

Classification

EN ISO 14174

SA FB 1 55 AC H5

Characteristics and typical fields of application

BÖHLER BB 421 TT is an agglomerated flux of fluoride basic type for joining and surfacing of high strength steels and cryogenic fine grained structural steels. The silicon and manganese pick-ups and burn-off rates are neutral because of its metallurgical behaviour. The cryogenic toughness of the weld metal is very good. It can be welded with nearly every wire electrode. The flux can be used for tandem and multi wire welding with DC and AC. Very good slag detachability.

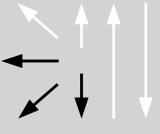
Base Materials

Unalloyed steels, high strength steels, cryogenic fine grained structural steels

Composition of sub-arc welding flux (wt. %)

	SiO ₂ +TiO ₂	CaO+MgO	Al ₂ O ₃ +MnO	CaF ₂
wt-%	16	34	21	26

Operating data

	Polarity DC (+) / AC	Basicity acc. to Boniszewski: 3.3 Mol. % 2.5 weight %
		Grain size acc. to EN ISO 14174: 3 – 20 (0,3 – 2,0 mm)
		Flux consumption: 1.0 kg flux per kg wire
		Redrying: 300 – 350 °C, 2 – 10h

Typical Composition of all-weld Metal with different Wires

SAW wires	C	Si	Mn	Cr	Mo	Ni
BÖHLER EMS 2	0.07	0.20	1.05			
BÖHLER EMS 2 Mo	0.07	0.20	1.05		0.47	
BÖHLER EMS 3	0.08	0.25	1.50			
BÖHLER Ni 2-UP	0.07	0.25	1.10			2.20
BÖHLER 3 NiMo 1-UP	0.08	0.20	1.55		0.55	0.90
BÖHLER EMS 3 Si	0.08	0.30	1.55			

Wire classification

	EN ISO	AWS
BÖHLER EMS 2	S2	EM12K
BÖHLER EMS 2 Mo	S2Mo	EA2
BÖHLER EMS 3	S3	EH10K
BÖHLER Ni 2-UP	S2Ni2	ENi2
BÖHLER 3 NiMo 1-UP	S3Ni1Mo	EF3
BÖHLER EMS 3 Si	S3Si	EH12K