

SECTION I

MANUFACTURER'S NAME CARROLL COMPANY EMERGENCY TELEPHONE NO. 214/278-1304
214/278-1300
ADDRESS 2900 WEST KINGSLEY RD, GARLAND, TEXAS 75041
TRADE NAME LIME-OFF REVISED: 3/01/91 PRODUCT CODE 378

SECTION II - HAZARDOUS INGREDIENTS

TLV UNITS

PHOSPHORIC ACID CAS#7664-38-2 1MG/M.

SECTION III - PHYSICAL DATA

BOILING POINT (F) UNDETERMINED SPECIFIC GRAVITY (H2O=1) 1.13
VAPOR PRESSURE (mm Hg.) UNDETERMINED PRODUCT pH 1.5
SOLUBILITY IN WATER MISCIBLE MELTING POINT UND.
APPEARANCE AND ODOR GREEN LIQUID, SLIGHTLY SWEET ODOR

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method Used) UNDETERMINED
EXTINGUISHING MEDIA WATER, CO2, FOAM
SPECIAL FIRE FIGHTING PROCEDURES NONE
UNUSUAL FIRE AND EXPLOSION HAZARDS NON-FLAMMABLE

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE 1MG/M-BASED ON RAW MATERIAL TVL
CARCINOGEN NO
ACUTE & CHRONIC HEALTH EFFECTS UNDETERMINED
PRIMARY ROUTES OF ENTRY: INHALATION X SKIN X INGESTION X
EFFECTS OF OVEREXPOSURE SKIN & EYE-IRRITATING TO SKIN AND EYES. INHALATION-
MAY BE IRRITATING TO MUCOUS MEMBRANES. INGESTION-HARMFUL OR FATAL IF SWALLOWED.
EMERGENCY & FIRST AID PROCEDURES SKIN-WASH WITH SOAP AND WATER. EYE-FLOOD WITH
WATER FOR AT LEAST 15 MINUTES. INGESTION-IF SWALLOWED, GIVE LARGE AMOUNT OF
MILK OR WATER TO DRINK. GET IMMEDIATE MEDICAL ATTENTION. INHALATION-MOVE TO
FRESH AIR. GET MEDICAL ATTENTION

SECTION VI - REACTIVITY DATA

STABILITY: UNSTABLE STABLE X
CONDITIONS TO AVOID AVOID CHLORINE CONTAINING COMPOUNDS
INCOMPATABILITY (Materials to Avoid) SEE ABOVE

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO TAKE IN CASE MATERIAL IS RELEASED OR SPILLED NORMAL CLEAN UP
PROCEDURE USING BAKING SODA AS NEUTRALIZER.
WASTE DISPOSAL METHOD FOLLOW FEDERAL AND LOCAL REGULATIONS

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Type) ADEQUATE VENTILATION IN CLOSE SPACES
GLOVES (Type) RUBBER OR NEOPRENE
EYE PROTECTION GOGGLES IF SPLASHING OCCURS
OTHER PROTECTIVE EQUIPMENT NONE

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING KEEP CLOSURE UP TO PREVENT
LEAKAGE.
OTHER PRECAUTIONS AVOID CONTACT WITH CHLORINE CONTAINING COMPOUNDS AS IT
WILL PRODUCE CHLORINE GAS.

8163-12
8/28/91

MATERIAL SAFETY DATA SHEET
CONTINUED

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SECTION X - SECTION 313 SUPPLIER NOTIFICATION (SARA)

This product contains 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 of 40 CFR 372:

CHEMICAL NAME & CAS# PHOSPHORIC ACID, CAS#7664-38-2

% BY
WEIGHT
21.00



MATERIAL SAFETY DATA SHEET

MSDS - Cr-Ni Bare Wire and Strip Electrodes and Rods

Revision 2
Supersedes - Revision 1
Issue Date - April, 1991
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(Complies with OSHA Hazard Communication Standard 29CFR 1910.1200 and SARA Title III)

SECTION 1 - Identification

Manufacturer/Supplier Name: **Sandvik Steel Company**
Information Supplied By and Emergency Phone Number: **Sandvik Steel Company (717) 587-5191**
Address: **P.O. Box 1220, Scranton, PA 18501-1220**
Trade Name: **SANDVIK**
Classification: **AWS A5.9/ASME SFA 5.9, ASME SFA 5.9 Section III, MIL-E-19333, ABS, Corrosion Resisting Chromium and Chromium Nickel Steel Bare Wire and Strip Welding Electrodes and Welding Rods**
Product Type: **Cr-Ni Bare Wire and Strip Electrodes and Rod for manual, semi-automatic and automatic welding processes.**

SECTION 2 - Hazardous* Ingredients

IMPORTANT: THIS SECTION COVERS THE MATERIALS FROM WHICH THIS PRODUCT IS MANUFACTURED. THE FUMES AND GASES PRODUCED DURING NORMAL USE WHEN WELDING WITH THIS PRODUCT ARE COVERED BY SECTION 5.

| Ingredient | CAS No. | PEL ⁽¹⁾ | TLV ⁽²⁾ | STEL ⁽³⁾ | WT% | APPROX. ⁽⁴⁾ | CARCINOGENICITY ^{(4) (5)} | |
|--------------------------------|-----------|---------------------|--------------------|---------------------|-------|------------------------|------------------------------------|-----|
| | | | | | | OSHA/ACGIH | IARC | NTP |
| Chromium (Cr) | 7440-47-3 | 1 | 0.5 | — | 1-30 | 0 | POS | POS |
| Copper ⁽⁶⁾ (Cu) | 7440-50-8 | 1 | 1 | — | 0-4 | 0 | 0 | 0 |
| Iron (Fe) | 7439-89-6 | 10 | 5 | — | Bal. | 0 | 0 | 0 |
| Manganese (Mn) | 7439-96-5 | 5 CL ⁽⁶⁾ | 5 | — | 1-5 | 0 | 0 | 0 |
| Molybdenum (Mo) ⁽⁷⁾ | 7439-98-7 | 5 ⁽⁸⁾ | 10 | — | 1-5 | 0 | 0 | 0 |
| Nickel (Ni) | 7440-02-0 | 1 | 1 | — | 1-35 | 0 | POS | POS |
| Silicon (Si) | 7440-21-3 | 5 ⁽⁸⁾ | 10 | — | 0.4-2 | 0 | 0 | 0 |

*The term "Hazardous" in "Hazardous Ingredients" ' should be interpreted as a term required and defined in the OSHA Hazard Communication Standard (29 CFR Part 1910.1200) and does not necessarily imply the existence of any hazard. Welding consumables applicable to this sheet as shipped are non reactive, non flammable, non explosive, and essentially non hazardous until welded.

- (1) Permissible Exposure Limit (mg/m³) OSHA (29CFR 1910) - An exposure limit that is published and enforced by OSHA as a legal standard.
- (2) Threshold Limit Value (mg/m³) - American Conference of Governmental Industrial Hygienists - Time weighted average concentration for a normal 8-hour work day and a 40-hour work week, to which nearly all workers may be repeatedly exposed, day after day, without adverse effect.
- (3) Short Term Exposure Limit (mg/m³) OSHA (29 CFR 1910) - A 15 minute time weighted average exposure which should not be exceeded at any time during a work day.
- (4) Wt. % 1% or greater or .1% or greater if included in one of the following:
 - National Toxicology Program (NTP) Annual Report on Carcinogens
 - International Agency for Research on Cancer (IARC) Monographs
 - 29 CFR Part 1910. Subpart Z Toxic and Hazardous Substances, & Occupational Safety and Health Administration
- (5) 0 = negative or not reviewed; POS = positive, human or animal
- (6) Ceiling Limit - The concentration that should not be exceeded during any part of the working exposure.
- (7) Only in Molybdenum-alloyed grades
- (8) These PELs are for the respirable fraction of dust for the substance listed.

SECTION 3 - Physical and Chemical Characteristics

Chromium-Nickel bare wire and electrodes and strip are welding consumables which are either solid wire or strip.