

# MATERIAL SAFETY DATA SHEET



## SECTION 1 - IDENTIFICATION

<b>SUPPLIER NAME:</b> Vanguard Steel Ltd.	<b>PRODUCT TYPE:</b> Flux Cored Wire for Mild & High Tensile Steels
<b>ADDRESS:</b> 2160 Meadowpine Blvd., Mississauga Ontario Canada	<b>TRADE NAME:</b> Bonarc E71T-9C
<b>TELEPHONE NUMBER:</b> 905-821-1100	<b>SIZE:</b> All Sizes
<b>DATE PREPARED:</b> August 31, 2017	<b>CLASSIFICATION:</b> AWS E71T-9C/-9M

## SECTION 2 - HAZARDOUS MATERIALS

COVERING AND FLUX INGREDIENTS	WT. %	TLV mg/m <sup>3</sup>	SUPPLEMENTAL INFORMATION
<b>FLUX INGREDIENTS</b>			* NOT LISTED NUISANCE VALUE MAXIMUM 10 mg/m <sup>3</sup>
TITANIUM OXIDE	10	10	
SILICON	0.5	10	
MANGANESE	1.5	5	
<b>OTHERS</b>	<b>WT. %</b>	<b>TLV mg/m<sup>3</sup></b>	<b>SUPPLEMENTAL INFORMATION</b>
LOW CARBON STEEL STRIP	88.0	10(+)	

## SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

**NON-FLAMMABLE:** WELDING ARC AND SPARKS CAN IGNITE COMBUSTIBLES AND FLAMMABLE PRODUCTS SEE Z49.1 REFERENCED IN SECTION 6

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## SECTION 4 - HEALTH HAZARD DATA

<b>THRESHOLD LIMIT VALUE:</b>	MAXIMUM FUME EXPOSURE - 5.0 mg/m <sup>3</sup>
<b>EFFECT OF OVEREXPOSURE:</b>	<ul style="list-style-type: none"><li>• WELDING FUME MAY RESULT IN DISCOMFORT SUCH AS DIZZINESS, NAUSEA OR IRRITATION OF NOSE, THROAT OR EYES</li><li>• ARC RAYS CAN INJURE EYES AND BURN SKIN, ELECTRIC SHOCK CAN KILL</li></ul>
<b>EMERGENCY AND FIRST AID PROCEDURES:</b>	<ul style="list-style-type: none"><li>• CALL FOR MEDICAL AID</li><li>• IF BREATHING IS DIFFICULT GIVE OXYGEN</li><li>• IN ALL CASES CALL A PHYSICIAN</li></ul>

## SECTION 5 - REACTIVITY DATA

<b>STABILITY</b>	UNSTABLE		CONDITIONS TO AVOID
	STABLE	•	NOT NECESSARY
<b>INCOMPATIBILITY (MATERIALS TO AVOID):</b> NOT NECESSARY.			
<b>HAZARDOUS DECOMPOSITION PRODUCTS:</b> WELDING FUMES AND GASES CANNOT BE CLASSIFIED SIMPLY. THE COMPOSITION AND QUANTITY OF BOTH ARE DEPENDANT ON THE METAL BEING WELDING, THE PROCESS, ELECTRODES USED AND PROCEDURE.			
<b>HAZARDOUS POLYMERIZATION</b>	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	•	NOT NECESSARY

## SECTION 6 - SPILL OR LEAK PROCEDURES

**STEPS TO BE TAKEN IN CASE MATERIALS ARE RELEASED OR SPILLED:** NOT NECESSARY  
**WASTE DISPOSAL METHOD:** USE SCRAP DISPOSAL IN AN ENVIRONMENTALLY ACCEPTABLE MANNER ACCORDING TO LOCAL REGULATIONS UNLESS OTHERWISE NOTED.

## SECTION 7 - SPECIAL PROTECTION INFORMATION

**RESPIRATORY PROTECTION:** USE RESPIRABLE FUME RESPIRATOR WHEN WELDING IN CONFINED SPACE  
**USE ENOUGH VENTILATION:** EXHAUST AT THE ARC, OR BOTH, TO KEEP FUMES AND GASES AWAY FROM YOUR BREATHING ZONE AND THE GENERAL AREA.  
**PROTECTIVE GLOVES:** YES, WHEN WELDING | **EYE PROTECTION:** SHIELD NECESSARY WHEN WELDING  
**OTHER PROTECTIVE EQUIPMENT:** MAY INCLUDE ARM PROTECTORS, APRONS, SHOULDER PROTECTION, HATS, AND DARK SUBSTANTIAL CLOTHING. DO NOT ALLOW LIVE ELECTRODES TO CONTACT SKIN.

## SECTION 8 - SPECIAL PRECAUTIONS

**PRECAUTIONS TO BE TAKEN IN HAULING AND STORING:** KEEP DRY  
**OTHER PRECAUTIONS:** READ AND UNDERSTAND THE MANUFACTURER'S INSTRUCTION AND THE PRECAUTIONARY LABEL ON THE PRODUCT