

ZANELLI	PRODUCT DATA SHEET	M-PRO-20 REVISION 1 DTD 28.05.2002
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PRODUCT NR.	NAME	CERTIFICATION	REV./DTD
2	ZA	Quality System Certificate to UNI EN ISO 9001:2000 (Product Certificate to EN 12069 class C-50 and C-80 by D.V.G.W. no. NV 5180BO0186)	Rev.8 del 1.12.2010

DESCRIPTION

Heat shrinkable irradiation cross-linked polyethylene sheet clad with polyolefinic heat sensitive adhesive, installed by prior application on bare steel of bi-component epoxy resin. Product suitable for the anti-corrosion protection of buried steel pipeline .
 Suitable for installation in ambient temperature from – 10°C to + 60°C and on pipelines operating at service temperature not exceeding +80°C.
 Compatible with coating in polyethylene, coal-tar, fusion bonded epoxy, polypropylene and polyurethane (for the latter two coatings is requested the roughening of the overlap area by abrasive material)
 Preheating temperature: +100°C min.
 Steel surface treatment: grit blasting to St 3 standards

VISUAL AND DIMENSIONAL CONTROL

COLOR	BLACK
WIDTH	AS SPECIFIED – TOLERANCE - 5 / + 20 mm.
TOTAL THICKNESS(*)	AS SPECIFIED – TOLERANCE - 0 / + 0,3 mm.
BUILT-IN PATCH	UPON REQUEST
EDGE-CUT	UPON REQUEST
MARKS	“ZANELLI – ITALY “ ZA/ZE + TRACEABILITY CODE
PROTECTIVE FOIL	NOT REQUIRED

PROPERTIES OF THE BACKING

TITLE	SPECIFICATION	UNIT	VALUES	TOLERANCES
YELD TO BREACK	EN 12068 app.A (M-PRO-29 PROVA N.12)	N/mm2	15	min.
ELONGATION	EN 12068 app.A (M-PRO-29 PROVA N.12)	%	400	min.
HEAT SHOCK	ASTM D-2671	VISUAL	no defects	-

PROPERTIES OF THE ADHESIVE

TITLE	SPECIFICATION	UNIT	VALUES	TOLERANCES
DENSITY	ASTM D-792	g/cm3	1,03	+/- 0,05
SHEAR STRENGTH AT +23°C	EN 12068 app. D (M-PRO-29 PROVA N.4)	N/mm2	1,80	min.
SHEAR STRENGTH AT +50°C	EN 12068 app. D (M-PRO-29 PROVA N.4)	N/mm2	0,4	min.
SOFTENING POINT	ASTM E-28 (M-PRO-29 PROVA N.6)	°C	97	+/- 10
VISCOSITY	ASTM D-4402	cPs	85.000	+/- 20.000

PROPERTIES OF THE INSTALLED SLEEVE

TITLE	SPECIFICATION	UNIT	VALUES	TOLERANCES
ADHESION AT +23°C	EN 12068 app. C (M-PRO-29 PROVA N.3)	N/mm	5,5	min.
ADHESION AT +50°C	EN 12068 app. C (M-PRO-29 PROVA N.3)	N/mm	0,5	min.
IMPACT RESISTANCE	EN 12068 app. H	15 J	pass	-
DIELECTRIC INSULATION	DIN 30672	KV 17,5	pass	-
CATHODIC DISBONDMENT at +23°C x 28 days	EN 12068 app. K	mm/radius	15	max.
CATHODIC DISBONDMENT at +60°C x 72 hrs	ASTM G 42	mm/radius	10	max.

PROPERTIES OF EPOXY PRIMER (PRODUCT DATA SHEET NR.5)

(*) UN-RECOVERED