

Classifications

AWS A5.23 / SFA 5.23
EN ISO 26304-A

F11A10-ECF5 / F11P6-ECF5

S 69 6 FB TZ H5

Characteristics and typical fields of application

diamondspark S 770 - UV 418 TT is a basic flux cored wire-flux combination for joint welding of high-strength, quenched and tempered fine grained structural steels up to MSYS = 690 MPa. The combination is designed to be applied in applications with requirements concerning overmatching YS and TS. The weld metal demonstrates good toughness properties at low temperatures (-60°C), a fine bead appearance and good wetting properties, together with good slag detachability characterize this wire/flux combination. The seamless coppered wire is not sensitive to moisture pick up, has a good resistance to deformation (wire feed rollers) and is very easy to straighten to ensure the best current transfer with low contact tip consumption.

UV 418 TT is an agglomerated fluoride-basic flux with high basicity and neutral metallurgical behaviour. For more information regarding this sub-arc welding flux see our detailed data sheet.

Base materials

S620Q,QL,QL1; S690Q,QL,QL1; alform plate 620 M, 700 M,

aldur 620Q, aldur 700Q, 700 QL, 700 QL1

ASTM A 514 Gr. F, H, Q; A 709 Gr. 100 Type B, E, F, H, Q; A 709 Gr. HPS 100W

Typical analysis

wt.-%	C	Si	Mn	Cr	Ni	Mo
all-weld metal	0.06	0.3	1.7	0.5	2.5	0.5

Mechanical properties of all-weld metal - typical values (min. values)

Condition	Yield strength R _{p0.2}	Tensile strength R _m	Elongation A (L ₀ =5d ₀)	Impact energy ISO-V KV J	
	MPa	MPa	%	-60°C	-51°C
u, DC +	≥ 690	≥ 770	≥ 17	≥ 69	
a1, DC+	≥ 690	≥ 770	≥ 17		≥ 27

u untreated, as welded ; a1 = 2 hours 580 °C

Operating data

Polarity	DC +	Dimension mm
		2.4
		3.2
		4.0

Mechanical properties depend on thermal weld cycle and dilution.

Approvals

CE, ABS, BV, DNV, LR