

Classifications

EN ISO 14174

S A FB 2 DC

Characteristics and typical fields of application

Marathon 203 is an agglomerated fluoride-basic flux for submerged arc welding with stainless steel wires. It is recommended for joining soft-martensitic CrNi-steels; joining (and cladding) of unstabilized stainless austenitic CrNi(Mo)-steels. Especially suitable for thick walled components with high restraint and where a low amount of diffusible hydrogen is essential. The flux has a high basicity-index and provides a high purity in the weld metal resulting in good mechanical properties. The flux does not contain Cr supporting elements. Besides good slag detachability, the flux allows for good fillet weld appearance. Compared to Marathon 431 and Marathon 805 the solidified slag of Marathon 203 remains flat on the weld bead surface which results in a more silver shiny color of the bead surface. Former product name was "BÖHLER BB 203".

Flux properties

Polarity	DC
Basicity index (Boniszewski)	2.3 (wt.%) ; 2.9 (mol)
Grain size (EN ISO 14174)	3 – 16 (0.3 – 1.6 mm); 2 – 12 (0.2 – 1.2 mm)
Apparent density	1.0 kg/dm ³
Redrying	300°C – 350°C for 2 – 10 h

Composition of sub-arc welding flux

	SiO ₂	CaO+MgO+CaF ₂ +MnO	CaF ₂	
Gew. %	18	60	33	

Typical wires to combine

Name	EN ISO	Class	AWS / SFA	Class
Thermanit 13/04 Si	14343-A	S 13 4	A5.9 / -5.9	ER410NiMo (mod.)
Thermanit 16/05 Mo (Avesta 248 SV)	14343-A	S 16 5 1	A5.9 / -5.9	-
Thermanit 1720	14343-A	S Z 17 Mo H	A5.9 / -5.9	ER430 (mod.)
Thermanit JE-308L (BÖHLER EAS 2-UP)	14343-A	S 19 9 L	A5.9 / -5.9	ER308L
Thermanit JE-308L Cryo (BÖHLER EAS 2-UP (LF))	14343-A	S 19 9 L	A5.9 / -5.9	ER308L
Thermanit GE-316L (BÖHLER EAS 4 M-UP)	14343-A	S 19 12 3 L	A5.9 / -5.9	ER316L
Thermanit 18/17 E Mn (BÖHLER ASN 5-UP)	14343-A	S Z 18 16 5 N L	A5.9 / -5.9	ER317L (mod.)
Thermanit 20/25 Cu	14343-A	S 20 25 5 Cu L	A5.9 / -5.9	ER385
Thermanit 22/09 (BÖHLER CN 22/9 N-UP)	14343-A	S 22 9 3 N L	A5.9 / -5.9	ER2209
Thermanit X (BÖHLER A 7 CN-UP)	14343-A	S 18 8 Mn	A5.9 / -5.9	ER307 (mod.)
Thermanit 309L (BÖHLER CN 23/12-UP)	14343-A	S 23 12 L	A5.9 / -5.9	ER309L
Thermanit 25/4 (BÖHLER FA-UP)	14343-A	S 25 4	A5.9 / -5.9	-

Packaging

Type	Weight
Dry System	25 kg
Metal bucket	30 kg