



WALLCOLMONOY

Safety Precautions

Spraywelder™ System

Fusewelder™ Torch

This booklet provides our customers with general safety guidelines to follow during spraying and fusing applications; in order for them to ensure a safe working environment for employees engaged in these operations.

We cannot furnish information that would address all workplace environments, and it is the responsibility of the user to evaluate what controls and/or personnel protective equipment (PPE) are best suited for their particular application(s).

In addition to this booklet, consult the Spraywelder™ & Fusewelder™ Operating Manuals as well as the Safety Data Sheets (SDS) for the Spraywelder™ or Fusewelder™ powders being used. Also recommended is Chapter 11 of “Thermal Spraying, Practice, Theory, and Applications” published by the American Welding Society.

Safety Precautions

Ventilation:

Spraying or fusing operations should be performed under an exhaust hood with adequate ventilation to keep any air contamination below the permissible exposure level.

(Refer to Threshold Limit Values published by the American Conference of Governmental Industrial Hygienists [ACGIH] for exposure limits for fumes).¹

Stationary operations should be performed in a spray booth with a dust collection system.

Spray booth velocity of 100 to 200 feet per minute (fpm) is normally sufficient to reduce contamination to the degree that a hazard does not exist. Once the required fpm has been established, a fixed device to measure air velocity should be used to assure that the correct velocity stays within established limits.

Clothing

Fire-resistant work gloves and long-sleeved fire resistant work shirts, without pockets, are recommended.

Eye Protection

Shaded protective lenses are required for fusing applications and for spraying applications using a heat process. **Shade number three** is the minimum recommended and **shade five is preferred**. Select **safety glasses that have side shields** offering sufficient protection from any airborne particulates. *(Refer to ANSI Z49.1, part of AWS F2.2 for a complete list of shade numbers).³*

Air Sampling

If there is reason to suspect that ventilation is not adequate, air sampling should be conducted in the employee's breathing zone. Sampling methods should include those for airborne particulate, as well as for any fumes that may be created during a heating process. These fumes may have a lower exposure limit than the alloy in powder form. Depending on the alloy being used, fumes can be generated that are classified as human carcinogens. *(Consult the manufacturer's Safety Data Sheet [SDS] for a list of the constituents)*

Respirator Usage

OSHA regulations state that if adequate controls are not feasible, or while they are being installed, only then shall respirator usage be instituted. If respirators are required, refer to OSHA CFR 1910.134 on Respiratory Protection.² It is important to select a respirator that offers protection from the form of contaminant present. A dust mask will not offer fume protection, while a cartridge respirator may be more than what is needed for protection from airborne particulates. Consult your safety professional for guidance, if needed.

Precautions for Compressed Gases

Gases under pressure can be highly combustible and must be handled with care. Pressure reducing regulator valves must be used. Store oxygen and acetylene cylinders separate from each other, secured in an upright position. Do not store or use any other flammable materials in the area. Be sure to manifold acetylene cylinders when needed to ensure

sufficient capacity for fuel delivery to the torch(s) being used. Insufficient delivery capacity can lead to equipment damage and explosion hazard.

General Warnings

Keep fumes and gases from your breathing zone. Do not eat or smoke in the area of use. Avoid creating airborne particles when handling powder and during clean up operations. Recommend damp sweeping compound or vacuum not a blow off with compressed air.

¹“Threshold Limit Values for Chemical Substances and Physical Agents” published by the American Council of Governmental Industrial Hygienists (ACGIH), 1330 Kemper Meadow Drive, Cincinnati, OH 45240, www.acgih.org

²OSHA Code of Federal Regulations (29 CFR 1910), phone 800-321-6742, www.osha.gov

³American Welding Society, “ANSI Z49.1 Safety in Welding and Cutting and Allied Processes”, phone 800-854-7179, www.global.ih.com

The information provided herein is given as a guideline to follow. It is the responsibility of the end user to establish the process information most suitable for their specific application(s). Wall Colmonoy Corporation (USA) assumes no responsibility for failure due to misuse or improper application of this product, or for any incidental damages arising out of the use of this material.



Safety & Welding Information

When you have questions about safety on our products, equipment, or techniques, contact your plant safety manager.

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