

60

High temperature Basic coated Electrode

TECO

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Classification

AWS A5.5 : E7018-A1
ISO 3580-A : E Mo B 42

EN 1599 : E Mo B 42

Description & Applications

Low hydrogen basic coated electrode with Mo for welding creep resisting steels used at temperatures up to 500°C. Good resistance to Hydrogen attacks (chemical installations).

Used for piping systems, boilers...

Soft fusion, easy slag removal and nice aspect of the metal deposit.

Base materials	Mat. N°	EN	DIN	NF	ASTM
	1.0425	P265GH	H11		
	1.0473	P355GH	19Mn6		A537 Cl1; A414 Gr G ; A612
	1.0481	P295GH	17Mn4		
	1.0482	P310G	19Mn5		
	1.0619	GP240GH	GS-C 25		
	1.5415	16Mo3	15Mo3	15D3	
	1.5419	G20Mo5	GS-22Mo4		
	1.5423		16 Mo 5		A161/A209/A250 Gr T1 ; A335 Gr P1
	1.5424	10MnMo4-5		18MD4-05	A204 Gr A, B, C

Typical Weld Metal Composition (%)

C	Si	Mn	Mo	P	S
<0.10	0.4	0.8	0.5	<0.025	<0.025

All Weld Metal Mechanical Properties *

Re (MPa)	Rm (MPa)	A5 (%)	KV (J)
>450	>550	>22	+20°C >100

* After heat treatment at 650°C/1h

Welding Current & Instructions

Electrode	ØxL (mm)	2,5x350	3,2x350	4,0x450	5,0x450
Current	(A)	80	115	150	190

Redrying: 2h at 350°C, if necessary. Interpass temperature: 100-250°C.

Annealing after welding is advised at 650°C/1h.



1G/PA



2F/PB



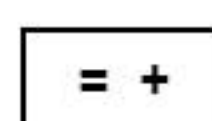
2G/PC



3G/PF



4G/PE



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High Strength Basic Electrode

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Classification

AWS A 5.5 : E10018-G
EN 757 : E 62 5 1,5NiMo B 42

Description & Applications

Basic coated electrode highly resistant to cracks and elaborated for welding fine grain steels and steels with high mechanical strength (Rm up to 800 MPa).

Welds of high security, buffer layers before hardfacing.

Regular fusion, stable arc, low spatters, good removal of the slag and nice aspect of the weld seam.

Base materials Construction steels for general use:

NF A 35-501 : A50-2*. A60-2*,3. E36-2*,3*,4*.
DIN 17100 : St50-2*. St60-2*. St70-2*.
ASTM : A 678grC*. A709gr50*,100*. A710gr A.
High strength steels :
NF A 36-204 : E500T*. E550T*. E620T*. E690T*.
DIN 17102 : StE460, 500*, 590*,690*.

Also suitable for welding heat- treatable steels like: 15CD4*. 25CD4*. 35CD4*.
XC38. XC48*. 32C4....., also for construction steels self-patining (consult us)

* eventual preheating and post-weld heat treatment in the case of heavy thickness.

Typical Weld Metal Composition (%)

C	Si	Mn	Cr	Ni	Mo
<0.10	0.5	1.4	0.2	1.5	0.4

All Weld Metal Mechanical Properties

Re (MPa)	Rm (MPa)	A5 (%)	KV (J)	
>620	720-820	>22	+20°C	>130
			-20°C	> 90
			-50°C	> 50

Welding Current & Instructions

Electrode	ØxL (mm)	2,5x350	3,2x350	4,0x450	5,0x450
Current	(A)	80	115	150	190

Rebaking of the electrodes at 350°C during 2 hours. Eventual preheating depends on the thickness and the nature of the steel (100°C). Interpasses temper ature <200°C. A stress relieving heat treatment is advised in most cases, at 600°C during 2 hours.



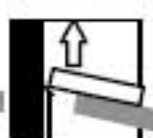
1G/PA



2F/PB



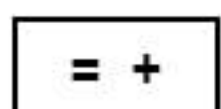
2G/PC



3G/PF



4G/PE



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TECO

Basic Electrode For steels resistant To Atmospheric corrosion

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Classification

AWS A 5.5 : E8018-W2
EN 499 : E 46 2 Z B 42

ISO 2560-A : E 46 2 Z B 42

Description & Applications

Low hydrogen basic coated electrode with a steel deposit containing Cu- Ni- Cr, for welding all steels resistant to atmospheric corrosion (industrial, sea, rural). Regular fusion, good removal of the slag. Nice aspect of the weld seams.

Principal applications : public buildings, department of civil engineering, navy, tanks, water tower, bridges, crash barrier, electrical pylons.

Base materials

Steels with improved resistance to atmospheric corrosion:

NF A 35-502 : E24W Quality 2 to 4 , E36W A2-A4

DIN : WT St37-2 , WT St37-3 , WT St52

Trade marks : COR-TEN A,B,C – PATINAX – INDATEN – ACOR...

Typical Weld Metal Composition (%)

C	Si	Mn	Cr	Ni	Cu	P	S
<0.10	0.4	1.0	0.5	0.5	0.4	<0.025	<0.025

All Weld Metal Mechanical Properties

Re (MPa)	Rm (MPa)	A5 (%)	KV (J)
>460	>550	>19	-20°C >60

Welding Current & Instructions

Electrode	ØxL (mm)	2,5x350	3,2x350	4,0x450	5,0x450
Current	(A)	80	115	150	190

Rebaking of the electrodes at 350°C during 1 hour.



1G/PA



2F/PB



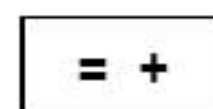
2G/PC



3G/PF



4G/PE



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Basic Electrode with High Strength

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Classification

AWS A5.5 : E11018-M
EN 757 : E 69 4 Mn 2NiCrMo B 42

Description & Applications

Basic electrode with a deposit which is very resistant to cracks and has a high strength. The deposit contains Ni, Cr, Mo, Mn for welding similar fine grain steels (service temperatures : -40 to +450°C)
Example : low alloyed, tempered coated steels, pressure vessels, with a yield strength $Re > 650$ MPa.
Very good radiographic quality - very low diffusible hydrogen (3 ml H₂/100g metal deposit).
Regular fusion - stable arc - low spatters - good removal of the slag.

Base materials

Fine grain and cold tough steels:

NF A 36-204 : E 500T* . E 620T* . E 690T* .
DIN 17102 : StE 590* . StE690* . TStE 500* . WStE 500* .
17MnCrMo 33, 11 NiMnCrMo 55, 16 NiCrMo 12, 12MnNiMo 55.
Werkstoff Nr. : 1.8928* - 1.7279* - 1.6780* - 1.6782* - 1.6343* etc.
ASTM : A517 - A533GrA - A537 - A678 - A633Gr C bis E
N-A XTRA; N-A TRA70* (Thyssen).
Tube steels : API 5 LX: X70* . X75* . X80*
(*) with eventual pre- and post weld heat treatment (consult us)

Typical Weld Metal Composition (%)

C	Si	Mn	Cr	Ni	Mo
<0.10	0.4	1.5	0.4	2.1	0.5

All Weld Metal Mechanical Properties

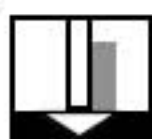
Re (MPa)	Rm (MPa)	A5 (%)	KV (J)	
>690	>760	>20	+20°C	>120
			-40°C	> 60

Welding Current & Instructions

Electrode	ØxL (mm)	2,5x350	3,2x350	4,0x450	5,0x450
Current	(A)	80	115	150	190

Rebaking of the electrodes at 350 °C during 2 hours before use. Eventual preheating of the base metal depends on the thickness and the nature of the steel (50 to 130°C).

Maintain an interpass temperature <150°C.



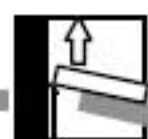
1G/PA



2F/PB



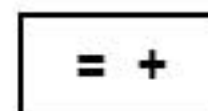
2G/PC



3G/PF



4G/PE



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Basic Electrode With high toughness

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Classification

AWS A5.5 : E8018-C2
EN 499 : E 46 6 3Ni B 42

ISO 2560-A : E 46 6 3Ni B 42

Description & Applications

Low hydrogen basic coated electrode alloyed with Nickel (above 3%) for welding fine grain steels used at low temperature (-60 to -80°C). Cryogenic and petrochemical industries. Storage and distribution of liquid gas or products volatile.

Base materials

Plates and tubes of fine grain steels, cold tough:

NF A 35-207 : A510FP1 – A550FP2
NF A 36-208 : 3.5 Ni 285 and 355 (12N14)
DIN : 10Ni14 – 14Ni6 – 16Ni14
ASTM : A203G D&E – A352GrLC3 – A334Gr3 – A350Gr LF3

Typical Weld Metal Composition (%)

C	Si	Mn	Ni	P	S
<0.10	0.3	0.9	3.5	<0.025	<0.025

All Weld Metal Mechanical Properties

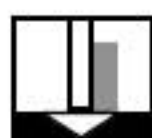
Re (MPa)	Rm (MPa)	A5 (%)	KV (J)
>460	>550	>19	-73°C >80 -100°C >30

*After thermal stress relieving at 620°C/1h

Welding Current & Instructions

Electrode	ØxL (mm)	2,5x350	3,2x350	4,0x450	5,0x450
Current	(A)	80	115	150	190

Eventual rebaking at 350°C during 2 hours. An eventual preheating depends on the thickness of the parent metal. A stress relieving heat treatment is recommended in most of cases (620°C/1h).



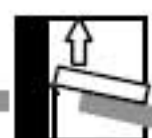
1G/PA



2F/PB



2G/PC



3G/PF



4G/PE

= +

