MATERIAL SAFETY DATA SHEET (MSDS)

SECTION I – IDENTIFICATION

Provider:	ANCHOR WELD (WUHAN) TECHNOLOGY CO., LTD
Address:	ROOM A2-34-03, GUANNAN INDUSTRIAL COMPLEX, EAST LAKE HIGH TECH DEVELOPMENT ZONE, WUHAN 430084, CHINA
Tel:	+86- 27-86952088
Product:	E71T-1C
Specification:	AWS A5.20

SECTION II – DANGEROUS MATERIALS

IMPORTANT: This section covers the products from which this product is manufactured. The fumes and gases that are produced during welding with normal use of this product are covered in SECTION V.
The term "Hazardous Materials" should be interpreted as a required term defined in the OSHA HAZARD COMMUNICATION STANDARD (29 CFR part 1910.1200). However, the use of this term does not necessarily imply the existence of any danger.

Flux or other ingredients	% Weight	N° CAS	Exposure Limit (mg/m3)	
			OSHA PEL	ACGIH TLV
Iron (Fe) (limits as oxide fumes)	80-95	7439-89-6	10	5
Manganese (Mn) (1) (limits like smoke)	< 4	7439-96-5	1; 3,0**; 5*	0,2
Titanium Oxide (1)	< 9	13463-67-7	15; 5 (Resp)	10; 20**
Silicon (Si)	< 2	7440-21-3	15; 5 (Resp)	10; 20**
Fluorite (F) (1)	< 5	7789-75-5	2,5 (as F)	2,5 (as F)

Occupational Safety and Health Administration 29 CFR 1910.1000 Permissible Exposure Limit (PEL)
[Allowable Exposure Limit]
American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV [R])
[Threshold Limit Value]
* Ceiling Limit [Maximum Allowable Limit]
** Short Term Exposure Limit (1) Subject to the reporting requirements of Sections 302, 304, 311, 312 and 313 of the Emergency Planning and Community Right-to-Know Act. of Community Knowledge and Emergency Planning] of 1986 and 40 CFR 370 and 372; (Resp) = Respiratory

SECTION III – PHYSICAL DATA

The material consists of cored wire containing flux, metal, and other ingredients listed in Section II, which are non-flammable, non-explosive, non-reactive, and non-hazardous.

SECTION IV – FIRE AND EXPLOSION DATA

Non-flammable: The arc and sparks from the welding process can ignite fuels. See Z-49.1, referenced in SECTION VI.

SECTION V – REACTIVITY DATA

Hazardous Decomposition Products

Welding fumes and gases cannot be classified simply. The composition and qualities of both depend on the material being welded, the process, the procedures and the electrodes used. Other conditions that can also influence the composition and quantity of fumes and gases to which workers are exposed include: coatings on the metal being welded (such as paint, plating, or galvanization), number of welders working, and volume of the work area, quality and quantity of the ventilation system, position of the welder's head with respect to the fumarole, as well as the presence of pollutants in the atmosphere (such as chlorinated hydrocarbon vapors typical of cleaning and degreasing activities). When the electrode is consumed, the fumes and gases of the decomposition generated are different in percentage and form with respect to the ingredients listed in SECTION II. The composition of these fumes and gases is the subject of interest and not the composition of the electrode itself. Decomposition products include those that originate from the volatilization, reaction, or oxidation of the ingredients listed in SECTION II, plus those that originate from the base metal and its coating, etc., as indicated above. The constituents whose presence can reasonably be expected in the fumes of this product would include: complex oxides of iron, manganese, silicon, titanium and fluorides. The smoke limits for Cr (VI) can be reached before reaching the 5 mg / m3 limit for general welding fumes. Observe the level of Cr (VI).

The gaseous products of the reaction can include carbon monoxide and carbon dioxide. Ozone and nitrogen oxides can be formed by the radiation of the electric arc.

One method of determining the composition and quantity of fumes and gases to which workers are exposed is to take an air sample inside the welder's helmet during use, or within the welder's breathing area. See ANSI / AWS publication F1.1, available from the American Welding Society, 8669 NW 36th Street # 130, Miami, FL 33166, USA

SECTION VI – DATA RELATING TO HEALTH RISKS

Threshold Limit Value:

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The general limit recommended by ACGIH for Unclassified Welding Fume NOC (Not Otherwise Classified) is 5 mg / m3. The preface to ACGIH-2016 states: “TLV-TWA values should be used as guidelines reference in the control of health risks and should not be used as border values between safe and dangerou concentrations ”. See SECTION V for information on specific constituents of fumes that may modify this TLV.

The Common Route of Entry is by Inhalation or Through the Eyes and Skin. Effects of Overexposure
Inhalation of welding fumes and gases can be hazardous to health. Short-term (acute) overexposure will cause discomfort such as dizziness, nausea, or dryness or irritation of the nose, throat, or eyes. Inhaling extremely high levels of fluorides can cause abdominal pain, diarrhea, muscle weakness, and seizures. Continued inhalation could cause loss of consciousness and death.

MANGANESE (Manganese Dioxide [MnO2])
Short-term overexposure should be treated by moving the affected person away from the exposure area and applying artificial respiration if required. Eyes and / or skin should be washed with water to remove dust particles.
Modified fluorides can cause skin and eye burns: pulmonary edema bronchitis.
Long-term overexposure to welding fumes can cause siderosis (iron deposition in the lungs) and is believed to affect lung function.

MANGANESE (Manganese Dioxide [MnO2])
Long-term overexposure to manganese compounds can affect the central nervous system. Symptoms such as muscle weakness, tremors, and behavior changes may appear. Workers exposed to manganese compounds must undergo medical examinations several times a year for early detection of manganese poisoning.

FLUORIDES

Repetitive exposure to fluoride fumes and / or gases can cause excessive calcification of the bones and ligaments of the ribs, pelvis and column.

ARC RAYS can damage eyes and burn skin. ELECTRIC SHOCK can kill. See SECTION VII.

CARCINOGENICITY

This product does not contain ingredients defined as carcinogens according to the 29CFR 1910.1200 - Hazard Communication Standard.

CALIFORNIA PROPOSITION 65

This product may contain or may produce chemicals known to the State of California to cause cancer and / or birth defects (or other reproductive harm) [Health and Safety Code section 25249.5 et seq.].

SECTION VII – PRECAUTIONS FOR SAFETY IN HANDLING AND USE / APPLICABLE CONTROL MEASURES

Read and understand the manufacturer's instructions and the warning label on the product, as well as the safety practices of your employer. See American National Standard Z49.1. Safety in Welding and Cutting, published by the AMERICAN WELDING SOCIETY, 8669 NW 36th Street # 130, Miami, FL 33166, USA and OSHA publication 2206 (29CFR1910), U.S. Government Printing Office, Superintendent of Documents,
P.O. Box 37954, Pittsburg, Pa 15250-7954, for more details on the following points:

VENTILATION: Use sufficient ventilation and / or local exhaust in the arc zone to keep gases and fumes below the TLV values in the welder's breathing zon and in the general area. Train the welder to keep his head out of the fumes.

RESPIRATORY PROTECTION: Use a supplied-air or fume filter respirator when welding in confined spaces or general areas where local exhaust or ventilation will not keep exposure below the TLV value.

EYE PROTECTION: Wear a helmet or facemask with eye filter number 12-14 or darker. Protect other workers by wearing safety shields and goggles.

PROTECTIVE CLOTHING: Wear approved hand, head and body protection to help prevent damage from radiation, sparks and shock electric. See ANSI Z49.1 standard. This should include welder's gloves and face shield, and may include arm guards, apron, shoulder guards, as well as dark clothing. Train the welder not to touch electrically live parts with skin or wet clothing and to isolate himself from energized and ground points.

WASTE DISPOSAL PROCEDURE: Dispose of any product, residue, waste receptacles or coatings in an environmentally sound manner, approved by state and local regulations.

For more information, consult ANCHOR WELD (WUHAN) TECHNOLOGY CO., LTD

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