

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved
OSHA No. 44-R-1387

11/25/85

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing,
Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME THERMACOTE WELCO		EMERGENCY TELEPHONE NO. 704-739-6421
ADDRESS HWY 161, YORK ROAD, KINGS MTN. N.C. 28086		
CHEMICAL NAME AND SYNONYMS		TRADE NAME AND SYNONYMS 4 AH
CHEMICAL FAMILY	FORMULA	

SECTION II HAZARDOUS INGREDIENTS

IMPORTANT! This section covers the materials from which this product is manufactured. The fumes and gases produced during welding with normal use of this product are covered in Section V.

COVERING OR FLUX	WT%	TLV ₃ Mg/m ³	METAL WIRE	WT%	TLV MG/M ³
TiO ₂	32.0	10.0	C	1.0	15.0
CaO	5.0	5.0	FE AS FeO	98.0	10.0
Zr ₂	6.0	5.0			
FeO	13.0	10.0			
AL 203	1.5	10.0			
Mn	3.0	C5			
CR.	3.5	1.0			
Mo.	2.0	10.0			
SiO ₂	44.0	0.64			
Fe ALLOY	6.0	10.0			

*The term "hazardous" should be interpreted as a term required and defined in the OSHA Hazard Communications Standard (29CFR 1910.1200) and does not necessarily imply the existence of any hazard.

SECTION III - PHYSICAL DATA NOT APPLICABLE

BOILING POINT (°F.)	SPECIFIC GRAVITY (H ₂ O=1)
VAPOR PRESSURE (mm Hg.)	PERCENT VOLATILE BY VOLUME (%)
VAPOR DENSITY (AIR=1)	EVAPORATION RATE (_____ =1)
SOLUBILITY IN WATER	
APPEARANCE AND ODOR	

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

NOT APPLICABLE

FLASH POINT (Method used)	FLAMMABLE LIMITS	LC ₅₀	LD ₅₀
EXTINGUISHING MEDIA			
SPECIAL FIRE FIGHTING PROCEDURES			
UNUSUAL FIRE AND EXPLOSION HAZARDS			

SECTION V HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE	EMERGENCY AND FIRST AID PROCEDURES
pulmonary irritation from dust inhalation	remove to fresh air

SECTION VI REACTIVITY DATA

STABILITY	UNSTABLE		
	STABLE	X	
INCOMPATIBILITY (MATERIALS TO AVOID) None			
HAZARDOUS DECOMPOSITION PRODUCTS			
CO, CO ₂ , Ozone, oxides of nitrogen			
HAZARDOUS POLYMERIZATION Not Applicable			

SECTION VII SPILL OR LEAK PROCEDURES

Not Applicable

SECTION VIII SPECIAL PROTECTION INFORMATION (See Note)

RESPIRATORY PROTECTION (SPECIFY TYPE)	
Weld fume respirator or airline respirator for confined space or where exposures are above TLV.	
VENTILATION	LOCAL EXHAUST in semi-open or poorly ventilated spaces
	MECHANICAL (GENERAL) in semi-open or poorly naturally ventilated space
EYE PROTECTION Face shield and safety glass #12 shade	
PROTECTIVE GLOVES Welder's protective gloves	
OTHER PROTECTIVE EQUIPMENT Welder's clothing for protection against sparks and hot material	

SECTION IX SPECIAL PRECAUTIONS (See Note)

OTHER PRECAUTIONS Arc and sparks could be source of ignition of combustible products

NOTE: For additional information, see American National Standard Safety in Welding and Cutting Z49.1-1967 (American Welding Society Publication Z49.1-1967).