**SECTION 5 – REACTIVITY DATA**

Determine the composition and quantity of fumes and gases to which workers are exposed by taking an air sample from inside the welder’s helmet if worn or in the welder’s breathing zone. Improvement in ventilation if exposures are not below limits. See ANSI/AWS F1.1, F1.2, F1.4, and F1.5, available from the American Welding Society, 550 N.W. LeJeune Road, Miami, FL 33126.

**SECTION 6 – HEALTH HAZARD DATA**

Carcinogenicity: The composition of welding or brazing fumes may contain carcinogens, depending on several factors that are unknown and unknowable to the product manufacturer (see Section 5). Always assume that welding or brazing fumes may contain carcinogenic materials, and follow sound Work/Hygienic, and ACGIH recommendations.

Threshold Limit Value: The ACGIH recommended general limit for Welding Fume NOC – (Not otherwise Classified) is 5 mg/m³. ACGIH-1987-88 preface states that the TLV-TWA should be used as guides in the control of health hazards and should not be used as fine lines between safe and dangerous concentrations. See Section 5 for specific flame constituents which may modify this TLV. Threshold Limit Values are figures published by the American Conference of Government Industrial Hygienists. Units are milligrams per cubic meter of air. Effects of Overexposure: Electric arc welding may create one or more of the following health hazards: Fumes and Gases can be dangerous to your health. Common entry is by inhalation. Other possible routes are skin contact and ingestion. Short-term (acute) exposure to welding fumes may result in discomfort such as metal fume fever, dizziness, nausea, or dryness or irritation of nose, throat, or eyes. May aggravate pre-existing respiratory problems (e.g. asthma, emphysema). Exposure to extremely high levels of fluorides can cause abdominal pain, diarrhea, mucousosal troubles and joint pain. In extreme cases it can cause toxicosis. Overexposure to welding fumes can lead to siderosis (iron deposits in lung) and may affect pulmonary function. Manganese overexposure can affect the central nervous system, resulting in impaired speech and movement. Bronchitis and some lung fibrosis has been noted. Repetitive exposure to fumes to fluorides may cause excessive calcification of the bone and calcification of ligaments of the ribs, pelvis and spinal column. May cause skin rash. Arc Rays can injure eyes and burn skin. Skin cancer has been reported. Electric Shock can kill. If welding must be performed in damp locations or with wet clothing, on metal structures or when in close proximity to water or dampened positions such as sitting, kneeling or lying, if there is a high risk of unavoidable or accidental contact with the equipment, follow the appropriate treatment: Semiautomatic DC Welder, DC Manual (Stick) Welder, or AC Welder with Reduced Voltage Control. Emergency and First Aid Procedures: Call for medical aid. Employ first aid techniques recommended by the American Red Cross. If BREATHING IS DIFFICULT give oxygen. If NOT BREATHING employ CPR (Cardiopulmonary Resuscitation) techniques. IN CASE OF ELECTRICAL SHOCK, turn off power and follow recommended treatment. In all cases, call a physician.

**SECTION 7 – PRECAUTIONS for SAFE HANDLING and USE**


Disposal Information: Discard any product, residue, disposable container, or liner as ordinary waste in an environmentally acceptable manner according to Federal, State and Local Regulations unless otherwise noted.

**SECTION 8 – CONTROL MEASURES**

New Jersey Right-To-Know Information: 5 most predominant ingredients/hazardous and non-hazardous 1 Carbon Steel; 2 Iron; 3 Limestone and/or calcium carbonate; 4 Fluorides (as F); 5 Silicon and/or silicon alloys and compounds (as Si).

**SARA Title III Notification Information:** All chemical compounds marked with an asterisk (*) are toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Super Fund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Disclaimer of Expressed and Implied Warranties: The information in this document is believed to be correct as of the date issued. No expressed or implied warranty, as to the accuracy, completeness, fitness for any particular purpose, or any other quality or characteristic, is to be implied regarding the accuracy or completeness of this information, the results to be obtained from the use of this information, the product, the safety of this product, or the hazards related to its use.