HAZARD COMMUNICATION"  
AND TO VARIOUS STATE "EMPLOYEE RIGHT TO KNOW" LAW

**SECTION I - PRODUCT IDENTIFICATION**

This MSDS supplied for: **MALLEABLE IRON CASTINGS**

ASTM ALLOY DESIGNATION

A 47	Grade 32510	
A 197		
A 220	Grade 40010	Grade 50005
	Grade 45006	Grade 60004
	Grade 45008	Grade 70003

VENDOR NAME AND ADDRESS- WARD MANUFACTURING LLC  
117 Gulick St. / P.O. Box 9  
Blossburg, PA 16912

EMERGENCY PHONE NUMBER (570) 638 - 2131

FIRE HAZARD CLASS: HEALTH: 0 FLAMMABILITY: 0 REACTIVITY: 0

THE FOURTH DIAMOND:

ANSI: CAUTION: WELDING, CUTTING, OR GRINDING ON THIS CASTING  
WILL GENERATE TOXIC DUST AND FUMES

N/E means none established

N/A means not applicable

N/D means no data available.

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**SECTION II - HAZARDOUS COMPONENTS**

<u>INGREDIENT</u>	<u>CAS NO.</u>	<u>PERCENT</u>	<u>TLV</u>	<u>PEL</u>
Carbon	7440-44-0	2.5-3.5	N/E	N/E
Silicon	7440-21-3	0.8-2.0	10 mg/cu.m	15 mg/cu-m
Manganese	7439-96-5	0.2-0.8	C5 mg/cu-m as dust 1 mg/cu.m as fume	C5 mg/ou- as dust
Nickel	7440-02-0	0.10	1 mg/cu.m	1 mg/cu.m
Chromium	7440-47-3	0.02-0.15	.5 mg/cu.m	1 mg/cu.m
Chromium (hexavalent)			.05 mg/cu.m	N/E
Aluminum	7429-90-5	0.003-0.20	10 mg/cu.m	N/E
Copper	7440-50-8	0.11-0.21	.2 mg/cu.m as fume 1 mg/cu.m as dust	.1mg/cu.m as fume 1 mg/cu.m as dust
Iron	7439-89-6	92.9-96.6	5 mg/cu-m as fume	10mg/cu.m as fume
Cerium	7440-45-1	0.01-0.40	N/E	N/E
Nitrogen	7727-37-9	0.002-0.15	N/E	N/E

Water insoluble hexavalent chromium is classified as a human carcinogen by the American Conference of Governmental Industrial Hygienists (ACGIH).

Approximately 66% of the total chromium (in welding fume) is hexavalent, and only 5% of that is insoluble. Considering the small amount of chromium in the casting, over-exposure to hexavalent chromium is not likely. (There is no hexavalent chromium in the alloy or its dust).

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