



# KALMATRON KF-I

## Main characteristics of KF-I

Mass per unit of volume, kg/cubic meter	800
Compressive strength, MPa, no less than	2,5
Flexural strength, MPa, no less than	0,5
Adhesion to the concrete surface, MPa, no less than	0,2
Freeze-thaw resistance grade, cycles, no less than	F50
Shrinkage, 28 days after hardening	no cracks
Heat conductivity, Wt/m <sup>2</sup> K ( kilo-calories / hour <sup>2</sup> meter <sup>2</sup> °C ), not exceedin temperature: 5 ± 5 °C 125 ± 5 °C	0,12 0,14
Mortar flaw , centimeters	5 ... 7
Vapor emission resistance, %	90 ... 95
Initial setting, hours, no less than	2
Sliding resistance on vertical surfaces	no sliding

## INTRODUCTION

- KALMATRON® KF-I is THERMORESISTANT COMPOUND for heat protection designed to perform high heat resistance and liquid impermeability as a coating on a roofs, floors, boiled water supplies pipes, heating joints, etc.
- Technological painting – if it required – will improve liquid impermeability over W6.
- Provides durable coat with highest resistance to atmospheric and biological effects.
- KF-I is applicable by brush or trowel in dry or damp environments as well.
- Provides rock solid and rough surface with required compressive strength, liquid impermeability, vapor transmission, and freeze-thaw resistances;
- Design of KF-I could be revised for any particular requests such as upgraded strength, radiation attenuation, underwater app., etc.

## ESSENTIALS

- KF-I designed for coating on heat exposed or heat releasing concrete, metal and masonry structures. For instance, application of KF-I for isolation of metal pipes caring boiled water reduced heat lost at least at 10 to 15% with lower cost per square unit.
- High strength, freeze resistance, as well as unattractiveness for the modern vandals (unlike the metal insulation) allows to increase by several times the whole heat proofing system service period up to 15 years. Compared to other similar heat proofing materials, KF-I has a higher heat proofing ability and water resistance.
- This product is welcomed for water proofing of structures that specifically designed for unstable in humid and temperature environment of civil, public and industrial buildings and structures.



## DEMO OF KF- I

Sequence of application on metal pipes:

1. Set a metal wire net frame over the pipe with  $d > 400$  mm;
2. Set the face templates in locations of designed thermal-joints equal to the joints in height;
3. Prepare KF-I mix by mixing with water;
4. Apply KF-I layer on the surface of the pipeline and smooth it with a metal or plastic trowel;
5. Curing is not required.

Comparative characteristic of the Heat-Proofing materials

Comprising products	Mass per unit volume (kg/m <sup>3</sup> )	Thermal conductivity Kcalorie / m <sup>2</sup> h <sup>2</sup> degree	Compressive Strength (MPa)	Flexural strength (MPa)	Designed durability (years)
Asbestos gypsum plaster	>900	0,24	1,6	0,35	4 – 5
Diatomaceous-silica asbestos plaster	900	0,23	1,9	0,4	4 – 6
Asbestos cement plaster	1400	0,45	2,5	0,5	4 – 5
Aerated concrete	≥ 600	0,22	0,95	N/a	N/a
Cellular concrete + quartz sand	800	0,29	1,5	N/a	N/a
<b>The KF-I composition</b>	<b>800</b>	<b>0,12</b>	<b>3,0</b>	<b>0,46</b>	<b>15 to 25</b>