

# MT-347

# 1.4551

**TIG/MIG welding wire of stabilized austenitic chrome – nickel steel for welding stainless austenitic steels that are exposed to working temperatures up to +400°C; non – scaling up to +800°C.**

**Standard designation**

|                  |               |
|------------------|---------------|
| Material No.     | 1.4551        |
| AWS/ASME SFA-5.9 | ~ER 347 Si    |
| EN ISO 14343-A   | G/W 19 9 NbSi |

**Main base metals**

Stainless austenitic chrome nickel steel/cast steel, e.g.

|        |                   |        |                  |
|--------|-------------------|--------|------------------|
| 1.4541 | X 6 CrNiTi 18 10  | 1.4301 | X 5 CrNi 18 10   |
| 1.4550 | X 6 CrNiNb 18 10  | 1.4303 | X 5 CrNi 18 12   |
| 1.4552 | G-X 5 CrNiNb 18 9 | 1.4308 | G-X 6 CrNi 18 9  |
| 1.4319 | X 5 CrNi 18 7     | 1.4310 | X 12 CrNi 17 7   |
| 1.4306 | X 2 CrNi 19 11    | 1.4312 | G-X 10 CrNi 18 8 |
| 1.4306 | G-X 2 CrNi 18 9   |        |                  |

**Mechanical properties of all – weld – metal (typical values)**

| Welding process<br>Gas shield<br>Thermal treatment<br>Test temperature | [°C] | MPa | TIG<br>I1<br>untreated<br>+20°C |  | MIG<br>M 11<br>untreated<br>+20°C -196°C |  |
|--|------|-----|---------------------------------|--|--|--|
|  |      |     | ≥270                            |  | ≥270                                     |  |
| 0,2%-yield strength R <sub>p0,2</sub>                                  |      | MPa | ≥270                            |  | ≥270                                     |  |
| Tensile strength R <sub>m</sub>  |      | MPa | ≥550                            |  | ≥550                                     |  |
| Elongation A <sub>5</sub>  |      | [%] | ≥25                             |  | ≥25                                      |  |
| Impact strength A <sub>V</sub>   |      | [J] | -                               |  | -  |  |

**Average chemical composition of all - weld - metal (%)**

| C    | Si       | Mn       | Cr        | Ni       | (Nb+Ta)      |
|------|----------|----------|-----------|----------|--------------|
| 0,08 | 0,65-1,2 | 1,0-2,50 | 19,0-21,0 | 9,0-11,0 | 10x%C.max1,0 |

**Structure**

Austenite with delta ferrite

**Gas types applicable TIG  
Gas types applicable MIG**

I1  
M 11, M 12

**Approvals**

TÜV, CE

**TIG rod diameters, unit weights**

| Diameter [mm] | Length [mm] | Kg per box [kg] |
|---------------|-------------|-----------------|
| 1,00          | 1000        | 10,0            |
| 1,60          | 1000        | 10,0            |
| 2,00          | 1000        | 10,0            |
| 2,40          | 1000        | 10,0            |
| 3,20          | 1000        | 10,0            |
| 4,00          | 1000        | 10,0            |
| 5,00          | 1000        | 10,0            |

**MIG welding wire**

Diameter 0,8mm 1,0mm 1,2mm 1,6mm

**Welding positions MIG acc.to EN ISO 6947  
Welding positions TIG acc.to EN ISO 6947**

PA, PB, PF, PC  
PA, PB, PC, PF

**Current/Polarity TIG**

= -

**Current/Polarity MIG**

= +