

# 4HW - HOT WORKING TOOL STEEL

## MATERIAL SAFETY DATA SHEET

01/11/00

MSDS PROVIDED BY:  
**STOODY INDUSTRIAL AND WELDING SUPPLY, INC.**  
**3316 National Ave., San Diego, Ca. 92113**  
**Phone: (619) 234-6750**  
**MILITARY EMERGENCY RESPONSE NUMBER 1-800-851-8061**

### 4HW - HOT WORKING TOOL STEEL

VERSION DATE 01/03/96 (REWRITTEN SIWS)

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<b>SECTION 1</b>	<b>PRODUCT IDENTIFICATION</b>
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COMPANY NAME WHO PROVIDED MSDS.....	HARRIS WELCO. DIV. OF J.W. HARRIS CO., INC.
COMPANY ADDRESS.....	1051 YORK RD KINGS MOUNTAIN, NC 28086
EMERGENCY PHONE NUMBER.....	(800)-424-9300
MSDS VERSION NUMBER.....	2
TRADE NAME.....	4HW - HOT WORKING TOOL STEEL
HAZARD RATING (HMIS).....	HEALTH-3 FLAMMABILITY-0 REACTIVITY-0 OTHER-0
HMIS DESIGNATED KEY.....	4-SEVERE HAZARD 3-SERIOUS HAZARD 2-MODERATE HAZARD 1 -SLIGHT HAZARD 0--MINIMAL HAZARD

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<b>SECTION 2</b>	<b>HAZARDOUS COMPONENTS</b>
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<u>MATERIAL</u>	<u>% BY WEIGHT</u>	<u>CAS NUMBER</u>	<u>ACGIH TLV (Mg/M3)</u>	<u>SEC 313</u>
CHROMIUM	4.8-5.35	7440-47-1	1	YES
MOLYBDENUM	1.5-1.9	7439-98-7	10	NA
SILICON	.6-9	7440-21-3	5	YES
MANGANESE	.6-8	7439-96-5	1	YES
TUNGSTEN	1.2-1.5	74-40-33-7	5	NA
VANADIUM	.25-.45	1314-62-1	0.05	YES
TITANIUM DIOXIDE	NA	1317-65-7	10	NA
CALCIUM CARBONATE	NA	1317-65-3	15	NA
CALCIUM FLUORIDE	NA	14542-23-6	2.5	NA
POTASSIUM SILICATE	NA	1312-76-1	NA	NA
SODIUM SILICATE	NA	1344-09-8	NA	NA

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<b>SECTION 3</b>	<b>PHYSICAL PROPERTIES</b>
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BOILING POINT.....	NA
MELTING POINT.....	NA
VAPOR PRESSURE.....	NA
VAPOR DENSITY (AIR=1).....	NA
SOLUBILITY IN WATER.....	NA
SPECIFIC GRAVITY.....	NA.
EVAPORATION RATE.....	NA
APPEARANCE AND ODOR.....	SOLID ROD FLUX COATED - NO ODOR

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<b>SECTION 4</b>	<b>FIRE AND EXPLOSION DATA</b>
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FLASH POINT.....	SEE AMERICAN NATIONAL STANDARD Z.49.1
EXTINGUISHING MEDIA.....	SEE AMERICAN NATIONAL STANDARD Z.49.1
SPECIAL PROCEDURES.....	SEE AMERICAN NATIONAL STANDARD Z.49.1
UNUSUAL HAZARDS.....	NA

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<b>SECTION 5</b>	<b>REACTIVITY DATA</b>
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STABILITY.....	STABLE
CONDITIONS TO AVOID.....	NA
HAZARDOUS POLYMERIZATION.....	WILL NOT OCCUR
INCOMPATIBILITY.....	NA
HAZARDOUS DECOMPOSITION PRODUCTS.....	NA

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### SECTION 6

### HEALTH HAZARD DATA

ROUTES OF ENTRY .....	INHALATION
HEALTH HAZARDS .....	PULMONARY IRRITATION FROM DUST INHALATION
CARCINOGENICITY .....	THE STATE OF CALIFORNIA REQUIRES THE FOLLOWING INFORMATION WARNING: THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER
SIGNS & SYMPTOMS OF EXPOSURE .....	OVEREXPOSURE TO WELDING FUMES MAY RESULT IN DISCOMFORT SUCH AS DIZZINESS NAUSEA, OR DRYNESS OR IRRITATION OF NOSE OR EYES.
MEDICAL CONDITIONS FROM EXPOSURE .....	COULD EFFECT PULMONARY FUNCTIONS
EMERGENCY & FIRST AID.....	REMOVE TO FRESH AIR.
ADDITIONAL INFORMATION .....	NONE

### SECTION 7

### PRECAUTIONS FOR SAFE HANDLING AND USE

SPILL AND LEAK PROCEDURES .....	NA
WASTE AND DISPOSAL METHOD.....	FOLLOW FEDERAL, STATE, AND LOCAL REGULATIONS
HANDLING AND STORING PRECAUTIONS .....	NA
OTHER PRECAUTIONS.....	NORMAL HANDLING COLD. CAUTION WHEN HOT.

### SECTION 6

### CONTROL MEASURES

RESPIRATORY MEASURES .....	WELD FUME RESPIRATORY OR AIRLINE RESPIRATOR FOR CONFINED SPACES.
VENTILATION .....	IN SEMI-OPEN OR POOR VENTILATION SPACES USE LOCAL EXHAUST. MECHANICAL EXHAUST RECOMMENDED FOR POORLY NATURAL VENT SPACES
PROTECTIVE GLOVES.....	WELDERS GLOVES.
EYE PROTECTION .....	FACE SHIELD & SAFETY GLASS #12
OTHER PROTECTIVE EQUIPMENT .....	WELDERS CLOTHING FOR PROTECTION AGAINST SPARKS AND HOT MATERIALS.
WORK/HYGIENIC PRACTICES .....	DISPOSE OF WELDING STUBS AND KEEP SAFETY LENS CLEAN. FOR MAXIMUM SAFETY BE CERTIFIED FOR AND WEAR A RESPIRATOR AT ALL TIMES WHEN WELDING AND OR BRAZING.

### SECTION 9

### DISCLAIMER

THIS DATA IS BELIEVED TO BE ACCURATE. HARRIS WELCO MAKES NO WARRANTY TO AND DISCLAIMS ALL LIABILITY FROM RELIANCE.

### SECTION 10

### ADDITIONAL INFORMATION

NA = NOT APPLICABLE  
CARCINOGENICITY INFORMATION: CHROMIUM COMPOUNDS ARE  
REQUIRED BY OSHA TO BE CONSIDERED CARCINOGENIC.