



Product Data Sheet

E 'Manual metal-arc welding'

ESAB 28

Prepared by Meenakshi A.	Qualified by Ravi Palli Kumar	Approved by Nagarjuna S	Reg no EN008649	Cancelling EN008515	Reg date 2019-05-20	Page 1 (2)
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REASON FOR ISSUE

Approvals updated

GENERAL

ESAB 28 is a medium heavy rutile coated mild steel electrode designed for welding of unalloyed structural steels in all positions. The electrode gives smooth radiographic quality weld with low spatter. Slag is self detachable and the bead shape is uniform and finely rippled.

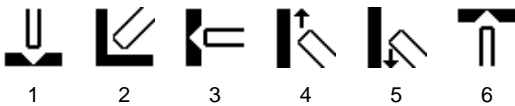
Min AC OCV: 50

Polarity: AC, DC+-

Alloy Type: C-Mn

Coating Type: Rutile

WELDING POSITIONS



CLASSIFICATIONS Electrode

SFA/AWS A5.1	E6013
EN ISO 2560-A	E 38 0 RC 11
IS 814	ER4212X

APPROVALS

ABS	2
BV	2
DNV	2
IBR	E6013
IRS	2
LR	2m
PDIL	E6013

CHEMICAL COMPOSITION

All Weld Metal (%)

	Max	Nom
C	0.20	0.08
Si	1.00	0.25
Mn	1.20	0.35
P	0.04	0.025
S	0.03	0.020
Cr	0.20	0.04
Ni	0.30	0.04
Mo	0.20	0.001
V	0.05	0.008
Nb	0.05	0.01
Cu	0.30	0.008

MECHANICAL PROPERTIES OF WELD METAL

Properties	AWS		
	As welded		
	Min	Max	Typ
Rp0.2 (MPa)	380		420
Rm (MPa)	470	540	510
A4 (%)	20		28
Z (%)			60
Charpy V at 0°C (J)	47		90



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ECONOMICS & CURRENT DATA

Dimension (mm) Ø x Length	Current (A)		W	η	N	B	H	T	U	Welding Positions
	Min	Max								
2.5 x 350	50	80								1,2,3,4,5,6
3.15 x 350	70	120								1,2,3,4,5,6
3.15 x 450	70	120								1,2,3,4,5,6
4.0 x 450	100	170								1,2,3,4,5,6
5.0 x 450	150	260								1,2,3,4,5,6

W = Weight (kg / 100 electrodes)

η = Efficiency (g weld metal x 100 / g core wire)

N = Effective value (kg weld metal / kg electrodes)

B = Changes (number of electrodes / kg weld metal)

H = Deposit rate at 90% of max current (kg weld metal / hour arc time)

T = Fusion time at 90% of max current (s / electrode)

U = Arc voltage (V)

OTHER DATA

Redrying: 110°C, 1/2h
