

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 4WH	
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 MG/M ³	METAL WIRE	WT%	TLV MG/M ³
TI02	32.0	10.00	C	1.0	15.0
CA0	5.0	5.0	FE AS FEO	98.0	10.0
Cellulose	3.6	10.0			
ZR2	6.0	5.0			
FEO	13.0	10.0			
AL2O3	1.5	10.0			
MN	3.0	C5			
FEV	1.0	1.0			
SI02	44.0	0.64			
CR	2.5	1.0			
FE Alloys	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	Low	High
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	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%; padding: 5px;">LOCAL EXHAUST</td> <td style="padding: 5px;">in semi-open or poorly ventilated spaces</td> </tr> <tr> <td style="padding: 5px;">MECHANICAL (GENERAL)</td> <td style="padding: 5px;">in semi-open or poorly naturally ventilated space</td> </tr> </table>	LOCAL EXHAUST	in semi-open or poorly ventilated spaces	MECHANICAL (GENERAL)	in semi-open or poorly naturally ventilated space
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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
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NOTE: For additional information, see American National Standard Safety in Welding and Cutting Z49.1-1967 (American Welding Society Publication Z49.1-1967).