

CARBO 4459 AC

International standards	Material No	1.4459
	EN ISO 3581-A	E 23 12 2 L R 12
	AWS A 5.4	E309MoL-17

Approvals TÜV, DB, CE

Typical applications and characteristics

CARBO 4459 AC is an AC-weldable rutile-coated electrode with an alloyed core, suitable for joining difficult-to-weld steels and for corrosion-proof claddings.

An austenitic weld metal (CrNiMo 18/ 10/ 2) is obtained already in the first layer.

The alloy is also suitable for welding buffer layers on plated metal sheets and for joining austenitic to ferritic steels which are subject to service temperatures of up to 300° C.

Due to its high alloy level. CARBO 4459 AC produces crack-proof welds.

The addition of molybdenum ensures higher corrosion resistance and higher tensile-strength at elevated temperatures, as compared to the moly-free material 1.4829.

The weld metal is heat resistant and non-scaling up to 1050° C

Operating temperature - 20° C up to + 300° C

Base materials Dissimilar joints of 1.4583 with H I / H II. 17 Mn 4. StE 355.
1.4583 with P235GH / P256GH, P295GH, P355N
Buffer layers (first layer) for metal sheet plating
Carrier material: H I / H II. 17 Mn 4. StE 255 up to StE 460.
P235GH / P256GH, P295GH, P255N up to P460N
1.4401 X5CrNiMo17-12-3 1.4404 X2CrNiMo17-13-2

Mechanical properties of all-weld metal
(typical values)

Tensile strength R _m N/mm ²	Yield strength R _{p0,2} N/mm ²	Elongation A ₅ %	Impact strength ISO – V J at - 20° C
650	450	30	48

Weld metal analysis %
(typical wt %)

C	Si	Mn	Cr	Ni	Mo
< 0,04	0,9	0,7	23	13	2,6

Welding positions PA, PB, PC, PD, PE, PF

Current = + / ~ / 42 V

Rebaking 1 h. 350° C + / - 10° C (if necessary)

Dia./Length	Amperage (A)	Pcs./packet	Pcs./carton	kg/1000	kg/packet	kg/carton
2,0 x 300	30 - 60	339	1356	11,8	4,0	16,0
2,5 x 300	50 - 80	217	870	18,4	4,0	16,0
3,2 x 350	60 - 100	138	551	36,3	5,0	20,0
4,0 x 350	80 - 140	91	364	55,0	5,0	20,0
5,0 x 450	130 - 170	54	217	110,6	6,0	24,0

Rev. 003/12

Statements on composition and application are just for the applier's information. Statements on mechanical properties always refer to the all-weld-metal according to valid standards. Carbo-Weld may change the characteristics of its products without notice. We recommend the applier to check our products for their special application autonomously.