

# 3HW – HOT WORKING TOOL STEEL - TIG

## MATERIAL SAFETY DATA SHEET

01/11/00

MSDS PROVIDED BY:

STOODY INDUSTRIAL AND WELDING SUPPLY, INC.

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Phone: (619) 234-6750

MILITARY EMERGENCY RESPONSE NUMBER 1-800-851-8061

VERSION DATE 01/03/96 (REPRODUCED SIWS)

3HW – HOT WORKING TOOL STEEL - TIG

### SECTION 1

### PRODUCT IDENTIFICATION

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..... 3HW – HOT WORKING TOOL STEEL - TIG  
HAZARD RATING (HMIS)..... HEALTH-3  
FLAMMABILITY-0  
REACTIVITY-0  
HMIS DESIGNATED KEY..... 4-SEVERE HAZARD  
3-SERIOUS HAZARD  
2-MODERATE HAZARD  
1 -SLIGHT HAZARD  
0--MINIMAL HAZARD

### SECTION 2

### HAZARDOUS COMPONENTS

<u>MATERIAL</u>	<u>% BY WEIGHT</u>	<u>CAS NUMBER</u>	<u>ACGIH TLV (Mg/M3)</u>	<u>SEC 313</u>
CARBON	0.36	7782-42-5	3.5	NA
SILICON	1.1	60676-86-0	5	NA
MANGANESE	0.4	7439-96-5	1	YES
VANADIUM	0.3	7440-60-2	0.1	YES
IRON	BALANCE	7439-89-6	5	NA
CHROMIUM	5.2	7440-47-3	0.05	YES
MOLYBDENUM	1.5	7439-98-7	5	NA
TUNGSTEN	1.3	7440-33-7	5	NA

### SECTION 3

### PHYSICAL PROPERTIES

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 WIRE OR ROD. NO ODOR

### SECTION 4

### FIRE AND EXPLOSION DATA

FLASH POINT..... NONFLAMMABLE  
EXTINGUISHING MEDIA..... NA  
SPECIAL PROCEDURES..... WELDING ARC, OPEN FLAME AND SPARK CAN IGNITE COMBUSTIBLES.  
SEE ANSI/ASC Z.49.1, 1-1983 SECTION 6  
UNUSUAL HAZARDS..... NA

### SECTION 5

### REACTIVITY DATA

STABILITY..... STABLE  
CONDITIONS TO AVOID..... NA  
HAZARDOUS POLYMERIZATION..... WILL NOT OCCUR  
INCOMPATIBILITY..... NA  
HAZARDOUS DECOMPOSITION PRODUCTS..... WELDING FUMES BUILT DURING WELDING PROCESS COMPOSITION SEE SECTION II

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## MATERIAL SAFETY DATA SHEET

### SECTION 6

### HEALTH HAZARD DATA

ROUTES OF ENTRY .....	INHALATION
HEALTH HAZARDS .....	SEE ADDITIONAL INFORMATION
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	SEE ADDITIONAL INFORMATION
MEDICAL CONDITIONS FROM EXPOSURE .....	LONG TERM EXPOSURE MAY CONTRIBUTE TO PULMONARY IRRITATION OR PNEUMOCONIOSIS. INDIVIDUALS WITH IMPAIRED PULMONARY FUNCTION OR ILLNESS MAY HAVE SYMPTOMS EXACERBATED BY FUME IRRITANTS.
EMERGENCY & FIRST AID.....	REMOVE FROM DUST OR FUME EXPOSURE. IF BREATHING HAS STOPPED, PERFORM ARTIFICIAL RESPIRATION. SUMMON MEDICAL AID IMMEDIATELY.
ADDITIONAL INFORMATION .....	INHALATION OF FUMES, RAYS FROM WELDING OPERATION CAN INJURE EYES AND BURN SKIN. WELDING ELECTRODES & WIRE ARE NONHAZARDOUS SOLIDS AT AMBIENT TEMPERATURE. ACTUAL EXPOSURE SHOULD BE DETERMINED BY MONITORING THE FUME IN THE OPERATOR'S BREATHING ZONE. COMPOUNDS OF CHROMIUM AND NICKEL IN THE FUME SHOULD BE CONSIDERED POSSIBLE CARCINOGENS PER OSHA 29 CFR 1920.1200. NO CLEAR ASSOCIATION, HOWEVER, HAS BEEN ESTABLISHED BETWEEN CR AND NI IN WELDING FUME AND THE DEVELOPMENT OF CANCER. SHORT TERM EXPOSURE TO WELDING FUME MAY RESULT IN DISCOMFORT, DIZZINESS NAUSEA, OR DRYNESS OR IRRITATION OF THE THROAT.

### SECTION 7

### PRECAUTIONS FOR SAFE HANDLING AND USE

SPILL AND LEAK PROCEDURES.....	NA
WASTE AND DISPOSAL METHOD.....	NA
HANDLING AND STORING PRECAUTIONS .....	AVOID HUMIDITY AND SHOCKS
OTHER PRECAUTIONS.....	ELECTRIC SHOCK FROM ARC WELDING EQUIPMENT CAN KILL.

### SECTION 6

### CONTROL MEASURES

RESPIRATORY MEASURES .....	USE ENOUGH VENTILATION TO KEEP THE FUMES AND GASES BELOW TLV'S IN THE WORKER'S BREATHING ZONE. SEE ANSI/ASC Z.49.1 SECTION 6.
VENTILATION .....	LOCAL AND MECHANICAL EXHAUST RECOMMENDED.
PROTECTIVE GLOVES.....	WELDER'S GLOVES RECOMMENDED.
EYE PROTECTION .....	COLOR ABSORTION GLASSES.
OTHER PROTECTIVE EQUIPMENT .....	WELDING HELMET AND PROTECTIVE CLOTHING SUCH AS LEATHER APRON.
WORK/HYGIENIC PRACTICES .....	READ AND UNDERSTAND MANUFACTURER'S INSTRUCTIONS. SEE AMERICAN NATIONAL STANDARD Z.49.1. USE SAFE WELDING PRACTICES. FOR MAXIMUM SAFETY: BE CERTIFIED FOR AND WEAR A RESPIRATOR AT ALL TIMES WHEN WELDING AND OR BRAZJNG.

### SECTION 9

### DISCLAIMER

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

### SECTION 10

### ADDITIONAL INFORMATION

INDIVIDUAL FILLER METALS COVERED BY THIS MSDS MAY CONTAIN THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO KNOW ACT OF 1986 AND 40 CFR 372: ALUMINUM, BARIUM CARBONATE, BARIUM FLUORIDE, COPPER, MANGANESE, AND NICKEL.	REFER TO SECTION II OF THIS MSDS FOR THE FILLER METAL NAME AND PERCENT BY WEIGHT, AND SECTION VI FOR THE CAS NUMBER FOR EACH CHEMICAL.  CARCINOGENICITY INFORMATION: CHROMIUM COMPOUNDS ARE REQUIRED BY OSHA TO BE CONSIDERED TO BE CARCINOGENIC.  NA = NOT APPLICABLE
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