

Product: Lincolnweld L-56
Date: 1/1/90

SECTION IV - HEALTH HAZARD DATA

Threshold Limit Value: The ACGIH recommended general limit for Welding Fume NOC - (Not Otherwise Classified) is 5 ACGIH 197-88 preface states that the TLV-TWA should be used as guides in the control of health hazards and should not be used to define lines between safe and dangerous concentrations. See Section V for specific fume 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.

Short-term (acute) overexposure to welding fumes may result in discomfort such as dizziness, nausea, or dryness or irritation of nose, throat, or eyes.

Long-term (chronic) overexposure to welding fumes can lead to siderosis (iron deposits in lung) and affect pulmonary

Arc Rays can injure eyes and burn skin.
Electric Shock can kill.

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 ELECTRICAL SHOCK, turn off power and follow recommended treatment. In all cases call a physician.

SECTION V - REACTIVITY DATA

Hazardous Decomposition Products: 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.

Other conditions which also influence the composition and quantity of the fumes and gases to which workers may be exposed include: coatings on the metal being welded (such as paint, plating, or galvanizing), the number of welders and the volume of the work area, the quality and amount of ventilation, the position of the welder's head with respect to the fume plume as well as the presence of contaminants in the atmosphere (such as chlorinated hydrocarbon vapors from cleaning and degreasing activities.)

When the electrode is consumed, the fume and gas decomposition products generated are different in percent and form from the ingredients listed in Section II. Decomposition products of normal operation include those originating from the volatile reaction, or oxidation of the materials shown in Section II, plus those from the base metal and coating, etc., as noted.

Reasonably expected fume constituents of this product would include: Primarily iron oxide and fluorides; secondarily complex oxides of aluminum, calcium, magnesium, manganese, potassium, silicon, sodium, titanium and zirconium when used with recommended Lincolnweld fluxes.

Primarily iron oxide; secondarily complex oxides of copper, manganese and silicon when used with gas shielding.
Maximum fume exposure guideline and PEL for this product is 5.0 milligrams per cubic meter.

Gaseous reaction products may include carbon monoxide and carbon dioxide. Ozone and nitrogen oxides may be formed by radiation from the arc.

One recommended way to determine the composition and quantity of fumes and gases to which workers are exposed is to take a sample from inside the welder's helmet if worn or in the worker's breathing zone. See ANSI/AWS F1.1 'Method for Sampling Particles Generated by Welding and Allied Processes,' available from the American Welding Society, 550 N.W. LeJeune Road, FL 33126.

SECTION VI AND VII CONTROL MEASURES AND PRECAUTIONS FOR SAFE HANDLING AND

Read and understand the manufacturer's instructions and the precautionary label on the product. See American National Standard Z49.1, 'Safety in Welding and Cutting' published by the American Welding Society, 550 N.W. LeJeune Road, Miami, FL, 33126 and OSHA Publication 2206 (29CFR1910), U.S. Government Printing Office, Washington, D.C. 20402 for more details on many of the following:

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

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

Eye Protection: Wear helmet or use face shield with filter lens shade number 12* or darker. Shield others by providing screens and flash goggles. (* No specific recommendation for submerged arc.)

Protective Clothing: Wear hand, head, and body protection which help to prevent injury from radiation, sparks and electrical shock. See Z49.1. At a minimum this includes welder's gloves and a protective face shield, and may include aprons, hats, shoulder protection, as well as dark substantial clothing. Train the welder not to permit electrical live parts or electrodes to contact skin or clothing or gloves if they are wet. Insulate from work and ground.

Disposal Information: Discard any product, residue, disposable container, or liner as ordinary waste in an acceptable manner unless otherwise noted.