Technical Data Sheet
UGIWELD™ 385

Chemical composition (%)

C	Si	Mn	Ni	Cr	Mo	Cu
≤ 0.025	≤ 0.50	1.0 – 2.5	24.0 – 26.0	19.5 – 21.5	4.2 – 5.2	1.2 – 2.0

30-09-2021 – REV 03

General presentation:
UGIWELD™ 385 is a “super-austenitic” welding filler wire used for the homogeneous welding of “super-austenitic” 904L stainless steel and derivatives. Thus, as the 904L grade, it can be used in different corrosive environments containing phosphates, phosphoric or sulfuric acids,…
It is often used in:

» Phosphates, phosphoric acid and chemical fertilizer industries;

» Sulfuric acid industry;

» Exchangers and condensers for chemical industry;

» Flue pipes;

» Seawater applications.

Classification
Super austenitic grade

Designation

Material No.

Europe – EN ISO 14343-A	USA – AWS A5.9	Europe – WNr.
20 25 5 Cu L	ER385	1.4539

Approvals

	MIG	TIG	SAW
TÜV (Germany)			
CE	X	X	X
DB			

Mechanical properties
On All-Weld metal.

Temperature (°C)	-196°C	Room Temperature
Tensile strength (MPa)		550
Yield strength (MPa)		350
Elongation (%)		30
Impact ISO V (J)	95	120

Swiss Steel Group

Production sites: Ugitech SA
www.swisssteel-group.com

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Corrosion resistance

» General corrosion resistance far superior to 316L, especially in sulfuric and phosphoric media.

» Pitting and crevice corrosion resistance higher than the one of austenitic stainless steel type 317L.

» Stress corrosion resistance higher than standard austenitic stainless steels.

Welding

The “as-welded” structure of UGIWELD™ 385 is 100% austenitic and by this way potentially subject to hot cracking.

Recommended welding parameters

MIG welding

Recommended shielding gases are:

» Argon + Oxygen (1 to 3%)
» Argon + CO_2 (1 to 2.5%)

Filler metal (mm)	0.8	1.0	1.2	1.6
Short-Arc Current (A) Voltage (V)	 60/80 15/17	 80/120 15/17	 100/150 17/19	
Spray-Arc Current (A) Voltage (V)	 140/210 25/29	 180/250 26/29	 200/290 26/29	 250/350 27/29
Gas Flow (l/min)	12 / 18	12 / 18	12 / 18	12 / 18

Water-cooled torch is recommended for high current above 250 A.
Interpass must be controlled to less than 150°C.
UGIWELD™ 385 is suited for pulsed arc welding.

TIG Welding

» Shielding gas: Argon (+/- Helium).
Nitrogen and hydrogen are prohibited in shielding gases
Follow the recommendations of the torch producer:

» Current 50 – 250 A
» Voltage 10 – 20 V

Interpass must be controlled to less than 150°C.

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Available products

Process	Shape	Diameter Range	Packaging	Weight
TIG	Rods	1.0 – 4.0 mm	Cardboard tubes	5 kg
MIG	Wire	0.8 – 1.6 mm	Metallic spools – BS 300	15 – 18 kg
		0.8 – 1.2 mm	Plastic spools – D 200	5 kg
			Plastic spools – D 300	15 kg
		1.0 – 1.6 mm	Plastic spools – D 350	25 – 27 kg
		0.8 – 1.2 mm	Pay off pack - Drums	250 – 500 kg
SAW	Wire	1.6 – 3.2 mm	Rims K415 / 300 / 94	20 – 25 kg
			Rims K435 / 300 / 70	

Contact us for dimensions

Applications

UGIWELD™ 385 is a filler metal suited to "super austenitic" stainless steel welding type 904L and derivatives.

» Phosphates, phosphoric acid and chemical fertilizer industries. Sulfuric acid industry.

» Exchangers and condensers for chemical industry.

» Flue pipes.

» Sea water applications.