

**Classifications**
**EN ISO 14174**

SA FB 2 DC

**Characteristics and typical fields of application**

**Marathon 431** is a fluoride-basic agglomerated flux for submerged arc welding of stabilized and unstabilized standard CrNi(Mo) and duplex stainless steel grades. The flux can be applied in multi-pass and single pass welding procedures. For a nice welding performance combined with good mechanical properties. Thin fluid slag which is self-releasing after solidification. The weld seams become smooth and finely rippled without any slag residues. Marathon 431 provides a high degree of purity in the weld metal ensuring good mechanical properties with good corrosion resistance. The flux does not compensate chromium loss.

**Flux properties**

Polarity	DC+
Basicity index (Boniszewski)	2.2 (wt%) ; 2.4 (mol)
Grain size (EN ISO 14174)	3 – 16 (0.3 – 1.6 mm) ; 4 – 14 (0.4 – 1.4 mm)
Apparent density	1.0 kg/dm <sup>3</sup>
Redrying	300 – 350°C for 2 h

**Composition of sub-arc welding flux**

	CaF <sub>2</sub>	SiO <sub>2</sub>	CaF <sub>2</sub> +CaO+MgO
wt. %	52	8	52

**Typical wires to combine**

Name	EN ISO	Class	AWS / SFA	Class
Thermanit JE-308L	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	14343-A	S 19 12 3 L	A5.9 / -5.9	ER316L
Thermanit H-347	14343-A	S 19 9 Nb	A5.9 / -5.9	ER347
Thermanit A-318 (Thermanit A)	14343-A	S 19 12 3 Nb	A5.9 / -5.9	ER318
Thermanit 22/09	14343-A	S 22 9 3 N L	A5.9 / -5.9	ER2209
Thermanit 25/09 CuT	14343-A	S 25 9 4 N L	A5.9 / -5.9	ER2594
Thermanit X	14343-A	S 18 8 Mn	A5.9 / -5.9	ER307 (mod.)
Thermanit 309L (Thermanit 25/14 E-309L)	14343-A	S 23 12 L	A5.9 / -5.9	ER309L
Thermanit 308 Mo (Thermanit 20/10)	14343-A	S 20 10 3	A5.9 / -5.9	ER308Mo (mod.)
Thermanit 25/4 (BÖHLER FA-UP)	14343-A	S 25 4	A5.9 / -5.9	EG

**Packaging**

Type	Weight
Dry System	25 kg
Metal bucket	30 kg
PE bag	25 kg