WHMIS/US OSHA Material Safety Data Sheet for:

Carbon Steel Electrode PROSTAR S6

Section 1: MANUFACTURER/PREPARER INFORMATION & HAZARD WARNINGS

SIDERGAS SPA Viale Rimembranza # 17 37010 S. AMBROGIO (VERONA) ITALY	EMERGENCY PHONE **N/R**	INFORMATION PHONE N/R
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WHMIS HAZARD SYMBOLS & DEFINITIONS

Class D-1: Poisonous & infectious material, immediate & serious toxic effects

Class D-2: Poisonous & infectious material, other toxic effects

Section 2: HEALTH HAZARD DATA

ROUTES OF ENTRY/SIGNS & SYMPTOMS OF ACUTE EXPOSURE:

EYES: Arc rays can injure eyes. **SKIN:** Arc rays can burn skin. **INHALATION:** Overexposure to welding fumes may result in discomfort such as metal fume fever, dizziness, nausea, or dryness or irritation of nose, throat, or eyes. **INGESTION:** N/R. **OTHER:** Electric shock from arc welding equipment can kill.

Chronic Effects: Long-term 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 have been reported. **Carcinogens:** N/R. **Medical Conditions Aggravated by Exposure:** Preexisting respiratory problems (e.g. asthma, emphysema).

EMERGENCY & FIRST AID PROCEDURES:

EYES / SKIN / INHALATION / INGESTION: 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 call cases, call a physician.

Section 3: PREVENTATIVE MEASURES

Respiratory Protection: Use respirable fume respirator or air supplied respirator when welding in confined space or general work area where local exhaust or ventilation does not keep exposure below TLV.

Ventilation: Use enough ventilation, local exhaust at the arc, or both to keep fumes and gases from the worker's breathing zone and the general area. Train welder to keep his head out of the fumes.

Gloves: Welder's gloves. **Eye Protection:** Wear helmet or use face shield with filter lens shade number 12 or darker. Shield others by providing screens and flash goggles. **Other Protective Equipment:** Wear hand, head, and body protection, which help to prevent injury from radiation, sparks or electrical shock. At a minimum this may include arm protectors, aprons, hats, shoulder protection, as well as dark substantial clothing.

Work/Hygienic Practices: Avoid inhalation of fumes. Use industrial hygiene monitoring to ensure that use of this material does not create exposures which exceed PEL/TLV.

Handling and Storing: Train welder not to permit electrically live parts or electrodes to contact skin, or clothing or gloves if they are wet. Insulate from work and ground. If welding must be performed in damp locations or with wet clothing, on metal structures, or when in cramped positions such as sitting, kneeling or lying, if there is a high risk of unavoidable or accidental contact with workpiece, use the following equipment: Semiautomatic DC Welder. DC Manual (Stick) Welder, or AC Welder with Reduced Voltage Control.

KEEP OUT OF THE REACH OF CHILDREN AND ANIMALS.

N/A=Not Applicable. N/E=Not Evaluated/Established. N/R=Not Reported by Manufacturer.

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Section 4: HAZARDOUS COMPONENTS & EXPOSURE LIMITS

Hazardous Component Name	CAS #	OSHA PEL	ACGIH-TLV	Other Limit	% Wt
Carbon steel wire		10 mg/M3	10 mg/M3	N/R	100
Nominal wire composition:					
§Total manganese	7439-96-5	1 mg/M3 fume	0.2 mg/M3	3 mg/M3 STEL	< 2
§Total copper including plated coating	7440-50-8	0.1 mg/M3 fume	0.2 mg/M3 fume	N/R	< 0.5
Iron	7439-89-6	10 mg/M3 iron oxide	10 mg/M3 5 mg/M3 iron oxide	N/R	balance

§ indicates a toxic chemical subject to the reporting requirements of SARA Title III, Section 313.
† indicates a chemical known to the State of California to cause cancer, birth defects or other reproductive harm per Proposition 65.

Section 5: PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: N/A
Vapor Pressure: N/A
Vapor Density (Air=1): N/A
Solubility in Water: N/A
Specific Gravity: N/A
Percent Volatile: N/A
Evaporation Rate: N/A
pH: N/A
Appearance/Odor: Carbon steel electrodes.

Section 6: FIRE & EXPLOSION HAZARD DATA

Flash Point (Method): N/A
Flammable Limits. LEL N/A **UEL:** N/A
Extinguishing Media: N/A

Special Firefighting Procedures: Non flammable. Welding arc and sparks can ignite combustible and flammable products.

Unusual Fire and Explosion Hazards: N/A

Section 7: REACTIVITY DATA

Stability: Stable. **Hazardous Polymerization:** Will not occur. **Conditions to Avoid:** N/R. **Incompatibility:** N/R. **Hazardous Decomposition or Byproducts:** Welding fumes and gases cannot be classified simply. The composition and quantity of both are dependent upon the metal being welded the process, procedure and electrodes used. Reasonably expected fume constituents of this product would include: Primarily iron oxide; secondarily complex oxides of copper, manganese and silicon when used with gas shielding. Gaseous reaction products may include carbon monoxide and carbo dioxide. Ozone and nitrogen oxides may be formed by the radiation.

Section 8: SPILLS, DISPOSAL & ADDITIONAL INFORMATION

Spill/Leak Procedures: Prevent waste from contaminating surrounding environment.

Waste Disposal: Discard any product, residue, disposable container, or liner as ordinary waste in an environmentally acceptable manner.

Additional Information: N/R