

4HSS - HIGH SPEED TOOL STEEL
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 (REWRITTEN SIWS)

4HSS - HIGH SPEED TOOL STEEL

SECTION 1

PRODUCT IDENTIFICATION

| | |
|-------------------------------------|---|
| COMPANY NAME WHO PROVIDED MSDS..... | HARRIS WELCO. DIV. OF J.W. HARRIS CO., INC. |
| COMPANY ADDRESS..... | 1051 YORK ROAD KINGS MOUNTAIN, NC 28086 |
| EMERGENCY PHONE NUMBER..... | (800)-424-9300 |
| MSDS VERSION NUMBER..... | 2 |
| TRADE NAME..... | 4HSS - HIGH SPEED TOOL STEEL |
| HAZARD RATING (HMIS)..... | HEALTH - 3 FLAMMABILITY - 0 REACTIVITY - 0 OTHER - 0 |
| HMIS DESIGNATION 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> |
|--------------------|--------------------|-------------------|--------------------------|----------------|
| TITANIUM DIOXIDE | NA | 1317-65-7 | 10 | NA |
| CALCIUM CARBONATE | NA | 1317-65-3 | 15 | NA |
| CALCIUM FLOURIDE | NA | 14542-24-5 | 2.5 | NA |
| MOLYBDENUM | 4.0 - 6.0 | 7439-98-7 | 10 | NA |
| SILICON | <.8 | 7440-21-3 | 5 | NA |
| NICKEL | NA | 7440-02-0 | 1 | NA |
| CHROMIUM | 3.0 - 5.0 | 7440-47-3 | 1 | YES |
| MANGANESE | <.6 | 7439-96-5 | 1 | YES |
| TUNGSTEN | 5.0 - 7.0 | 7440-33-7 | 5 | YES |
| VANADIUM | 1.0 - 2.5 | 1314-62-1 | 0.05 | NA |
| GRAPHITE | NA | 7782-42-5 | 5 | YES |
| POTASSIUM SILICATE | NA | 1312-76-1 | NA | 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 ROD FLUX COATED |

SECTION 4

FIRE AND EXPLOSION DATA

| | |
|--------------------------|---------------------------------------|
| 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 |

SECTION 5

REACTIVITY DATA

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| | |
|---------------------------------------|----------------|
| STABILITY..... | STABLE |
| CONDITIONS TO AVOID..... | NA |
| HAZARDOUS POLYMERIZATION..... | WILL NOT OCCUR |
| CONDITIONS TO AVOID..... | NA |
| INCOMPATABILITY..... | NA |
| HAZARDOUS DECOMPOSITION PRODUCTS..... | NA |

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 PRECALJTIONS..... | NORMAL HANDLING COLD. CAUTION WHEN HOT. |

SECTION 8

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. DISPOSE OF WELDING STUBS AND KEEP SAFETY LENS CLEAN. |
| WORK/HYGIENIC 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 WARRANTY TO AND DISCLAIMS ALL LIABILITY FROM RELIANCE.

SECTION 10

ADDITIONAL INFORMATION

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