



**EC-CERTIFICATE
OF FACTORY PRODUCTION CONTROL
No 2032-CPD-11.5**

In compliance with the Directive 89/106/EEC of the Council of European Communities of 21 December 1988 on the approximation of laws, regulations and administrative provisions of the Member States relating to the construction products (Construction Products Directive - CPD), amended by the Directive 93/68/EEC of the Council of European Communities of 22 July 1993, it has been stated that the construction

**PRODUCTS FOR THE PROTECTION AND REPAIR OF CONCRETE STRUCTURES
EXMAL 4 and REPARATUR MALTER F2**

used to repair of concrete elements and strengthen of reinforced concrete structures with function-related characteristics according to producer's stated values given in an Annex to the Certificate,

placed on market by

ADING Ltd.
Novoselski pat b.b., 1000 Skopje, F.Y.R.Macedonia

and produced in the factory of

ADING Ltd.
Novoselski pat b.b., 1000 Skopje, F.Y.R.Macedonia

is submitted by the manufacturer to the initial type-testing of the product and a factory production control and that the Notified body No 2032 "NISI" Ltd has performed the initial inspection of the factory and of the factory production control and performs the continuous surveillance, assessment and approval of the factory production control.

This certificate attests that all provisions concerning the attestation of factory production control described in Annex ZA of the standard

EN 1504-3:2005

This certificate was first issued on 31st May 2011 and remains valid as long as the conditions laid down in the harmonised technical specification in reference or the manufacturing conditions in the factory or the FPC itself are not modified significantly.

General Manager of NISI Ltd
Dr.Eng.Rumen Guglev, assoc prof.

Sofia, 31st May 2011

There is an Annex of this Certificate that is integrant.





ANNEX

EC-CERTIFICATE of factory production control 2032-CPD-11.5

PRODUSER'S STATED VALUES OF ESSENTIAL CHARACTERISTICS IN SCOPE OF THE CERTIFICATE

Essential characteristic	Test method	Unit of measurement	Product / value	
			EXMAL 4 class R4	REPARATUR MALTER F2 class R3
Compressive strength	EN 12190	N/mm ²	≥ 45	≥ 25
Water-soluble chloride	EN 1015-17	%	≥ 0,05	≥ 0,05
Bond strength by pull-off	EN 1542	N/mm ²	≥ 2,0	≥ 1,5
Unrestrained shrinkage and expansion	EN 12617-4	N/mm ²	Bond strength after shrinkage and expansion ≥ 2,0	
Carbonation resistance	EN 13295	mm	pass dk ≤ control concrete (MC 0,45)	pass dk ≤ control concrete (MC 0,45)
Elasticity Modulus in compression	EN 13412	GPa	≥ 20	≥ 15
Thermal compatibility (Part 1)	EN 13687-1	N/mm ²	Bond strength after 50 freeze-thaw cycles ≥ 2,0	
Water absorption	EN 13057	kg/(m ² h ^{0,5})	≤ 0,5	≤ 0,5

General Manager of NISI Ltd
 Dr.Eng.Rumen Guglev, assoc.prof.

