



LNG Adhesives

Koresive EN9771 A / B (Two-Components)

Product

Description

- Koresive EN9771 is an epoxy based two-component adhesive
- This adhesive is conforming to the GTT Technigaz Mark III specification M3004.
- It has highly thixotropic and good crush properties.

Key properties

- Highly thixotropic mastic
- Low specific gravity
- Very good workability
- Sufficient Maximum usable time, Good crush property

Typical product

data

Properties	EN9771 A	EN9771 B	Mixed
Appearance	Gray-blue	Gray-yellow	Gray-green
Viscosity at 20 °C (Poise)	2,500~3,500	1,800~2,400	1,800~2,800
Specific gravity	1.0~1.1	0.87~0.97	0.9~1.0

* Viscosity is based on ISO 2555.

* Specific gravity is based on ASTM D792.

Processing

EN9771 A/B is extrudable through automatic mix metering equipments.

Mixing Ratio	Part by weight	Part by volume
EN9771 A	100	100
EN9771 B	73	82
Tolerance	± 10% of hardener addition	

* Working is recommended to the range of 5 °C to 40 °C.

* Substrate must be dried and 5 °C above.

* A temperature of materials be used is desirable to the range of 20 °C to 25 °C.

Cure requirement

Temperature	Minimum time to achieve the lap shear strength of 12MPa
15 °C	130 hrs
20 °C	96 hrs
35 °C	36 hrs

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Physical properties

Tested according to related specification.

Item	Data	Remarks
Thixotropic of the mixture	0 mm at 20±2 °C	ASTM D 2730
	4 mm at 35±2 °C	
Gel time	240 min	ASTM D 2471
Peak exothermic	27.2 °C	
Stability of the product in volume after complete curing	0.3 % at 20±2 °C	MH1004-5.4
Open working time	116 min	MH1004-4.3
Maximum usable Time	3.5 hr at 20 °C	MH1004-6.1
	2.3 hr at 35 °C	
Coefficient thermal contraction (m/m. °C)	53.5×10^{-6} between -30 °C ~ +50 °C	ASTM D 696

Creep properties

Maximum deflection after 360hours	0.04 mm	MH1004-7.4
Remaining deflection after 360hours recovery	0.03 mm	

Mechanical properties

Tested according to related specification.

Tensile strength

	-25 °C	25 °C	Remarks
Strength (MPa)	30.6	22.6	ISO R527
Elongation (%)	0.84±0.15	1.21±0.14	
Modulus (MPa)	4416	3317	

* Cured 14 days at room temperature

Compressive strength

	-25 °C	25 °C	Remarks
Strength (MPa)	66.7	39.7	ASTM D695
Modulus (MPa)	3382	2501	

* Cured 14 days at room temperature

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Lap shear strength

Temperature	-25 °C	25 °C	Remarks
Strength (MPa)	14.4	14.5	ISO 4587

* Cured 14 days at room temperature

Adherence properties

Tested according to related specification

	-25 °C	25 °C	Remarks
Shearing strength on steel (MPa)	13.2	18.7	MH1004-8.1.1
Shearing strength on plywood (MPa)	5.9	6.3	
Perpendicular tensile strength With steel (MPa)	21.9	21.1	MH1004-8.1.2
Perpendicular tensile strength with plywood (MPa)	3.2	3.3	

* Cured 14 days at room temperature

Compatibility to sea water (with Primer)

Tested according to related specification.

Primer : Kunsul washprimer

		-25 °C	25 °C	Remarks
Shearing Strength (MPa)	No immersion	11.8	14.2	MH1004
	15 days	-	14.8	
	4 weeks	-	13.4	
	6 weeks	-	14.8	
Perpendicular tensile strength (MPa)	No immersion	20.4	19.9	MH1004
	15 days	-	17.9	
	4 weeks	-	15.8	
	6 weeks	-	15.4	

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Primer : KCC washprimer

		-25℃	25℃	Remarks
Shearing Strength (MPa)	No immersion	15.7	17.2	MH1004
	15 days	-	16.6	
	4 weeks	-	16.4	
	6 weeks	-	16.0	
Perpendicular tensile strength (MPa)	No immersion	24.6	23.2	MH1004
	15 days	-	19.6	
	4 weeks	-	19.6	
	6 weeks	-	17.3	

Storage The products have a shelf life of 12 months providing they are stored in original drums supplied by KCC.

The temperature of storage must be continued to minimum of 5 °C and maximum 40 °C.

They must be protected from direct sunlight and rain.

Handling Caution

precaution The products are generally harmless to handle provided that certain precautions normally taken when handling chemicals are observed. The uncured materials must not be allowed to come into contact with foodstuff, food utensils, skin.

The wearing of rubber or plastic gloves will normally be necessary and the use of eye protection. The skin should be thoroughly cleansed at the end of working by washing with soap and warm water.

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