

# Data sheet and application

## DIM L-1.4755 SOFC<sup>®</sup>

DIM L-1.4755 SOFC  
DIN EN: X1CrWNbTiLa22-2 Crofer 22H High performance material

### Characteristics

The solid wire electrode made of ferritic, stainless steel has been specially designed for use in solid oxide fuel cells (SOFC). The weld metal has a very good resistance against Laves-phase precipitations. At temperatures of up to 900°C (1652°F), a chromium-manganese oxide layer is formed which is thermodynamically very stable on the surface and has a high electrical conductivity. The low thermal expansion adapts very well to the typical ceramic properties. Therefore it is possible to use high-temperature fuel cells from room temperature up to 900°C (1652°F).

Summary of typical features:

- Excellent corrosion resistance at high temperatures in anode and cathode gas
- Good durability
- Low chromium evaporation
- Easy to use
- Low thermal expansion coefficient
- Good electrical conductivity of the oxide layer

### Materials

Special Cr steels for high temperature fuel cells (SOFC)

### Chemical composition

	Cr	Fe	C	N	S	Mn	Si	Al	W	Nb	Ti	La	P	Ni	Cu
min.	20,0	bal.					0,1		1,0	0,2	0,02	0,04			
max.	24,0		0,03	0,04	0,006	0,8	0,6	0,1	3,0	1,0	0,2	0,2	0,05	0,5	0,5

Certificate of batch upon request.

### Processive instructions

Never contaminate welding area with carbon steel. Stainless steel tools (brushes), etc.  
Cleaning the welding area with ACETON.

Protection gases: Argon 4.8