

Repair electrode

Classification

AWS A5.5 : ENiFe-CI
 ISO 1071 : E C NiFe-CI 1

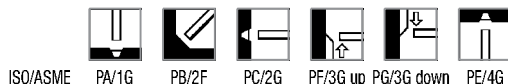
General description

Basic graphite coated stick electrode with nickel iron core for cold welding of cast iron, malleable cast iron and joint welding to steel.

Specially developed for good peen- and machinable seams e.g. for thick joints.

In order to introduce as little heat into the work piece as possible, it is advisable to weld with DC positive.

Welding positions



Current type

AC / DC electr. +

Chemical composition (w%), typical. all weld metal

C	Fe	Ni
0.6	40	balance

Mechanical properties, all weld metal

	Condition	0.2% Proof strength (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)	Hardness HB10
Required: AWS A5.15		296-434	400-579	6-18	165-218
ISO 1071		250	350	6	
Typical values	AW	300	460	10	175

Packaging, available sizes and identification

	Diameter (mm)	2.5	3.2	4.0
	Length (mm)	300	300	350
Unit: PE tube	Pieces/unit (nominal)	155	95	54
	Net weight/unit (kg)	2.5	2.5	2.5

Identification

Imprint: REPTec CAST 3

Tip colour: black

RepTec Cast 3: rev. EN 20

Materials to be welded

Material grades	DIN 1691	DIN 1692	DIN 1693
For welding and repair	GG-10	GTS-35	G GG-40
	GG-15	GTS-45	G GG-50
	GG-20	GTS-55	G GG-60
	GG-25	GTW-35	G GG-70
	GG-30	GTW-40	G GG-80
	GG-35	GTW-45	
	GG-40	GTW-S-38	

Calculation data

Sizes Diam. x length (mm)	Current range (A)	Current type	Arc time - per electrode at max. current - (s)*	Energy E(kJ)	Dep.rate H(kg/h)	Weight/ 1000 pcs. (kg)	Electrodes/ kg weldmetal B	kg Electrodes/ kg weldmetal 1/N
2.5 x 300	50 - 70	AC	58	106	0.76	15.9	82	1.3
3.2 x 300	70 - 90	AC	69	161	1.24	30.8	42	1.3
3.2 x 350	70 - 90							
4.0 x 350	100 - 120	AC	75	234	1.78	46.2	27	1.2
4.0 x 400	100 - 120							

* stub end 35mm

Welding parameters, optimum fill passes

Welding positions Diameter (mm)	PA/1G Current (A)	PB/2F	PC/2G	PF/3G up	PE/4G	PF/5G up
2.5	60	60	60	60		
3.2	80	80	80	75		
4.0	110	110	110	105		

Application advice

Welding of short beads is recommendable.

Peening (with a ball hammer) immediately after welding eliminates shrinkage stresses.

Perlitic cast iron often needs 200°C preheating.