

# MATERIAL SAFETY DATA SHEET

WELDING CONSUMABLE AND RELATED PRODUCTS  
CONFORMS TO OSHA 1910.1200

## IDENTIFICATION

TRADE NAME: CALDO TORCH/BURNING BAR/LANCE PIPE DATE: January 1, 2006

PRODUCT TYPE: EXOTHERMIC CUTTING TORCH  
EXPENDABLE

## HAZARDOUS INGREDIENTS

THIS SECTION LISTS THE INGREDIENTS (>0.01%) FROM WHICH THIS PRODUCT IS MANUFACTURED WHICH ARE DEFINED AS HAZARDOUS MATERIALS ACCORDING TO OSHA HAZARDOUS COMMUNICATION STANDARD (29 CFR 1910.1200). THE FUMES AND GASES PRODUCED DURING NORMAL CUTTING WITH THIS PRODUCT ARE COVERED IN THE REACTIVITY DATA SECTION.

<u>INGREDIENT (ACGIH)</u>	<u>CAS</u>	<u>PERCENT</u>	<u>PEL (OSHA)</u>	<u>TLV</u>
IRON	7439-89-6	97 – 99.5	5 MG/M	5MG/M
CARBON	7440-44-0	-.06 - .14	N/E	N/E
SILICON mg/cu.m	7440-21-3	1.8 – 4.0	15mg/cu.m	10
MANGANESE mg/cu.m	7439-96-5	<1.2	C5 mg/cu.m	C5
DUST			AS DUST	AS
FUME				1 AS
NICKEL mg/cu.m	7440-02-0	0.01-1.5	1 mg/cu.m	1
CHROMIUM mg/cu.m	7440-02-0	0.02 – 0.13	.1 mg/cu.m	.5
CHROMIUM (HEXAVALENT) mg/cu.m			N/E	.05
MOLYBDENUM mg/cu.m	7439-98-7	0.01 – 0.75	15 mg/cu.m	10
SULFUR	7723-14-0	0.02	N/E	N/E
PHOSPHORUS mg/cu.m	7723-14-0	<0.05	.1 mg/cu.m	.1
ALUMINUM	7429-90-5	0.003 – 0.06	N/E	N/E

• N/E MEANS NONE ESTABLISHED

## PHYSICAL/CHEMICAL CHARACTERISTICS

STEEL TUBE OR TUBES WITH OR WITHOUT STEEL WIRES.

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## FIRE/EXPLOSION HAZARDS

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NONFLAMMABLE WELDING ARC AND SPARKS CAN IGNITE COMBUSTIBLES AND FLAMMABLE PRODUCTS. REFERENCE: ANST-Z49.1NFPA-51NB

**CARCINOGENICITY:** PRODUCTS DO NOT CONTAIN INGREDIENTS THAT ARE DEFINED AS CARCINOGENIC PER 29CFR1910.1200.

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## SAFE HANDLING/CONTROL MEASURES

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**AIR SAMPLING:** TO DETERMINE THE COMPOSITION AND QUANTITY OF FUME AND GASES TO WHICH WORKERS ARE EXPOSED. IT IS TO TAKE AIR SAMPLES INSIDE THE WORKMEN'S HELMET AND SHIELD OR BREATHING ZONE. REFERNECE: ANSI/AWS – F1.1

**VENTILATION:** USE GENERAL VENTILATION, LOCAL EXHAUST AT THE TORCH TOP, OR GENERAL VICINITY TO KEEP FUMES AND GASES BELOW THE PEL/TLV IN THE WORKER'S BREATHING ZONE AND GENERAL AREA. TRAIN THE WORKER TO KEEP HIS HEAD OUT OF THE FUME PLUME.

**RESPIRATORY PROTECTION:** USE NIOSH APPROVED FUME RESPIRATOR OR AIR SUPPLIED RESPIRATOR WHEN CUTTING IN CONFINED SPACES OR WHERE VENTILATION DOES NOT KEEP FUME EXPOSURES BELOW LEL/TLV.

**EYE PROTECTION:** WEAR GOGGLES, FACE SHIELD, OR WELDING HELMET WITH THE CORRECT SHADE OF FILTER LENS. PROVIDE PROTECTIVE SCREENS AND FLASH GOGGLES TO SHIELD OTHERS.

**PROTECTIVE CLOTHING:** AS A MINIMUM, WEAR LEATHER GLOVES, ARM AND SHOULDER PROTECTORS, APRON, FACE SHIELD, AND HARD HATS. REFERENCE: ANSI-Z191.1

**CLEAN UP OF SPILLS:** NOT APPLICABLE.

**WASTE DISPOSAL:** DISCARD ANY PRODUCTS, RESIDUE, DISPOSABLE CONTAINER, OR LINER IN AN ENVIRONMENTALLY ACCEPTABLE MANNER, IN FULL COMPLIANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.

**OXYGEN:** THESE TORCHES ARE USED WITH A SINGLE GAS, WHICH IS OXYGEN. OXYGEN CAUSES RAPID BURNING. DO NOT USE OXYGEN TO BLOW OFF CLOTHING OR MATERIALS, AS A SPARK COULD IGNITE OXYGEN SATURATED MATERIALS AND CAUSE BURNS.

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## REACTIVITY DATA

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**HAZARDOUS DECOMPOSITION PRODUCTS:** *THE COMPOSITION OF FUMES AND GASES DEPEND UPON THE MATERIAL BEING CUT. THE QUANTITY OF FUMES TO WHICH THE WORKMAN IS EXPOSED DEPENDS UPON THE CUTTING PROCESS, NUMBER OF WORKMEN IN THE WORK AREA WHO ARE ALSO CUTTING, VOLUME OF THE AREA, AMOUNT OF VENTILATION, AND WHETHER THE WORKMAN KEEPS HIS HEAD OUT OF THE FUME PLUME. LISTED ARE FUME AND GAS PRODUCTS WHICH MAY REASONABLY BE EXPECTED WHEN THE TORCH OR LANCE IS CONSUMED IN NORMAL OPERATION. INCLUDED ARE THOSE ORIGINATING FROM THE OXIDATION, VOLATILIZATION AND REACTION OF THE INGREDIENTS LISTED IN THE HAZARDOUS INGREDIENTS SECTION, PLUS THOSE FROM THE BASE METAL.*

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<i>FUME/GASES</i>	<i>CAS</i>	<i>PEL (OSHA)</i>	<i>TLV(ACGIH)</i>
IRON OXIDE	1309-38-2	5 MG/M3	10 MG/M3
CARBON DIOXIDE	124-30-9	5000 P.P.M.	5000 P.P.M.
CARBON MONOXIDE	630-08-0	50 P.P.M.	50 P.P.M.

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**HEALTH HAZARD DATA**

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THE AC GIH RECOMMENDED TLV FOR CUTTING FUME NOC (NOT OTHERWISE CLASSIFIED) IS 5 MG/M3. SEE REACTIVITY DATA FOR SPECIFIC FUME CONSTITUENTS, WHICH MAY MODIFY THIS PER TLV.

**ACUTE OVEREXPOSURE:** TO CUTTING FUMES MAY RESULT IN DISCOMFORT SUCH AS DIZZINESS, NAUSEA, OR DRYNESS OR IRRITATION OF THE NOSE, THROAT, OR EYES. IN CONFINED AREAS, MAY LEAD TO UNCONSCIOUSNESS AND DEATH.

**CHRONIC OVEREXPOSURE:** TO CUTTING FUMES MAY LEAD TO SIDEROSIS, AND IS BELIEVED BY SOME INVESTIGATORS TO REDUCE PULMONARY FUNCTION.

**EMERGENCY/FIRST AID PROCEDURES:** PROVIDE OXYGEN IF BREATHING IS DIFFUCULT. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION AND GET MEDICAL HELP. TREAT SKIN AREAS EXPOSED TO BURNS. OBTAIN MEDICAL AID FOR ALL OVEREXPOSURES AND EYE INJURIES.

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