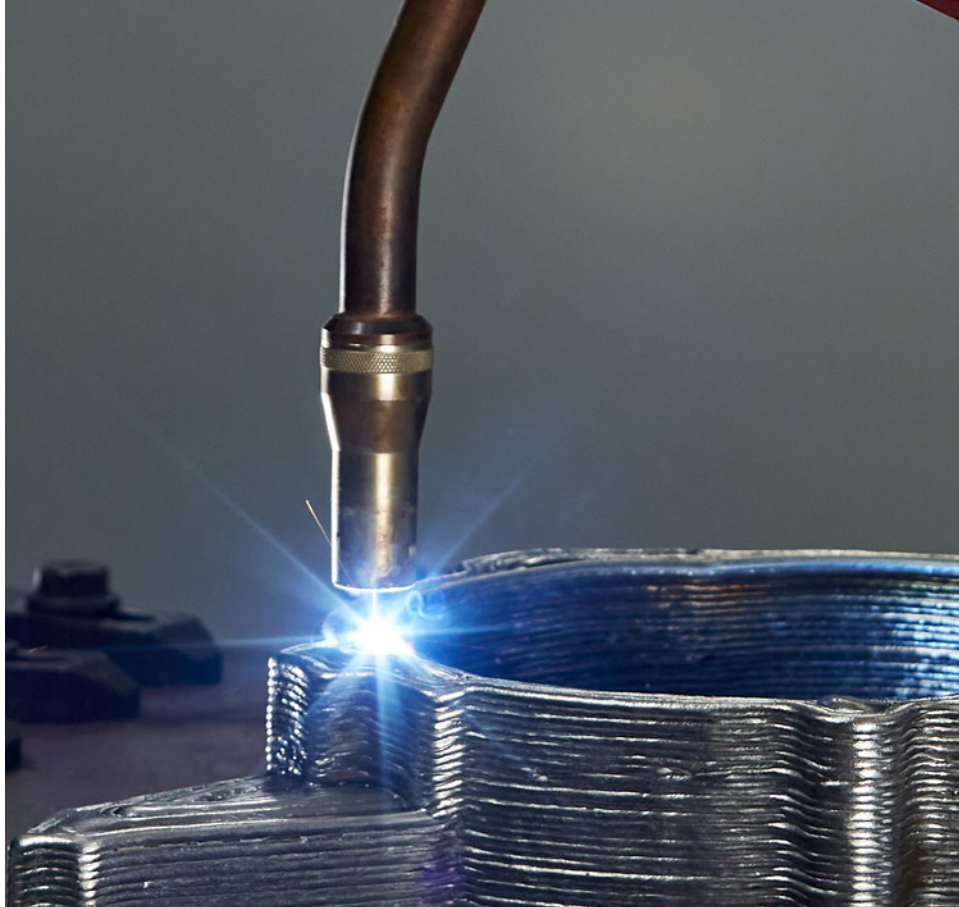


LINCOLN ELECTRIC ADDITIVE SOLUTIONS

# LOW CARBON STEEL



## KEY FEATURES

Our low carbon steel offers a good balance of strength, toughness and ductility. It has a higher yield strength than typical carbon steel grades such as ASTM A36 and ASTM A516 Grade 60, and offers good machinability and weldability. This makes it ideal for applications such as power generation, construction and agricultural equipment, machinery parts, ornamental works and more.

Low carbon steel mechanical properties compare favorably to the following carbon steel grades:

- ASTM A27 Grade 70-40
- ASTM A352 Grade LCA
- ASTM A516 Grade 60
- ASTM A36

### Typical Applications »

- Power Generation
- Construction and Agricultural Equipment
- Machinery Replacement Parts
- Prototypes
- Structural Components
- Ornamental Works
- Meets the A-No 1 weld metal chemical composition designation per Section IX of ASME BPVC
- Meets the maximum hardness requirements of NACE SP0472 compliant

## NOMINAL MECHANICAL PROPERTIES (AS-PRINTED)<sup>(1)</sup>

| GMAAM <sup>(2)</sup> | Room Temperature Strength |           |           | Toughness      |                 | Vickers Hardness | CTE        |
|----------------------|---------------------------|-----------|-----------|----------------|-----------------|------------------|------------|
|                      | YS @ 0.2% Off [ksi]       | UTS [ksi] | Elong [%] | ft-lbs @ 70 °F | ft-lbs @ -50 °F | HV10             | in/(in °F) |
| Low Carbon Steel     | 50                        | 70        | 30        | > 150          | > 30            | 160              | 7          |

(1) As-Printed indicates deposits were not subject to post-weld heat treatment

(2) Gas Metal Arc Additive Manufacturing (GMAAM)

### Test Results

Test results for mechanical properties were obtained from GMAAM deposits produced and tested according to prescribed standards. Users are cautioned to confirm by qualification testing, or other appropriate means, the suitability of any GMAAM component before use in the intended application. This data is for illustrative purposes only. Actual results may vary.

### CUSTOMER ASSISTANCE POLICY

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