

TECHNICAL DATA

Standards

Material : Stelite 12

AWS 5.21 :	ERCoCr-B
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General Properties

DSI M ST12 is an Cobalt-base Laser Welding Wire with an excellent resistance to many forms of chemical and mechanical degradation over a wide temperature range. Its attributes its anti- galling properties, abrasion, corrosion and oxidation resistant up to its melting range due to its age fraction of hard, brittle chromium.

Mechanical Properties

Yield strength $R_{p0.2}$	[MPa] / [N/mm ²]	500 - 700
Tensile strength R_m	[MPa] / [N/mm ²]	1000
Elongation A ($L_0 = 5d_0$)	[%]	2 - 5
Hardness (as cast)	[HRC]	40 - 45

Chemical Composition (Standard Values in %)

Co	Cr	W	C	Ni	Fe	Mn	Si
Base	26-30	8-10	1.4-1.8	≤ 3	≤ 3	≤ 1	≤ 1.5

Field of Applications (Selection)

Mainly use in applications that require the deposit to endure abrasion, heat and corrosion. Cutting and wear-prone environments. Harsh chemical and marine. Valve seats and guides in engines. Cutting tools and saw teeth. Industrial pump components. Bearings and bushings in high-stress environments

Elevated Temperatures

400°C (750°F) : 44 HRC	800°C (1475°F) : 37 HRC
600°C (1110°F) : 40 HRC	900°C (1620°F) : 35 HRC

Packaging and available Sizes*

Rod : 500 / 1000 mm	Ø mm	1.2
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* Other dimensions available on request

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