

ER 120 S-1

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|-----------------------|---|-----|--------------------|--------|--------------------------------|------------|--------|-----|-------|
| CATEGORY | GMAW-GTAW Solid wires | | | | | | | | |
| TYPE | Extreme high tensile strength alloy with excellent impact properties for fine grain steels exceeding 890 N/mm ² yield strength. | | | | | | | | |
| APPLICATIONS | Welding materials such as S960QL - S1100Q and other similar fine grain cold tough steels. Offshore, crane building etc. | | | | | | | | |
| PROPERTIES | Extreme high tensile strength alloy with very good mechanical properties and perfect welding characteristics. High impact strength at very low temperatures with exceptional plasticity of the weld deposit. Weldable with Co2 and Mix gas. | | | | | | | | |
| CLASSIFICATION | <table border="0"> <tr> <td>AWS</td> <td>A 5.28: ER 120 S-1</td> </tr> <tr> <td>EN ISO</td> <td>16834-A: G 89 5 M Mn4Ni2,5CrMo</td> </tr> <tr> <td>DIN: W.Nr.</td> <td>1.8983</td> </tr> <tr> <td>DIN</td> <td>8575:</td> </tr> </table> | AWS | A 5.28: ER 120 S-1 | EN ISO | 16834-A: G 89 5 M Mn4Ni2,5CrMo | DIN: W.Nr. | 1.8983 | DIN | 8575: |
| AWS | A 5.28: ER 120 S-1 | | | | | | | | |
| EN ISO | 16834-A: G 89 5 M Mn4Ni2,5CrMo | | | | | | | | |
| DIN: W.Nr. | 1.8983 | | | | | | | | |
| DIN | 8575: | | | | | | | | |
| SUITABLE FOR | XABO 90, StE890V, StE960TM, Weldox 700, weldox 900, Domex 960, Domex Wear 360, StE 890, S890QL1, A517, X120, StE 960, S960QL1, S1100 (till 12 mm) | | | | | | | | |
| APPROVALS | CE approved | | | | | | | | |

WELDING POSITIONS:



WELD METAL ANALYSIS ACC. AWS IN WEIGHT %

| C | Mn | Si | Cr | Ni | Mo | Cu | Ti | Zr | Al |
|------|---------|-----------|------|---------|-----------|-------|-------|-------|-------|
| <0.1 | 1.4-1.8 | 0.25-0.60 | <0.6 | 2.0-2.8 | 0.30-0.65 | <0.25 | <0.10 | <0.10 | <0.10 |

MECHANICAL PROPERTIES

| Heat Treatment | R _{p0,2} (N/mm ²) | R _m (N/mm ²) | A ₅ (%) | Impact Energy (J) ISO-V | | | Hardness HRc / HV |
|----------------|---|--|-----------------------|-------------------------|-------|-------|----------------------|
| | | | | -20°C | -50°C | -60°C | |
| AW (M21) | 930 / 1030 | 970 / 1070 | >14 | | >68 | | |
| AWS spec. | >730 | >830 | >14 | | >68 | | |

AW: as welded

WELDING PARAMETERS / PACKING

| Welding Parameters | | | | Packing | |
|--------------------|-------------|-------------|--------------------|----------------|-------------------|
| D (mm) | Voltage (V) | Current (A) | spool type | kg / spool | kg / pallet |
| 0.8 | 15-24 | 60-210 | KD-300 / Drum / B3 | 15 / 250 / 300 | 1080 / 1000 / 600 |
| 1.0 | 18-28 | 80-280 | KD-300 / Drum / B3 | 15 / 250 / 300 | 1080 / 1000 / 600 |
| 1.2 | 20-33 | 120-350 | KD-300 / Drum / B3 | 15 / 250 / 300 | 1080 / 1000 / 600 |

REDRYING TEMPERATURE not required

GAS ACC. EN ISO 14175: M21