

WELDING SAFETY

MODULE 4 – MISCELLANEOUS WELDING SAFETY

FREQUENTLY ASKED QUESTIONS

Q: What is a warning label?

A: A warning label is a label that contains information about the safe use of a product that you need to know to use the product safely. You should read a warning label prior to first using a product.

Q: On what types of welding machines can you find warning labels?

A: You can find warning labels on arc welding equipment, including arc welders and wire feeders, and arc welding electrode and flux products.

Q: What types of hazards and reference information does a typical warning label review?

A: It covers the basic hazards encountered in arc welding such as exposure to arc welding fumes and gases, electric shock, arc rays and fire and explosion. It also instructs the welder to read and follow the manufacturer's instructions and refers the welder to the OSHA regulations and the American National Standard regarding Arc Welding & Cutting Safety (ANSI Z49.1).

Q: Why is it a good idea to review warnings periodically?

A: Warnings on electrode and flux products are also updated occasionally so it is a good idea to review them again periodically to be sure you have the information you need to use the product safely. The warnings also vary from product to product so when you change the product you are using you should review the warning on the new product when you begin to use it.

Q: What is the purpose of a Special Ventilation Note?

A: Special Ventilation Notes inform the user that a particular substance in the electrode is present in sufficient amounts that additional ventilation is needed to properly control fume exposure. Special Ventilation Notes commonly relate to manganese and chromium in the welding fumes; however other substances may also require such notes. Special attention to ventilation is important when welding with products having Special Ventilation Notes.

Q: What is a GHS-FORMATTED SAFETY DATA SHEET (SDS)?

A: An SDS or Safety Data Sheet is a document containing important information about a hazardous chemical or chemical product and must include the following:

- Product name
- Chemical and generic name of certain ingredients
- Chemical and physical properties of the hazardous substance
- Health hazard information
- Precautions for safe use and handling
- Manufacturer's name, address and telephone number.

The SDS provides employers, workers and health and safety professionals with the necessary information to assist in safely managing the risk from hazardous substance exposure.

WELDING SAFETY

MODULE 4 – MISCELLANEOUS WELDING SAFETY

FREQUENTLY ASKED QUESTIONS

Q: Why is a SDS needed for arc welding consumable products?

A: Lincoln Electric has provided safety data sheets (SDS) to its customers for years because the SDS provides important information to end-user customers regarding the safe use of its products. Since 1985, the Occupational Safety & Health Administration (OSHA) regulations have required manufacturers or distributors to provide an SDS for each chemical product that they sell, including arc welding consumables.

Q: What is the purpose for Safety Data Sheet (SDS)?

A: The SDS provides industrial hygienists, employers, workers, emergency response personnel and health and safety professionals with information about what is in the product, the potential hazards of exposure and use, and how to safely handle, work with and dispose of the product.

Q: What is the Globally Harmonized System (GHS)?

A: GHS is short for “Globally Harmonized System.” GHS is an internationally recognized system which specifies how the hazards of chemical products are communicated. This includes an expanded format for the MSDS, now SDS, which OSHA has indicated it will require manufacturers to provide.

Q: Why do you need to switch from the “MSDS” format to the “SDS” format?

A: MSDS have always included information about what is in the product, potential health hazards, and safe use instructions, as well as what to do if there is an emergency. Lincoln Electric’s new SDS will be formatted to comply with the Globally Harmonized System (GHS) and will contain 16 distinct sections with information such as hazards, first aid safety, storage and handling, physical and chemical properties, and disposal instructions.

Q: What other changes will be made regarding the new SDS?

A: As part of the change to the GHS-formatted SDS, Lincoln Electric will provide communication by distributing SDS via email and internet download, making it easier to receive and further distribute the multi-page document electronically. The SDS will no longer be placed inside each consumable package when the new SDS is phased in.

Q: If Lincoln Electric is no longer placing a SDS in each package of consumable product, how will customers receive this information?

A: Customers who purchase products from Lincoln Electric will receive the Safety Data Sheets by email, internet download or alternative methods. If delivery by these methods is not possible, the SDS can even be viewed on a mobile device using a QR Code located on the Safe Use Guide and product packaging. Customers who purchase Lincoln Electric products from distributors or other resellers will receive the SDS from the distributor. Lincoln Electric SDS will continue to be available on the Lincoln Electric website at www.lincolnelectric.com/sds. On the website, you can view, download and print the SDS needed. On the website customers may also subscribe to receive automatic email alerts when the SDS for the products you use are updated.

WELDING SAFETY

MODULE 4 – MISCELLANEOUS WELDING SAFETY

FREQUENTLY ASKED QUESTIONS



Q: What will distributors of Lincoln Electric products need to do?

A: One effect of the change in the SDS distribution method is that it becomes very important that distributors must provide SDS documents to their customers. Distributors may also provide SDS to their customers by using the email alert system on the Lincoln Electric website. Under OSHA's Hazardous Communication Standard [29 CFR 1910.1200] distributors continue to be responsible for providing SDS documents to their customers for the products they sell. An SDS must be provided to customers on or before the initial shipment of the product and after an SDS has been changed.

Q: What will be included in the consumable package when the SDS is removed?

A: At the same time the new SDS is rolled out, Lincoln Electric will introduce the Safe Use Guide (SUG). The Safe Use Guide will be packaged with each consumable product. This fact sheet provides a summary of basic safety and potential health hazard information for employers and welders in a simplified format. It can be used for safety training or as a convenient reminder of what should be done to weld safely.

Q: How can a customer obtain further information about the safety and health information provided in the product labeling, Safe Use Guide or the SDS?

A: Customers may contact Lincoln Electric in several ways to obtain more information regarding the safe use of its products. There is a lot of useful safety and health information available on the Lincoln Electric safety website located at <http://www.lincolnelectric.com/safety>. See the FAQ for the answers to many common welding safety questions. Request a copy of the welding Safety Interactive DVD which includes a very comprehensive course on many arc welding safety and health topics. If you need further information you may contact Lincoln Electric through the website's "Contact Us" link or by calling Lincoln Electric directly at (216) 481-8100.

Q: Can I use my smart phone and QR code on the product package and SAFE USE GUIDE (SUG) to obtain the SDS?

A: This unique bar code allows you to instantly learn more about the products by visiting our mobile SDS page. On this page you will find an SDS Look Up, receive product alerts, subscribe to the automated emails and view interactive welding safety all on your mobile device.

Q: What is the most important consideration in selecting a trailer for your application?

A: Trailer capacity must be adequate for the payload.

Q: Where can you find the rated capacity for a trailer?

A: Check the manufacturer's specifications and the capacity plate on the trailer.

Q: What is the most important consideration in selecting a tow vehicle?

A: Tow vehicle and hitch capacity are important. Check capacity and serviceability of the tow vehicle and hitch.

WELDING SAFETY

MODULE 4 – MISCELLANEOUS WELDING SAFETY

FREQUENTLY ASKED QUESTIONS



Q: What is generally recommended minimum tongue weight for a trailer?

A: Always maintain a minimum tongue weight of approximately 8% of total trailer plus payload weight.

Q: How and when should safety chains be connected when towing a trailer?

A: Safety chains should always be crossed under the tongue of the trailer and connected to the eyes of the hitch. Install safety chains on trailer before towing the trailer. Be sure the safety chains and emergency brake cable are in place and properly connected.

Q: What should be done to be sure that the trailer and tow vehicles tires are prepared for towing?

A: Check the tires and tire pressure. Inspect all tires for damage or wear. This includes the tow vehicle tires. Tire pressures should be set to the trailer or vehicle manufacturer's recommended pressure and not greater than the maximum pressure on the tire.

Q: What should be checked about the wheels on the trailer and tow vehicle before towing?

A: Check to be sure all lug nuts are tight. Be sure bearings are serviced and have grease. Bearing failure can cause a wheel and tire to separate from the trailer.

Q: What about the trailer lights should be checked before towing?

A: Check to see that the trailer wiring is properly hooked up and working. Do not tow trailer after dark without lights.

Q: What can be done to avoid fuel leakage when engine driven equipment is towed?

A: Most engine driven equipment has a shutoff in the fuel line or at the tank. Always shut off the fuel when trailering to prevent fuel leakage.

Q: What should you do if a trailer begins to sway or become difficult to control?

A: If the trailer is not stable or if a problem develops or something does not "feel right" don't ignore it. Do not continue to tow the trailer if you think there is a problem. Immediately slow down and pull the trailer off the road in a safe location and recheck the trailer and tow vehicle. Fix the problem off the road.

Q: How does welding in a confined space affect the safety precautions that should be taken?

A: When arc welding in a confined area, such as a boiler, tank, ship hold, or similar confined, enclosed or restricted space, bear in mind that all the hazards associated with normal arc welding are amplified. Therefore, special precautions must always be taken.

WELDING SAFETY

MODULE 4 – MISCELLANEOUS WELDING SAFETY

FREQUENTLY ASKED QUESTIONS



Q: What is the definition of a confined space?

A: The definition of a confined space, according to OSHA, is:

- a) That it is large enough and so configured that an employee can bodily enter and perform assigned work
- b) Has limited or restricted means for entry or exit (for example: bins, silos, tanks, vessels, hoppers, vaults, and pits)
- c) Is not designed for continuous human occupancy

Q: What hazards are more of concern when welding in a confined space?

A: In a confined space there is a greater danger that flammable gases maybe present that could cause an explosion. Also, the walls of a metal enclosure or space can become electrically energized and become part of the circuit, presenting an electrical hazard to the welder or other entrants. Fumes from welding or other hot work can accumulate more rapidly and concentrate to dangerous levels in enclosed or confined spaces. Fumes generated from the work itself and/or the gases used for welding and hot work can also have the potential to displace or force out breathable air, while also potentially consuming and reducing oxygen concentrations to below safe levels.

Q: What should be done to evaluate the atmosphere inside a confined space prior to entering?

A: The following atmospheric hazards must be assessed for any confined space prior to entry:

- a) Test for safe oxygen levels
- b) Test for combustible gases and vapors
- c) Test for toxic gases and vapors

Q: What precautions must employers take if they have a confined space in the workplace?

A: Employers must have a written confined space entry program that includes specialized training for employees who enter confined spaces, serve as attendants to those entering, and for those who supervise confined space entries. They must also have a written entry permit process that includes a hazard assessment and specific entry procedures that employees must follow in order to safely complete assigned work.

Q: What causes electric and magnetic fields [EMF]?

A: Electric current flowing through any conductor causes localized Electric and Magnetic Fields (EMF). For example, when you are welding the welding current flowing through your arc welder and welding cables creates an EMF field near the welder and the welding cables.

Q: What precautions should be taken by welders who have pacemakers or defibrillators?

A: Since EMF fields may interfere with some pacemakers, welders having a pacemaker (or defibrillator) should consult their physician before welding.

WELDING SAFETY

MODULE 4 – MISCELLANEOUS WELDING SAFETY

FREQUENTLY ASKED QUESTIONS



Q: What is known about the health effects of exposure to EMF fields in welding?

A: Exposure to EMF fields in welding may have other health effects which are now not known. It is prudent for you to use good practices when arc welding to minimize your exposure to EMF.

Q: What procedures should be followed by the welder to reduce exposure to EMF?

A: All welders should use the following procedures in order to minimize exposure to EMF fields from the welding circuit: Route the electrode and work cables together. Secure them with tape or tie wraps when possible. If the cables are routed together, the EMF field at that point is reduced. Some cables even include electrode and work conductors inside one cable which may be a convenient way to reduce EMF exposure.

Q: Why should you never coil the electrode or work cables around your body?

A: Coiling the cables around your body increases your exposure to EMF.

Q: How should cable be positioned relative to your body when welding?

A: Do not place your body between the electrode and work cables. If the electrode cable is on your right side, the work cable should also be on your right side. There is an EMF field at and between each cable.

Q: What is the recommended point at which the work cable should be connected to work?

A: Connect the work cable to the work piece as close as possible to the area being welded.

Q: Why is it not good practice to weld next to the welding power source?

A: Welding next to the welding power source increases your exposure to the EMF due to the field located at the welder.

Q: What arc welding processes minimize EMF exposure and may be particularly suitable for welders who have a pacemaker or defibrillator and for whom welding has been approved by their physician?

A: You may further minimize EMF exposure by using arc welding processes such as TIG or by welding at the lowest DC output settings acceptable for your welding application. This is particularly important if you have a pacemaker or defibrillator.

Q: What precautions should be taken prior to welding by any welder who has a pacemaker or defibrillator?

A: If you have a pacemaker or defibrillator and wish to continue to weld you must talk to your physician and follow the advice that he gives. Your physician may want to contact the manufacturer of the pacemaker to obtain their recommendation about arc welding. In some cases your physician may advise against continuing to weld.