Welding Consumables Packaging



TUBES, CANS & CARTONS





Easy Open (EO) Hermetic Cans

8 & 10 lb EO Can

25 & 50 lb EO Can





TUBES, CANS & CARTONS

Package Type	Weight (lbs)	Width (in) / Diameter (in)	Height (in)
Tubes			
Tubes	1	1.16	8.3
	5	2.18	14.45
Hermetic Cans			
Easy Open (EO) Cans	8	3	12.62
	10	3	14.62
	25	5	12.62
	50	5	14.62
Carton			
Cardboard Carton	5	1.25	14.25
	10	2.25	14.25
	50	4.75	14.56

Notes: Electrodes come in 12, 14 & 18 inches (300, 350 & 450 mm) lengths.



TUBES, CANS & CARTONS



STICK

REELS & STEM

REELS

LLLJ							
Wire Type	Weight (lbs)	Wire Diameter Specifications	"D" Outer Diameter (in)	"W" Outer Width (in)	"D1" Arbor Hole Diameter (in)	"D2" Pin Hole Diameter (in)	"A" Pin Hole Distance from Axis (in)
Speed-Feed [®] Re	eels						
Solid	300	-	30	12.75	1.31	0.68	2.5
	750	≤ 1/16 in	30	12.75	1.34	0.75	2.5
	750	≥ 5/64 in	30	12.75	1.31	0.68	2.5
	1000	≤ 1/16 in	30	12.75	1.34	0.75	2.5
	1000	≥ 5/64 in	30	12.75	1.31	0.68	2.5
Flux-Cored	300	-	23.75	11.25	1.31	0.68	2.5
	600	≤ 1/16 in	30	12.75	1.34	0.75	2.5
	600	≥ 5/64 in	30	12.75	1.31	0.68	2.5
	900	-	30	12.75	1.31	0.68	2.5
Precise-Trak® R	Reel						
Solid	1000	-	30	19.5	1.31	0.68	2.5
Speed-Feed® SI	imReel			·			
Solid	250	-	29.75	6.18	1.31	1.31	8.75







STEM

				Wire Stack (in)	
Wire Type	Weight (lbs)	Base	Stem Height (in)	Inner Diameter	Outer Diameter
Speed-Feed® Stem					
Solid	2200-3000	27.4 x 27.4	54	16	32 - 34

D

REELS & STEMS



SPOOLS

Plastic/Fiber Spools







SPOOLS

Wire Type	Weight (lbs)	"D" Outer Diameter (in)	"D1" Inner Diameter (in)	"W" Wound Reel Outer Width (in)	"D1" Arbor Hole Diameter (in)	Pin Hole "D2" Diameter (in)	Pin Hole "A" Distance from Axis (in)
Steel Spools							
Solid or	25	11.81	2.05	4.25	-	-	-
Flux-Cored	33	11.81	2.05	4.25	-	-	-
	44	11.81	2.05	4.25	-	-	-
Plastic Spools							
Solid (Mild Steel)	2	4.00	-	1.75	0.63	-	-
	10	8.00	-	2.16	2.03	0.44	1.75
	11	8.00	-	2.16	2.03	0.44	1.75
	12.5	8.00	-	2.16	2.03	0.44	1.75
	33	12.00	-	4.19	2.03	0.44	1.75
Solid (Copper Alloys)	33	12.00	-	4.19	2.03	0.44	1.75
Solid (Aluminum)	1	4.00	-	1.75	0.28	-	-
	16	11.88	-	4.00	2.00	0.47	1.75
	20	11.88	-	4.00	2.00	0.47	1.75
Flux-Cored/	10	8.00	-	2.16	2.03	0.44	1.75
Metal-Cored	15	8.00	-	3.00	2.03	0.44	1.75
	25	12.00	-	4.00	2.03	0.44	1.75
	33	12.00	-	4.00	2.03	0.44	1.75
Fiber Spools							
Solid	44	12.00	-	4.30	2.03	0.44	1.75
	60	14.00	-	4.30	2.03	0.44	1.75
Flux-Cored	33	12.00	-	4.30	2.03	0.44	1.75
	50	14.00	-	4.30	2.03	0.44	1.75

SPOOLS

SPOOLS



Steel Spool Solid & Flux-Cored - 33 lb



Plastic Spool Flux-Cored - 25 lb, 1 lb



Plastic Spool Solid, Mild Steel - 33 lb, 12.5 lb, 2 lb, Solid, Copper Alloys - 33 lb



Plastic Spool Solid, Aluminum - 16 lb, 1 lb



Fiber Spool Solid, Mild Steel - 60 lb, Flux-Cored - 33 lb, 44 lb, 50 lb

COILS, BOXES & BAGS

COILS

Wire Type	Weight (lbs)	Wire Diameter Specifications	"D" Outer Diameter (in)	"D1" Inner Diameter (in)	"W" Wound Reel Outer Width (in)
Coils					
Solid	55 & 60	≤ 1/16 in	16.50	12.00	4.40
	55 & 60	≥ 5/64 in	16.50	12.00	4.60
Flux-Cored	14	-	9.50	6.70	3.00
	50 8 60	-	16.50	12.00	4.60

COIL ADAPTERS

System	Part#	Description
Automatic wire feeders - LT-7 Tractor systems	K299	Wire reel adapter for 50 lb & 60 lb coils
SAW coil nd supported coil adapter for 2 inch (51mm) spindle	K1504-1	Spindle adapter for 50 lb & 60 lb coils
FCAW coil adapter for 2 inch (51mm) spindle	K435	Spindle adapter For 14 lb coils





Boxes

BOXES

Wire Type	Weight (lbs)	Outside Dimensions L x W x H (in)	Core Dimensions (in)
Gem-Pak [®] Box			
Solid (Aluminum)	300	24 x 24 x 32	14
Solid (Copper Alloys)	500	24 x 24 x 32	14
Accu-Pak [®] Box			
Solid (Mild Steel)	500	21 x 21 x 28	-
	900-1000	24 x 24 x 32	-

BAGS

Wire Type	Weight (lbs)	Dimensions (in)			
Paper Bag / Plastic Bag / Sahara ReadyBag [™]					
Flux	50	-			
Bulk Bag					
Flux	2600 - 3000	43 x 43 x 48 ⁽¹⁾			
®Values are maximums.					

COILS, BOXES & BAGS



DRUMS & PAILS

Drums



DRUMS

Wire Type	Weight (lbs)	Outer Diameter (in)	Outer Height (in)	Core Inside Diameter	Core Height
Speed-Feed® Drum					
Solid	300	23.4	17.8	16	17
	600	23.4	34.8	16	34
	1000	23.4	34.8	16	34
Flux-Cored	125	23.4	11.1	16	10
	300	23.4	17.8	16	17
	500 and 600	23.4	34.8	16	17
Accu-Trak® Drum					
Solid	250	23.4	19.7	-	-
	500	20.4	32.6	-	-
	1000	23.4	34.8	-	-
Flux-Cored	300, 400 and 500	20.4	32.6	8.4	31.5
	500 and 600	23.4	34.8	8.4	34
Metal-Cored	500	20.4	32.6	8.4	31.5
Mini-Drum					
Solid (Aluminum)	60	20.4	13	-	-
Steel Drum			. ,		
Flux	550	22.75	33.50	-	-

PAILS

Wire Type	Weight (lbs)	Outer Diameter (in)	Outer Height (in)	Core Inside Diameter	Core Height
Hermetically Sealed Po	ail				
Flux	50	12	14.75	-	-

DRUMS & PAILS



🕅 Needs to be rotated to payoff wire. 🛤 This product does not come on a pallet. If your application requires a pallet, please contact your local Lincoln Electric sales representative.

STICK ELECTRODES

Storage & Handling

STORING LOW HYDROGEN ELECTRODES

Low hydrogen electrodes must be dry to perform properly. Unopened hermetically sealed containers provide excellent protection in good rod cabinet conditions. Opened cans of electrodes should be stored in a cabinet at 120°-150°C (250°-300°F).

Moisture resistant electrodes with an "R" suffix have a high resistance to coating moisture pick-up.

However, all low hydrogen electrodes should be stored properly, even those with an "R" suffix. Standard EXX18 electrodes should be supplied to welders twice per shift. Moisture resistant types may be exposed for up to 9 hours. Specific code requirements

may indicate exposure limits different from these guidelines.

Depending on the amount of moisture absorbed and other factors, moisture pickup can degrade weld quality in various ways:

- Moisture in low hydrogen electrodes may cause porosity. This porosity could be completely subsurface and require x-ray inspection or destructive testing. The porosity could also be visible, external porosity.
- 2. High moisture can also lead to excessive slag fluidity, a rough weld surface, and difficult slag removal.
- 3. Excessive moisture in low hydrogen electrodes will lead to elevated levels of diffusible hydrogen which, in turn, can lead to hydrogen-induced weld cracking and/or underbead cracking.

RE-DRYING LOW HYDROGEN ELECTRODES

Re-drying, when done correctly, restores the electrodes' ability to deposit quality welds. Proper re-drying temperature depends upon the electrode type and its condition. One hour at the listed final temperature is satisfactory. DO NOT dry electrodes at higher temperatures. Several hours at lower temperatures is not equivalent to using the specified requirements.

Electrodes of the E8018 and higher strength classifications should be given no more than three 1-hour re-dries in the 370°-430°C (700°-800°F) range. This minimizes the possibility of oxidation of alloys in the coating which would result in lower than normal tensile or impact properties.

Any low hydrogen electrode should be discarded if excessive re-drying causes the coating to become fragile and flake or break off while welding, or if there is a noticeable difference in handling or arc characteristics, such as insufficient arc force.

Electrodes to be re-dried should be removed from the can and spread out in the oven because each electrode must reach the drying temperature.

STORING CELLULOSIC ELECTRODES

Electrodes in unopened Lincoln cans or cartons retain the proper moisture content indefinitely when stored in good condition.

If exposed to humid air for long periods of time, electrodes from opened containers may pick up enough moisture to affect operating characteristics or weld quality. If moisture appears to be a problem, store electrodes from the opened containers in heated cabinets at 40° to 50°C (100° to 120°F).

STORING AND RE-DRYING NON-LOW HYDROGEN ELECTRODES

Electrodes in unopened Lincoln cans or cartons retain the proper moisture content indefinitely when stored in good condition.

If exposed to humid air for long periods of time, electrodes from opened containers may pick up enough moisture to affect operating characteristics or weld quality. If moisture appears to be a problem, store electrodes from the opened containers in heated cabinets at 40° to 50°C (100° to 120°F). DO NOT use higher temperatures.

Some electrodes from wet containers or long exposure to high humidity can be re-dried. Follow the procedures below for each type.

Using longer drying times or higher temperatures can easily damage the electrodes.

For drying, remove the electrodes from the container and spread them out in the rod cabinet because each electrode must reach the drying temperature.

STICK ELECTRODES

Storage & Handling

RE-DRYING CONDITIONS - LOW HYDROGEN

Condition	Pre-drying Temperature ⁽ⁱ⁾	Final Re-drying Temperature
Electrodes exposed to air for less than one week; no direct contact with water.	_	370° - 430°C (700° - 800°F)
Electrodes which have come in direct contact with water or which have been exposed to high humidity.	80 - 105°C (180° - 220°F)	370° - 430°C (700° - 800°F)

RE-DRYING CONDITIONS - NON-LOW HYDROGEN

Electrode	Electrode Group	Final Re-drying Temperature	Time
E6010: E6011: E7010-A1 ⁽¹⁾ : E7010-G ⁽¹⁾ : E8010-G ⁽¹⁾ : E9010-G ⁽¹⁾ :	Excessive moisture is indicated by a noisy arc and high spatter, rusty cored wire at the hold end or objectionable coating blisters while welding. Rebaking of this group of electrodes is not recommended.	Not Recommended	_
E7024: E6027:	Excessive moisture is indicated by a noisy or "digging" arc, high spatter, tight slag, or undercut. Pre-dry unusually damp electrodes for 30 - 45 minutes at 90°C to 110°C (200°F to 230°F) before final drying to minimize cracking of the coating.	200° - 260°C (400° - 500°F)	30 - 45 minutes
E6013: E7014: E6022:	Excessive moisture is indicated by a noisy or "digging" arc, high spatter, tight slag, or undercut. Pre-dry unusually damp electrodes for 30 - 45 minutes at 90°C to 110°C (200°F to 230°F) before final drying to minimize cracking of the coating.	150° - 180°C (300° - 350°F)	20 - 30 minutes

[™]Pre-dry for 1-2 hours.

PACKAGING

STAINLESS STEEL & NICKEL

Storage & Handling

STORING STAINLESS STEEL AND NICKEL

Excalibur[®] stainless steel covered electrodes should be handled and stored as if they were low hydrogen electrodes for welding low alloy steels. They should be protected from moisture pickup. The consequences of moisture pickup with Excalibur stainless electrodes do not include cold cracking, as would be the case with low alloy steels, unless they are used for dissimilar metal joining. But if Excalibur stainless electrodes are exposed for extended periods a humid environment, the coating can pick up enough moisture to cause starting porosity and/or center line porosity. The electrode should be stored in sealed cans, or stored in an oven at about 120°C (250°F); this is also recommended for flux-cored wires. Plastic spools can be baked up to 66°C (150°F) with no issues. Stainless can be restored to like new conditions by baking one hour at 345-425°C (650-800°F). Nickel electrodes should be reconditioned before by baking in drying oven for 1-2 hours at 204-260°C (400-500°F).

METAL-CORED & FLUX-CORED WIRE

Storage & Handling

SHELF LIFE

As a general rule, The Lincoln Electric Company estimates maximum storage time for mild and low alloy steel consumables to be 3 years. This estimate is for material in the original, undamaged packages that is stored indoors at up to ~70% relativehumidity and that are protected from the weather or other adverseconditions. Packages should be stored under conditions that minimize the likelihood of temperature variations that cause moisture condensation on the consumables.

These estimates are based on what we know about the packaging materials and the frequency of product improvements. Since actual storage conditions vary widely across geographical regions and from one customer to another, it is not possible to be more specific. For packages that are not hermetically sealed, a shorter storage time is advisable under sustained severe humidity conditions but is not possible to estimate. Note that product stored for longer than 3 years, may still be suitable for use. It depends on the product and the condition it is in.

Dispose of any wire or rod that has visible signs of rust.

Customers are not encouraged to store consumables for extended periods of time. It is advisable to maintain turnover in inventory to ensure the products are as close to their as manufactured conditions as can be reasonably expected. The general guidelines above are provided for those unplanned instances where product is stored longer than originally anticipated.

STORAGE OF UNOPENED PACKAGES

FCAW products should be stored in the original, unopened packaging until ready to use. To maintain the integrity of these products, electrodes must be protected from the atmosphere. All flux cored electrodes, regardless of package, should be protected from condensation, including rain or snow. To ensure that condensation does not form on the product, it is recommended that the electrode be stored in an environment that is kept above the dew point temperature for a given relative humidity. Minimizing temperature variation will also help to protect the electrode from moisture condensation. It is advisable to maintain turnover in inventory to ensure the product is as close to the manufactured condition as possible.

For applications in which the weld metal hydrogen must be controlled (usually 8 mL/100g or lower), or where shipping and storage conditions are not controlled or known; only hermetically sealed packaging is recommended.

HANDLING OF WIRES OUT OF THE PACKAGE

The following minimum precautions should be taken to safeguard the wire after opening the original package:

- It is recommended to use wires within one week of opening the original package.
- Open wires should not be exposed to damp moisture conditions or extremes in temperature and/or humidity where surface condensation can occur.
- When not in use, wires should be placed in original packaging and sealed as best as possible.
- If exposed to moisture conditions, discard any rusty wire.
- After exposure, hydrogen levels can be reduced by conditioning the wire. Wires may be conditioned at a temperature of 212°F ± 25°F (100°C ± 4°C) for a period of 6 to 12 hours, cooled and then stored in a sealed poly bags (4 mil minimum thickness) or equivalent. Wire on plastic spools should not be heated at temperatures in excess of 150°F (65°C).

WHEN TO DISPOSE OF PRODUCT

It is advisable to dispose of any wire that has visible signs of rust on the wire where the package integrity has been compromised. When proper storage procedures are not followed, consumables may show signs of high moisture. High moisture can result in rough bead surface or slag that is unusually difficult to remove. In addition, it can also result in visible and/or internal porosity in the weld deposit, increase spatter, and decreased puddle control which can increase chances of slag entrapment. Oxidation (rust) of either the surface of the wire or internal fluxing agents increases the oxygen content of the wire that can lead to changes in alloy recovery. This, in turn, can deteriorate the mechanical properties of the weld metal.

SOLID WIRES & SUBMERGED ARC FLUX

Storage & Handling

STORAGE FOR SUBMERGED ARC FLUX

Flux Package Type ⁽¹⁾	Flux Storage Conditions for General Welding Applications	Flux Storage for Applications Requiring Diffusible Hydrogen Control
Plastic or Multi-Wall Plastic/Paper Bag	Store indoors at < 90% RH Protect from condensation	Store indoors at < 70% RH and 5°C - 50°C (40°F - 122°F). Protect from condensation
Bulk Bag with Liner	Store indoors at < 90% RH Protect from condensation	Store indoors at < 70% RH and 5°C - 50°C (40°F - 122°F). Protect from condensation
Steel Drum	Protect from rain or snow	Protect from rain or snow
Plastic Pail	Protect from rain or snow	Protect from rain or snow
Sahara ReadyBag™	Protect from rain or snow	Protect from rain or snow

STORAGE FOR ALL MIG, TIG, AND SAW SOLID WIRES^[2]

Wire Package Type ⁽¹⁾	Wire Storage Conditions for All Welding Applications	
Any Type	Protect from rain or snow. Protect from condensation. DO NOT use wire with visible signs of rust.	

⁽¹⁾For other package types, consult your Technical Representative. ⁽²⁾ All as in Stainless, Nickel, Low Alloy, and Mild Solid Wires.

RE-DRYING & RECYCLING FLUX

Lincoln Electric submerged arc welding flux can be used directly from its original, undamaged package, if it has been stored according to the conditions listed in the chart above.

When proper procedures are not followed, flux may show signs of moisture. These can include porosity, a rough bead surface or slag that is unusually difficult to remove. In many instances these fluxes can be re-dryed in general welding applications.

RE-DRYING FLUX

To re-dry fluxes other than MIL800-H, MIL800-HPNi and 842-H fluxes

- Remove flux from its original packaging and place in a clean oven set between 260°-480°C (500°-900°F).
- Leave in oven long enough to raise the temperature of the entire bulk of flux to your set temperature for a minimum of one hour.
- For ovens in which heating rods are inserted into the flux, do not let the temperature of flux adjacent to the rods exceed 480°C (900°F).
- For all other applications requiring diffusible hydrogen control set temperature at approximately 425°C (800°F).

For MIL800-H, MIL800-HPNi and 842-H fluxes

Follow all previous procedures, with the following changes:

- Set temperature between 120°-205°C (250°-400°F).
- For ovens in which heating rods are inserted into the flux, do not let the temperature of flux adjacent to the rods exceed 205°C (400°F).

RECYCLING FLUX

Non-consumed flux may be collected from the finished weld and recycled. To do so, please follow these procedures:

- Remove slag, metal, mill scale, and any other contaminants from the flux.
- Prevent damage to the flux from heavy impingement in flux transport systems.
- Avoid the separation of different sized particles in cyclones or "dead" corners.
- Remove excess fines from recycled fluxes.
- For optimal welding characteristics, it is recommended to add at least 20% new flux by weight to recycled flux.

ACCU-PAK[°] BOX

Storage & Handling

GENERAL INFORMATION

Never tip or roll an Accu-Pak[®] box – box shall be kept vertical at all times.

LIFTING STRAP INSTRUCTIONS

(The following instructions are in no way intended to supersede the manufacturers' instructions for the use of their lifting device)

- 1. Place the wooden master pallet on the floor.
- 2. Remove all stretch wrap and/or tape binding the boxes together.
- Prior to lifting, inspect the box for dents, gashes or holes penetrating the side of the box, and dented or crushed box lids. NEVER LIFT DAMAGED BOXES.
- 4. Remove the strap loops from the slots on the box lid.
- 5. Confirm the two strap loops are from the same box.
- 6. Do not remove the lid while moving the box.
- 7. For 500 lb & 1000 lb Accu-Pak boxes, the straps may be placed directly on the tow motor forks. Configure the straps according to the pictures below for proper use. Straps should come up vertically. For 1500 lb Accu-Pak boxes, a lifting device must be used. For all boxes, if a lifting device is used, follow the manufacturer's instructions to assure proper handling.



- 8. Lift the box straight up off the wooden master pallet. **DO NOT LIFT AT AN ANGLE.**
- 9. Avoid sudden starts and stops.
- 10. When using an overhead crane, use standard safety procedures.
- Once the Accu-Pak box has been placed at its point of use, follow the instructions inside the center of the box for proper set up.

MINI PALLET INSTRUCTIONS

- 1. Follow the first 3 steps listed for lifting with straps.
- 2. Extend the tow motor forks to completely reach through the mini pallet to ensure the box does not tip or fall over. Verify that the mini pallet and Accu-Pak box are secure and are 100% in contact with the tow motor.
- 3. Then proceed to lift and place the box at its intended location.



🛦 CAUTION 🔺

- Boxes should never be lifted to a height greater than necessary – when moving boxes, while in the air, the box can start swinging resulting in injury.
- 2. Appropriate care should be taken to avoid pinch points when moving the box.
- 3. Appropriate personal safety equipment should be worn to prevent injury such as a safety helmet to prevent head injury.
- When lifting a box, care should be given to the path the box will take in getting to its intended location as to avoid collision with other items.
- 5. Do not walk under the box while it is in the air and never move the box over others.
- 6. Only qualified material handling personnel should attempt lifting or handling the Accu-Pak box.
- 7. Lincoln Electric is not responsible for consequential damage due to improper lifting or movement of box.

ACCU-TRAK° DRUM & SPEED-FEED° DRUM

Storage & Handling

GENERAL INFORMATION

Never tip or roll an Accu-Trak[®] or Speed-Feed[®] drum – drum shall be kept vertical at all times.

Only use appropriate lifting devices designed for lifting fiber drums with steel chimes, within manufacturers' ratings while adhering to manufacturers' instructions.

LIFTING WITH A DRUM LIFTING DEVICE

(The following instructions are in no way intended to supersede the manufacturers' instructions for the use of their lifting device)

- 1. Place the wooden master pallet on the floor.
- 2. Remove shrink-wrap, cut and remove the band that secures all four drums together.
- After removing the shrink-wrap from the perimeter of the pallet of drums, the banding that wraps around the top chime of the drum, tying the drums together, should be removed.
- 4. The band, which secures the drum to the mini pallet, may also be removed (optional).
- 5. Prior to lifting, inspect the drum for dents, gashes or holes penetrating the side of the drum, and dented or crushed drum lids or chimes. Verify the drum is closed and the chimes are in the locked position. **NEVER LIFT A DAMAGED OR OPEN DRUM.**
- 6. After inspection, the grippers of drum lifting device should be placed in the groove of the top chime. Placing the gripper of one side of the lifting device in the center of the drum pallet and catching the mating groove in the top chime makes the effort easier.
- 7. The device can then be opened and placed in the groove, 180 degrees from the starting point. After verifying that the grippers on both sides of the lifting device are properly secured and are in 100% contact with the groove in the top drum chime, lifting of the drum can proceed.
- 8. Place the drum at its intended location and remove the lifting device.

250-600 LB ACCU-TRAK DRUMS AND SPEED-FEED DRUMS

The 500 lb. drums come standard four drums per pallet. These drums are placed directly on the surface of the pallet.

1000 LB OR > ACCU-TRAK DRUMS & SPEED-FEED DRUMS

The 1000 lb. drums come standard four drums per pallet. Each drum is placed on an individual mini pallet then mounted on a master pallet. The mini-pallet is used to facilitate the moving of these drums with a standard tow motor.



🛦 CAUTION 🗚

- Drums should never be lifted to a height greater than necessary – when moving drums, while in the air, the drum can start swinging resulting in injury
- 2. Appropriate care should be taken to avoid pinch points when moving the drum
- Appropriate personal safety equipment should be worn to prevent injury such as a safety helmet to prevent head injury
- 4. When lifting a drum, care should be given to the path the drum will take in getting to its intended location as to avoid collision with other items
- 5. Do not walk under the drum while it is in the air and never move the drum over others
- 6. Only qualified material handling personnel should attempt lifting or handling the Accu-Trak and Speed-Feed drums
- 7. Lincoln Electric is not responsible for consequential damage due to improper lifting or movement of drums

Safety Data Sheets (SDS) and Certificates of Conformance are available on our website at www.lincolnelectric.com

FUMES AND GASES can be hazardous to your health.

• Fumes from the normal use of this product contain significant quantities of potentially hazardous compounds. See consumable product label/insert.

Keep your head out of the fumes.

- Use enough ventilation and local exhaust to keep fumes and gases from your breathing zone and the general area.
- An approved respirator should be used unless exposure assessments are below applicable exposure limits.

TEST RESULTS

Test results for mechanical properties, deposit or electrode composition and diffusible hydrogen levels were obtained from a weld produced and tested according to prescribed standards, and should not be assumed to be the expected results in a particular application or weldment. Actual results will vary depending on many factors, including, but not limited to, weld procedure, plate chemistry and temperature, weldment design and fabrication methods. Users are cautioned to confirm by qualification testing, or other appropriate means, the suitability of any welding consumable and procedure before use in the intended application.

CUSTOMER ASSISTANCE POLICY

The business of The Lincoln Electric Company^{*} is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or advice about their use of our products. Our employees respond to inquiries to the best of their ability based on information provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or advice. Moreover, the provision of such information or advice does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or advice, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose is specifically disclaimed.

Lincoln Electric is a responsive manufacturer, but the selection and use of specific products sold by Lincoln Electric is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric affect the results obtained in applying these types of fabrication methods and service requirements.

Subject to Change - This information is accurate to the best of our knowledge at the time of printing. Please refer to www.lincolnelectric.com for any updated information.