

## DUPLEX 2209

### Comparable specifications

**ASME SFA A 5.9:** ER2209  
**EN ISO 14343-A:** 22 9 3 N L  
**Werkstoff Nr.:** ~1.4462

### Description and applications\*

\* *Illustrative, not-exhaustive list*

Austenitic-ferritic duplex stainless steel filler metal characterized by high tensile strength, resistance to stress corrosion cracking and improved resistance to pitting. It is magnetizable and polishable. Its PREN is at least 35.

This grade may be used for:

welding, joining and overlay of stainless steels of similar composition (duplex);  
heterogeneous welding of stainless steels with unalloyed and low alloyed grades;  
applications in petro-chemical and off-shore industry (e.g. plates, pipeworks)  
applications where is needed a stress corrosion resistance far higher than that given by austenitic stainless steels in chloride environments and for temperatures between 50°C and 300°C;  
applications in the acid gas industry and for chemical products transportation;  
applications in the de-pollution, pulp and paper industry.

### Weldable base materials\*

\* *Illustrative, not-exhaustive list*

UNS S31803, UNS S32205, UNS S39209

### All-weld metal mech. properties\*

\* *For reference only values*

**Tensile strength (Rm):** ≥ 550 N/mm<sup>2</sup>  
**Elongation:** ≥ 20%

**Yield Strength (Rp<sub>0.2</sub>):** ≥ 450 N/mm<sup>2</sup>  
**Charpy-V Impact (R.T.):** ≥ 50 J

### Chemical composition\*

\* *For reference only values*

C	Mn	Si	S	P	Ni	Cr	Mo	Cu	N
max	0.50	max	max	max	7.50	21.50	2.50	max	0.10
0.03	2.00	0.90	0.020	0.030	9.50	23.50	3.50	0.50	0.20

### Standard packaging data\*

Welding process	Product type	Ø mm (inches)	Packing type	Weight kg (lbs)	Length mm (inches)
GMAW **	filler wire	0.80 - 1.20 (0.030 - 0.047)	spools BS300 / D300	15 (33)	n.a.
GTAW **	filler rod	1.60 - 4.00 (1/16 - 5/32)	cardboard boxes / tubes	5 (11)	1000 (39.4)
SAW **	filler wire	1.60 - 4.00 (1/16 - 5/32)	basket rims B450	25 (55)	n.a.
SMAW **	core wire for electrodes	1.60 - 5.00 (1/16 - 0.197)	wooden boxes	500 - 750 (1100 - 1650)	250 - 450 (10 - 18)


\* *Other sizes and packing types are available upon request*

\*\* *GMAW: gas metal arc welding; GTAW: gas tungsten arc welding; SAW: submerged arc welding; SMAW: shielded metal arc welding*

### Marking

Each filler rod for GTAW welding is durably marked with an identification traceable to the unique product type. Welding filler materials wound on spools or in coils are durably marked on the coil or spool with an identification traceable to the unique product type.

The outside of each unit package is suitably labelled with at minimum the following data: grade, diameter, heat, lot no., classifications.

 marking type-testing performed and available.

Customized labels are available upon request.

### Type approvals

**Canadian Welding Bureau** Cert. nr. AYL 25/03/2009 (GMAW / GTAW)

**DB** Zulassungs nr. 43.097.06 (GMAW / GTAW)

**TUV Nord** Kennblatt nr. 06006 (GMAW) **TUV Nord** Kennblatt nr. 06007 (GTAW)

### Lot classification

All our productions fulfil the **Class S3** requirements acc. to EN ISO 14344.