

# Lincore® 15CrMn

## TOP FEATURES

- Can be used in open arc mode for joining austenitic manganese steel to carbon steel, low alloy steel, austenitic, or stainless steel
- Unlimited layers with proper preheat and interpass temperatures and procedures
- Can be used as a build-up layer before capping with abrasion resistant alloys

## TYPICAL APPLICATIONS

- Bar, Bucket, Crush, Cut
- Drag, Dredge, Hammer, Mix
- Open Hearth, Plate, Power Generation, Pump, Rail
- Roll, Screen, Shovel, Teeth, Wheel

## CLASSIFICATION

EN ISO T Fe9

## CURRENT TYPE

DC+

## WELDING POSITIONS

Flat/Horizontal

## CHEMICAL COMPOSITION (WEIGHT %), TYPICAL, ALL WELD METAL

C	Mn	Si	Cr
0.4	15.0	0.25	16.0

## MECHANICAL PROPERTIES, TYPICAL, ALL WELD METAL

Condition	Typical hardness values
As deposited	18-22 HRc (210-235 HB)
Work hardened	40-50 HRc (375-490 HB)

## PACKAGING AND AVAILABLE SIZES

Wire diameter (mm)	Packaging	Weight (kg)	Item number
1.6	SPOOL	15.0	ED037492
2.0	SPOOL	11.3	ED031126
	COIL	22.7	ED022060
2.7	COIL	22.7	ED022061
2.8	DRUM	56.0	ED022068

## ADDITIONAL INFORMATION

- All work-hardened base material and previously deposited material should be removed prior to applying a new deposit, since such areas are prone to embrittlement and possible cracking.
- No preheat is required on austenitic manganese steels although a preheat of between 150-200°C may be necessary on carbon and low steels to prevent heat affected zone cracking.
- Narrow stringer beads are preferred to avoid excessive heat build up in the base material. High heat input welds and interpass temperatures above 260°C causes manganese carbide precipitation resulting in embrittlement.
- There is no definite limitation to the number of passes that may be deposited, however, it is good practise to peen each pass immediately after welding to minimise internal stresses and possible distortion and cracking.
- Lincore 15CrMn deposits work harden rapidly making them difficult to machine. For best results carbide or ceramic cutting tools and rigid tooling should be used. Grinding can also be successfully employed.
- For applications involving severe impact and abrasion, a build-up of Lincore 15CrMn coupled with a single pass of Wearshield 60 or Lincore 60-O should be employed.
- The Lincore 15CrMn deposit can not be cut using the oxy-fuel process due to the high chromium content, however, plasma arc and air carbon arc processes are appropriate.

## 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

Safety Data Sheets (SDS) are available here:



Subject to Change – The information is accurate to the best of our knowledge at the time of printing.  
Please refer to [www.lincolnelectric.eu](http://www.lincolnelectric.eu) for any updated information.