

## Classifications

### EN ISO 14174

S A FB 1 55 DC H5

## Characteristics and typical fields of application

**Marathon 543** is an agglomerated fluoride-basic special welding flux with high basicity suitable for multi-run welding high creep resistant 9%Cr-steels like grade P91/T91, 1.4903 - X10CrMoVNb9-1, grade P92/T92, NF616 and 1.4905 - X11CrMoWVNb9-1-1. The metallurgical behaviour concerning Si and Mn is neutral. The flux produces well contoured and smooth welding beads with good slag release as well as appropriate weld metal ductility and impact behaviour after tempering. Marathon 543 is a hydrogen-controlled welding flux with low hydrogen contents.

## Flux properties

Polarity	DC+
Basicity index (Boniszewski)	3.0 (wt%) ; 4.5 (mol)
Grain size (EN ISO 14174)	3-20 (0.3–2.0 mm)
Apparent density	1.0 kg/dm <sup>3</sup>
Redrying	400 °C ± 50°C / 2 hrs min.
Diffusible hydrogen (ISO 3690)	Max 5 ml/100 g acc. to EN ISO 14174 ; max 4 ml / 100 g acc. to AWS A5.23

## Composition of sub-arc welding flux

	CaF <sub>2</sub>	SiO <sub>2</sub>	CaF <sub>2</sub> +CaO+MgO
wt. %	21	8	62

## Typical wires to combine

Name	EN ISO	Class	AWS / SFA	Class
Union S 1 CrMo 9	24598-A	S S CrMo9	A5.23 / -5.23	EB8
Thermanit MTS 3	24598-A	S S CrMo91	A5.23 / -5.23	EB91
Thermanit MTS 3 LNi	24598-A	S S ZCrMo91	A5.23 / -5.23	EB91
Thermanit MTS 616	24598-A	S S ZCrMoWVNb 9 0,5 1,5	A5.23 / -5.23	EG (EB91(mod.))
Thermanit MTS 616 LNi	24598-A	S S ZCrMoWVNb 9 0,5 1,5	A5.23 / -5.23	EG (EB91(mod.))
Thermanit MTS 911	24598-A	S S ZCrMoWVNb 9 1 1	A5.23 / -5.23	EG (EB91(mod.))
Thermanit MTS 4	24598-A	S S CrMoWV12	A5.23 / -5.23	EG

## Packaging

Type	Weight
DRY SYSTEM	25 kg