

MATERIAL SAFETY DATA SHEET

| SECTION I - IDENTIFICATION | |
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| SUPPLIER NAME: VANGUARD STEEL LTD. | PRODUCT TYPE: FLUX CORED WIRE FOR STAINLESS STEEL |
| ADDRESS: 2160 MEADOWPINE BLVD., MISSISSAUGA ONTARIO CANADA | TRADE NAME: BONARC E308LT-1/4 |
| TELEPHONE NUMBER: 905-821-1100 | SIZE: ALL SIZES |
| DATE PREPARED: MARCH 6, 2009 | CLASSIFICATION AWS E308LT-1/4 |

| SECTION II -- HAZARDOUS MATERIALS | | | |
|--|--------------|------------------|--|
| COVERING AND FLUX INGREDIENTS | WT. % | TLV mg/m3 | SUPPLEMENTAL INFORMATION |
| TITANIUM OXIDE | 12.0 | 10 | (*) NOT LISTED NUISANCE VALUE MAXIMUM 10 mg/m3 |
| MANGANESE and MANGANESE ALLOYS | 1.5 | 5 | |
| SILICONE and SILICONE OXIDE | 2.0 | 10(*) | |
| CHROMIUM and CHROMIUM ALLOYS | 5.0 | 0.5 | |
| TOTAL-Fe | 1.5 | 10(*) | |
| NICKEL OXIDE | 2.0 | - | |
| ALUMINUM AND ALUMINUM OXIDE | 0.5 | 10 | |
| | | | |
| OTHERS | WT. % | TLV mg/m3 | |
| STAINLESS STEEL STRIP | 75.5 | | |
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| SECTION III -- FIRE AND EXPLOSION HAZARD DATA |
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| NON-FLAMMABLE: WELDING ARC AND SPARKS CAN IGNITE COMBUSTABLES AND FLAMMABLE PRODUCTS SEE Z49.1 REFERENCED IN SECTION VI |

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| SECTION IV – HEALTH HAZARD DATA | |
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| THRESHOLD LIMIT VALUE: | MAXIMUM FUME EXPOSURE 5.0mg/m3 |
| EFFECT OF OVEREXPOSURE: | WELDING FUME MAY RESULT IN DISCOMFORT SUCH AS DIZZINESS, NAUSEA OR IRRITATION OF NOSE, THROAT OR EYES. ARC RAYS CAN INURE EYES AND BURN SKIN, ELECTRIC SHOCK CAN KILL |
| EMERGENCY AND FIRST AID PROCEDURES: | CALL FOR MEDICAL AID. IF BREATHING IS DIFFICULT GIVE OXYGEN. IN ALL CASES CALL A PHYSICIAN. |

| SECTION V – REACTIVITY DATA | | | |
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| STABILITY | UNSTABLE | | CONDITIONS TO AVOID |
| | STABLE | • | NOT NECESSARY |
| INCOMPATIBILITY (MATERIALS TO AVOID): NOT NECESSARY | | | |
| HAZARDOUS DECOMPOSITION PRODUCTS: 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 | | | |
| HAZARDOUS POLYMERIZATION | MAY OCCUR | | CONDITIONS TO AVOID |
| | WILL NOT OCCUR | • | NOT NECESSARY |

| SECTION VI- SPILL OR LEAK PROCEDURES | |
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| STEPS TO BE TAKEN IN CASE MATERIALS ARE RELEASED OR SPILLED: | NOT NECESSARY |
| WASTE DISPOSAL METHOD: | USE SCRAP DISPOSAL IN AN ENVIROMENTALLY ACCEPTABLE MANNER, ACCORDING TO LOCAL REGULATIONS UNLESS OTHERWISE NOTED. |

| SECTION VII- SPECIAL PROTECTION INFORMATION | |
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| RESPIRATORY PROTECTION: USE RESPIRABLE FUME REPIRATOR WHEN WELDING IN CONFIDED 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 VIII- SPECIAL PRECAUTIONS | |
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| PRECAUTIONS TO BE TAKEN IN HAULING AND STORING: | KEEP DRY |
| OTHER PRECAUTIONS: READ AND UNDERSTAND THE MANUFACTURER'S INSTRUCTIONS AND THE PRECAUTIONARY LABEL ON TH PRODUCTS | |