

**Public Contracts Review Board
Notre Dame Ravelin
Floriana**



JGS Contractors Limited (TID 225937)

vs

Housing Authority

Green Building Solutions Limited

Tender TWO 3/2025

Tender for the Construction Works of a New Housing Block using environmental performance standards at Triq I-Imdina, c/w Triq San Pietru c/w Triq Karwija Kirkop (KKP-E)

Reasoned Letter of Reply filed by the Housing Authority

The Housing Authority (“HA”) categorically refutes all allegations raised by JGS Contractors Limited (“JGS”) as entirely unfounded and devoid of merit.

The HA issued a call for tenders for the supply of Tender for the Construction Works of a New Housing Block using environmental performance standards at Triq I-Imdina, c/w Triq San Pietru c/w Triq Karwija Kirkop (KKP-E).

JGS Contractors Limited (JGS) submitted three offers bearing Tender ID numbers 225936, 225937, 225938 which ranked first, second and fourth respectively. JGS was aware of such rankings.

The HA requested administrative requests for clarifications from JGS in relation to all three offers.

Conveniently, JGS replied only with respect to the offer which placed second, while failing to respond to the correspondence concerning the offers placing first and fourth.

Pursuant to General Conditions, Clause 3.1, the HA was obliged to reject such offers given that all three offers submitted were identical from a technical point of view and thus rendered the offers administratively and technically non-compliant in accordance with Clause 3.1 of the General Conditions.

First Grievance

The HA submits that the Evaluation Committee never evaluated the tender offer submitted by JGS under TID 225937. The words “was not technically compliant” appearing in the first paragraph of the letter dated 24th September 2025 are clearly a typographical error.

Indeed, the same letter continues to elaborate on the reasons for non-compliance as follows:

“The main reasons why your procurement proposal was non-compliant are as follows:

The following request for rectification was deemed necessary. EO was requested to;

1. Provide details concerning the sub-contractor/s and submit an ESPD for the subcontractor/s, since in the submitted ESPD, your company mentioned 1% (Rockcut Ltd) subcontracting as requesting in Section 1 – Instructions to Tenderers – Clause 5(B)(c)(2); and

2. Provide attesting that the minimum average yearly turnover during the past three (3) years, being 2022-2024 is not less than €500,000 per year, as requested in Section 1-Instruction to Tenderers- Clause 5(B)(b), since this was missing from your submission.

By the deadline, bidder submitted the requested documentation, but when evaluated by the EC noted that three (3) bids Tender ID 225936, 225937 and 225938 submitted were administratively and technically identical. General Rules Governing Tenders Clause 3.1 states that “Bidders may submit up to three (3) multiple bids which should be non-identical (technically and financially) for a tender”. The EO is disqualified based on this clause, since the three (3) offers submitted are technically identical. Moreover, The EO deliberately did not reply to cheapest Bid, the EC deemed that bidder must be disqualified due to improper practice.”

After careful examination of the above, it is evident that the phrase “was not technically compliant” in the first paragraph of the said letter constitutes a typographical error. The substantive reasons outlined in the remainder of the letter clearly relate to non-compliance with Clause 3.1. of the General conditions given that all three offers submitted were identical from a technical point of view and thus, this rendered the offer administratively and technically non-compliant in accordance with Clause 3.1 of the General Conditions.

Accordingly, no error of evaluation occurred, as the HA did not conduct a technical evaluation of the offer in question.

Second Grievance

The Evaluation Committee acted in full conformity with the General Rules Governing Tenders, particularly Article 3.1 of the General Conditions, which stipulates that bidders may submit up to three non-identical bids.

In compliance with this requirement, the Committee was obliged to compare the three bids submitted by JGS to ascertain that they were neither technically nor financially identical.

The HA never stated that the offers submitted under TID 225936 and TID 225938 were “unacceptable tenders” as alleged by the appellant. Rather, these were deemed “administratively non-compliant” for the following reasons:

“The main reasons why your procurement proposal was non-compliant are as follows:

The following request for rectification was deemed necessary. EO was requested to;

1. Provide details concerning the sub-contractor/s and submit an ESPD for the subcontractor/ s, since in the submitted ESPD, your company mentioned 1% (Rockcut Ltd) subcontracting as requesting in Section 1 – Instructions to Tenderers – Clause 5(B)(c)(2); and

2. Provide attesting that the minimum average yearly turnover during the past three (3) years, being 2022-2024 is not less than €500,000 per year, as requested in Section 1-Instruction to Tenderers- Clause 5(B)(b), since this was missing from your submission.

By the deadline, bidder did not answer the rectification request, therefore, his offer could not be considered further.

Administratively non-compliant.”

The mere classification of a tender as administratively non-compliant does not render it an unacceptable tender within the meaning of Regulation 2 of S.L. 601.03.

Moreover, once an offer is deemed administratively non-compliant, this does not preclude the Evaluation Committee from examining the submissions to ensure adherence to Article 3.1 of the General Rules.

Were such scrutiny prohibited, contracting authorities would risk implicitly condoning improper practices by contractors who intentionally submit multiple identical offers and strategically fail to respond to requests for rectification relating to the lowest-priced identical offer, thereby gaining undue financial advantage for the same works and specifications.

The General Conditions form an integral part of the tender documentation; therefore, by ensuring their strict application, the Evaluation Committee acted within its legal remit and did not violate the principle of self-limitation. On the contrary, it ensured that such principle was

upheld. Therefore, both the appellant's and also the caselaw quoted in support thereof are negated by the particular circumstances of this case.

Third Grievance

In relation to the third grievance, the HA submits that the reasons for considering the conduct of JGS as improper practice were explicitly set out in the letter dated 24th September 2025, and that such determination was made in accordance with Article 3.1 of the General Conditions.

A comparative analysis carried out by the Evaluation Committee of the technical questionnaires and supporting literature confirmed that all three offers were technically identical, differing only in financial terms (see documents DOK HA1, HA2 (i) HA2 (ii), HA3, HA 4 (i) HA4 (ii), HA 5 and HA6 (i), HA 6(ii) respectively).

It is inconceivable for three offers based on identical technical specifications to yield different financial quotations, as was done by JGS. Conduct of this nature goes diametrically against the scope of an open and transparent public procurement system.

Furthermore, Article 3.1 of the General Conditions explicitly empowers the Evaluation Committee to disqualify any submission that gives rise to improper practice:

“In any case, if any submissions lead to any form of conflict of interest, collusion, or improper practice, the Central Government Authority/Sectoral Procurement Directorate/Contracting Authority reserves the right to disqualify any submission as necessary.”

The fact that JGS deliberately failed to reply to the letters sent through a request for rectification dated 23rd May 2025 concerning the offers that ranked first and fourth, knowing that failure to respond would render such offers administratively non-compliant, while simultaneously submitting three technically identical offers with only financial variations, constitutes improper practice on the part of the appellant and should not find the approval of this Board, even as a matter of principle.

Fourth Grievance


The manner in which the appellant believes that the principle of proportionality should have been applied by the EC is a travesty of what the principle actually stands for. This is so because the principle of proportionality does not require a contracting authority to overlook serious breaches of mandatory requirements and to forgive improper and unfair practices.

The HA acted proportionately and lawfully in declaring JGS non-compliant for submitting identical offers. The decision was made strictly in accordance with the General Conditions, which impose clear procedural and substantive obligations on tenderers.

The principle of proportionality does not entail that contracting authorities must disregard or violate applicable rules. Rather, it requires that actions taken are appropriate and necessary to achieve compliance with those rules. In this case, no lesser measure was legally available or suitable, and the HA's action was entirely justified and proportionate.

For the reasons stated above, the Housing Authority respectfully maintains that all actions taken were in full conformity with the applicable tender regulations, the General Conditions, and principles of good administration.

The HA therefore submits that the appeal lodged by JGS Contractors Limited should be dismissed in its entirety. Accordingly, no expenses whatsoever in relation thereto should be borne by the HA.


Bryony Balzia Bartolo
Senior Manager
Legal Office

Av Mattia Felice

List of Documents

DOK HA1 – Technical Questionnaire of TID 225936

DOK HA2 (i) – supporting literature of TID 225936 (C9-Thermal)

DOK HA2 (ii) – supporting literature of TID 225936 (C-11 Liquid Membrane)

DOK HA3 - Technical Questionnaire of TID 225937

DOK HA4 (i) – supporting literature of TID 225937 (C9-Thermal)

DOK HA4 (ii) – supporting literature of TID 225937 (C-11 Liquid Membrane)

DOK HA5 - Technical Questionnaire of TID 225938

DOK HA6 (i)- Technical Questionnaire of TID 225938 (C9-Thermal)

DOK HA6 (ii)- Technical Questionnaire of TID 225938 (C-11 Liquid Membrane)

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Senior Manager
Legal Office

Illegible signature
Av Mattia Felice

I. TECHNICAL QUESTIONNAIRE (Note 3)

Note: Where in this tender document a standard is quoted, it is to be understood that the Contracting Authority will accept equivalent standards. However, it will be the responsibility of the respective bidders, at tendering stage, to prove that the standards they quoted are equivalent to the standards requested by the Contracting Authority.

Item No.	Description	Reference in Section 3 of the tender document - Technical Specifications	Bidders are to tick the word <u>Agreed</u> if in agreement with the respective specification	Bidders are to insert the <u>Manufacturer / Brand/ Supplier</u> of the items being offered (as part of their technical offer ^{Note 3}). These are to be inserted next to each item in the space provided below
1	Masonry Units a) Hollow Concrete blocks b) <i>Franka</i> stone	Spec C-1 Clause 1.5- 1.6 Spec C-1 Clause 1.1-1.4	Agreed X	A) Ballut Blocks / Attard Brothers B) Maltese Quarry – Zibgi (Siggiewi)
2	Concrete	Spec C-2 Clause 2	Agreed X	ROCKCUT
3	Testing of Concrete	Spec C-2 Clause 2.24	Agreed X	SOLIDBASE / TERRACORE
4	Formwork for Concrete	Spec C-3 Clause 3	Agreed X	Attard Brothers
5	Re-enforcement of Concrete	Spec C-4 Clause 4.2	Agreed X	Attard Brothers / JM Vibro / Marsa Rebar

HAI

6	Manholes, Inspection Chambers, Gullies, Drains and pipes	Spec C-7 Clause 7	Agreed X	ACO – JM Vibro
7	Thermal Insulation	Spec C-9 Clause 9	Agreed X	Styropan XPS – JM Vibro
8	Damp proofing	Spec C-10 Clause 10	Agreed X	Novaglass / Plysolene / Visqueen / Gutta JM Vibro and/or Bitmac Ltd.
9	Waterproofing Specs	Spec C-11 Clause 11	Agreed X	ISOFLEX – JM Vibro
10	Earthworks	Spec D-2 Clause 2.1.2	Agreed X	SOLIDBASE

Declaration (This should be confirmed through the tender response format):

Declaration:

I/We declare that as part of our technical offer, we confirm that the works will be carried out in accordance with the Technical Specifications (Section 3), as detailed in the Bills of Quantities and as per Drawings.



styropan XPS

ARTIFICIALLY MADE ORGANIC
EXTRUDED POLYSTYRENE
THERMAL INSULATING
MATERIAL

DESCRIPTION

Styropan XPS extruded polystyrene is an artificially made organic thermal insulating material, with a closed-cell structure which, by polymerization and constant extrusion, takes the form of a solid foam board.

It is made from thermoplastic polystyrene, additives, colouring agents, flame retardants and propellant gases free of CFCs (chlorofluorocarbon gases).

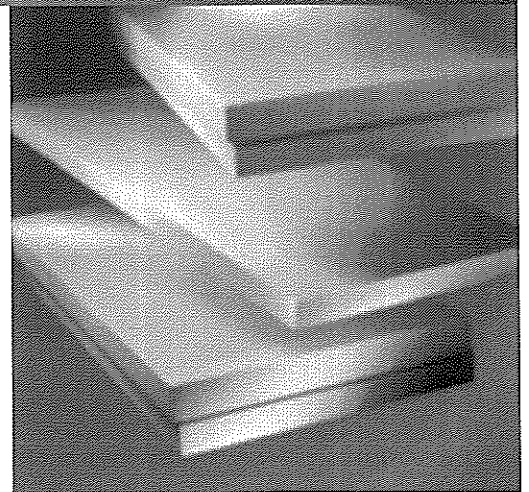
During the production process of Styropan XPS, this mixture is homogenized and liquefied in extruders, under controlled temperature and pressure conditions. This fluid is then processed through a die, from where it

emerges as a foam board and is shaped, trimmed and cut to dimension. The end product is a homogeneous insulation material with closed polyhedral cells of a diameter ranging from 0.05mm to 0.5mm and walls of just 1µm thickness.

What is impressive is that despite the fact that 97% of its volume is composed of inert gas and the remaining 3% are the cell structure's walls, extruded polystyrene Styropan XPS is a solid material with excellent thermal insulating and mechanical properties.

PROPERTIES

Thanks to these properties, Styropan XPS can be used in a number of applications, such as



- Thermal insulation of concrete elements (beams, pillars, walls, concrete wall ties, wooden shuttering boards)
- Insulation of exterior walls (prevention of dampness – mildew)
- Thermal insulation of roofs (flat roofs, pitched roofs, tiled roofs)

ADVANTAGES

Styropan XPS is a unique thermal insulating, money-saving and environmentally friendly building solution thanks to its properties, which are:

- Almost zero heat loss, which contributes to energy saving
- High durability
- Zero hydro absorbency
- Compression stability
- Self-extinguishing properties
- Homogenous mass density
- Dimension stability
- Excellent compatibility with other building materials

Styropan XPS is manufactured according to the European Union's norm EN13164 concerning extruded polystyrene products and the Quality Management system EN ISO 9001:2000 and is CE marked.

Styropan XPS is 100% recyclable and free of CFC, HCFC and HFC gases (chlorofluorocarbon, hydro chlorofluorocarbon and

hydro fluorocarbon gases), thus contributing to the reduction of the ozone layer depletion.

Its exceptional durability which exceeds a building's life span, contributes to the environment's protection by saving on resources and energy.

styropan XPS

TECHNICAL SPECIFICATIONS

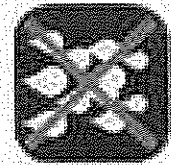
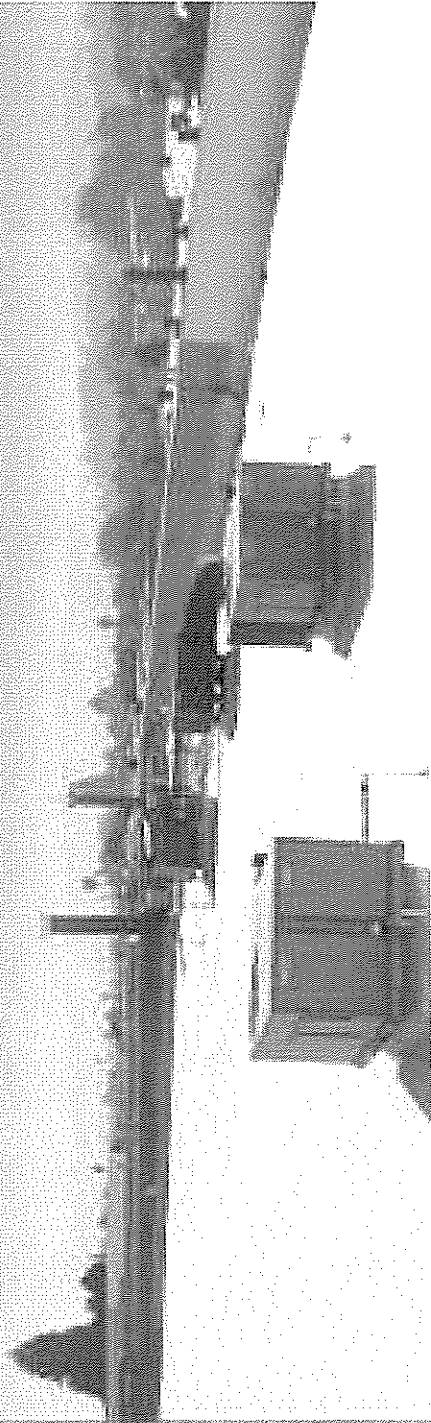
PROPERTY	STANDARD	UNIT	VALUE
Minimum Density	EN 1602	kg/m ³	32
			30mm
			0.033
Thermal Conductivity λ at 10°C	EN 12667	W/(m·K)	0.035
			50mm
			80mm
			0.038
COMPRESSION STRENGTH			
STYROPAN XPS General Use (with surface skin)	EN 826	KPa	300
STYROPAN XPS External Thermal Insulation (diamond-shaped surface)			250
Water Absorption Total Immersion (maximum)	EN 12087	%	≤ 0,7
Temperature Coefficient of Linear Expansion		mm/mK	0.07
Fire resistance	EN 13501-1		Euroclass E
Resistance to Vapor Permeability μ (Air $\mu=1$)	EN 12086		100mij
Minimum / Maximum Limits of Temperature at application		°C	-50 / +75
Dimensions	Length	mm	1250
	Width	mm	600
Thicknesses	EN 823	mm	30, 50, 80

Thickness of Extruded Polystyrene sheet mm	R Value m ² K/W	U Value W/(m ² K)
30	0.91	1.10
50	1.43	0.70
80	2.11	0.47

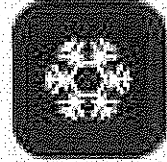
JMV
BUILDING SOLUTIONS

DISTRIBUTOR
J.M. VASSALLO VIBRO STEEL LTD
MDINA ROAD ZEBBUG ZBG 9019
TEL: (356) 2146 7421 FAX: (356) 2146 5202
SALES@JMVIBRO.COM / WWW.JMVIBRO.COM

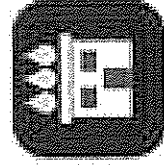
**absolute
& durable
waterproofing**



**permanent
waterproofing**



**excellent mechanical,
chemical and weather
resistance**



**application also
on terraces
without slope**

MA2C(ii)

ISOFLEX-T25

Elastomeric, liquid waterproofing membrane for flat roofs

Description

ISOFLEX-T25 is an elastomeric, waterborne, liquid waterproofing membrane for flat roofs. Has excellent bonding to various substrates, such as concrete, wood, metal and any type of waterproofing membranes, applicable even to irregular substrates. After curing, it forms a continuous, elastic, waterproof and vapor-permeable membrane, without seams or joints, offering:

- Exceptional durability, even in extreme temperature conditions.
- High elasticity.
- High resistance to weather and aging.
- High whiteness and solar reflectance.
- Improvement of building energy efficiency by decreasing the roof temperature.

Certified according to EN 1504-2 and classified as a coating for surface protection of concrete. CE marked.
Certificate No.: 2032-CPR-10.11.

Fields of application

ISOFLEX-T25 is ideal for the waterproofing of flat roofs, curved roofs, etc. Constitutes a simple and safe solution for waterproofing roof details, such as corners, edges and joints between different adjacent materials, as well as isolated cracks.

Furthermore, thanks to its high solar reflectance, it can be used as cool roof paint.

Technical data

Colors:	white, red-brown
Density:	1.44 kg/l ± 0.02 kg/l
Elongation at break: (EN ISO 527)	> 400%
Permeability to CO ₂ : (EN 1062-6)	Sd > 50 m

Capillary water absorption: (EN 1062-3, requirement of EN 1504-2: w < 0.1)	0.03 kg/m ² ·h ^{0.5}
Water vapor permeability: (EN ISO 7783-2, Class I < 5m)	Sd=0.84 m (permeable)
Adhesion strength: (EN 1542, requirement for flexible systems with no traffic: 0.8 N/mm ²)	1.4 N/mm ²
Artificial weathering: (EN 1062-11, after 2000 h)	Pass (no blistering, cracking or flaking)
Reaction to fire: (EN 13501-1)	Euroclass F
Viscosity: (EN ISO 2884-2)	≈ 50.000 mPa·s
Solar reflectance: (ISOFLEX-T25 white) (ASTM E903-96)	89%
Infrared thermal emittance: (ISOFLEX-T25 white) (ASTM E408-71)	ε = 0.90
Minimum application temperature:	+5°C
Service temperature:	from -25°C to +80°C
Resistance to temporary exposure:	from -25°C to +120°C
Drying time at +20°C: (EN ISO 2811-1)	3 h (touch dry)
Recoat time at +20°C: (EN ISO 2811-1)	20 h (touch dry)

ISOFLEX-T25

Directions for use

1. Substrate preparation

The substrate must be dry, clean, free of grease, loose particles, dust, etc. Any existing cavities in concrete should be repaired in advance. The substrate is then primed with the special primer ISO-PRIMER at a consumption of approx. 200 g/m².

2. Application

a) Total waterproofing of the surface

ISOFLEX-T25 is applied by brush or roller in 2 layers, after the primer has dried. The second layer should be applied crosswise after the first one has dried.

In areas of severe cracks, it is recommended to reinforce ISOFLEX-T25 with a 10 cm wide strip of fiberglass mesh (65 g/m²) or polyester fleece (30 g/m²) along the cracks. In that case, after the primer has dried, the first layer of ISOFLEX-T25 is applied along the cracks and, while still fresh, the 10 cm wide strip of fiberglass mesh or polyester fleece is embedded lengthwise. Then, two more layers of ISOFLEX-T25 are applied over the entire surface.

Consumption: 1.0-1.5 kg/m², depending on the substrate.

In case of dense, multiple cracks appearing all over the surface, it is strongly recommended to fully reinforce ISOFLEX-T25 membrane with 100 cm wide strips of fiberglass mesh (65 g/m²) or polyester fleece (30 g/m²). These placed strips must overlap by 5-10 cm.

After the primer has dried, a first layer of ISOFLEX-T25 is applied as wide as the upcoming reinforcement, and, while still fresh, a strip of fiberglass mesh or polyester fleece is embedded. The same application process is followed over the remaining surface. Two extra layers of ISOFLEX-T25 are applied over the entire surface.

Consumption: approximately 2.0-2.5 kg/m², depending on the substrate and the type of reinforcement.

b) Local waterproofing of cracks

In this case, the primer is placed to the substrate only across the cracks to a width of 10-12 cm. After the primer has dried, the first ISOFLEX-T25 layer is applied and, while still fresh, a 10 cm wide strip of fiberglass mesh (65 g/m²) or polyester fleece (30 g/m²) is embedded lengthwise. Two additional ISOFLEX-T25 layers are applied along the cracks completely covering the reinforcement.

Consumption: approximately 200-250 g/m of crack length.

Tools should be cleaned with water, while ISOFLEX-T25 is still fresh.

Packaging

ISOFLEX-T25 is available in 1 kg, 5 kg, 15 kg and 25 kg plastic containers and in 150 kg drums.

Shelf life – Storage

24 months from production date if stored in original, unopened packaging at temperatures between +5°C and +35°C. Protect from direct sunlight and frost.

Volatile Organic Compounds (VOCs)

According to Directive 2004/42/CE (Annex II, table A), the maximum allowed VOC content for the product subcategory i, type WB is 140 g/l (2010) for the ready-to-use product.

The ready-to-use product ISOFLEX-T25 contains 3.86 g/l VOC.

ISOFLEX-T25



2032

ISOMAT S.A.

17th km Thessaloniki – Ag. Athanasios
P.O. BOX 1043, 570 03 Ag. Athanasios,
Greece

12

2032-CPR-10.11

EN 1504-2

Surface protection products

Coating

Permeability to CO₂: Sd > 50m

Water vapor permeability: Class I
(permeable)

Capillary absorption: $w < 0.1 \text{ kg/m}^2 \cdot \text{h}^{0.5}$

Adhesion strength: $\geq 0.8 \text{ N/mm}^2$

Artificial weathering: Pass

Reaction to fire: Euroclass F

Dangerous substances comply with 5.3

ISOMAT S.A.

BUILDING CHEMICALS AND MORTARS

MAIN OFFICES - FACTORY:

17th km Thessaloniki - Ag. Athanasios Road,
P.O. BOX 1043, 570 03 Ag. Athanasios, Greece,
Tel.: +30 2310 576 000, Fax: +30 2310 722 475

www.isomat.eu e-mail: info@isomat.eu

The technical information and instructions supplied in this datasheet are based on the knowledge and experience of the Research and Development Department of our company and on results from long-term applications of the product in practice. The recommendations and suggestions referring to the use of the product are provided without guarantee, since site conditions during the applications are beyond the control of our company. Therefore the user is responsible for confirming that the chosen product is suitable for the envisaged application. The present edition of this technical datasheet automatically cancels any previous one concerning the same product.



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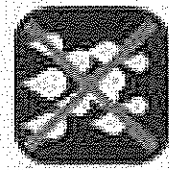
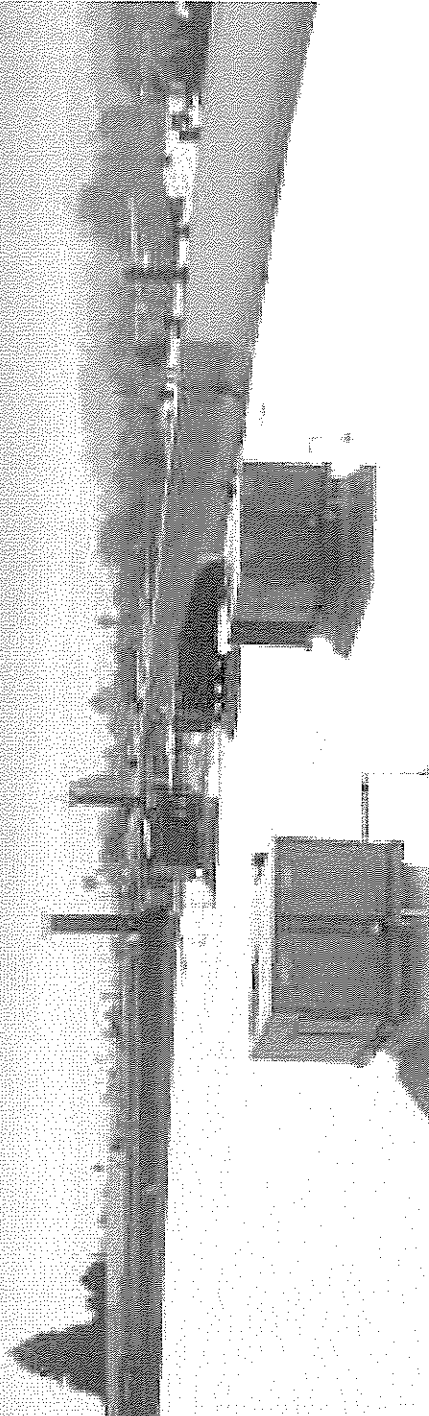
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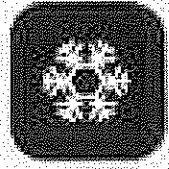
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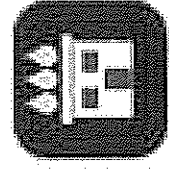
**absolute
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waterproofing**



**permanent
waterproofing**



**excellent mechanical,
chemical and weather
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**application also
on terraces
without slope**

HALL Ci)

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ISOFLEX-T25

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1. Substrate preparation

The substrate must be dry, clean, free of grease, loose particles, dust, etc. Any existing cavities in concrete should be repaired in advance. The substrate is then primed with the special primer ISO-PRIMER at a consumption of approx. 200 g/m².

2. Application

a) Total waterproofing of the surface

ISOFLEX-T25 is applied by brush or roller in 2 layers, after the primer has dried. The second layer should be applied crosswise after the first one has dried.

In areas of severe cracks, it is recommended to reinforce ISOFLEX-T25 with a 10 cm wide strip of fiberglass mesh (65 g/m²) or polyester fleece (30 g/m²) along the cracks. In that case, after the primer has dried, the first layer of ISOFLEX-T25 is applied along the cracks and, while still fresh, the 10 cm wide strip of fiberglass mesh or polyester fleece is embedded lengthwise. Then, two more layers of ISOFLEX-T25 are applied over the entire surface.

Consumption: 1.0-1.5 kg/m², depending on the substrate.

In case of dense, multiple cracks appearing all over the surface, it is strongly recommended to fully reinforce ISOFLEX-T25 membrane with 100 cm wide strips of fiberglass mesh (65 g/m²) or polyester fleece (30 g/m²). These placed strips must overlap by 5-10 cm.

After the primer has dried, a first layer of ISOFLEX-T25 is applied as wide as the upcoming reinforcement, and, while still fresh, a strip of fiberglass mesh or polyester fleece is embedded. The same application process is followed over the remaining surface. Two extra layers of ISOFLEX-T25 are applied over the entire surface.

Consumption: approximately 2.0-2.5 kg/m², depending on the substrate and the type of reinforcement.

b) Local waterproofing of cracks

In this case, the primer is placed to the substrate only across the cracks to a width of 10-12 cm. After the primer has dried, the first ISOFLEX-T25 layer is applied and, while still fresh, a 10 cm wide strip of fiberglass mesh (65 g/m²) or polyester fleece (30 g/m²) is embedded lengthwise. Two additional ISOFLEX-T25 layers are applied along the cracks completely covering the reinforcement.

Consumption: approximately 200-250 g/m of crack length.

Tools should be cleaned with water, while ISOFLEX-T25 is still fresh.

Packaging

ISOFLEX-T25 is available in 1 kg, 5 kg, 15 kg and 25 kg plastic containers and in 150 kg drums.

Shelf life – Storage

24 months from production date if stored in original, unopened packaging at temperatures between +5°C and +35°C. Protect from direct sunlight and frost.

Volatile Organic Compounds (VOCs)

According to Directive 2004/42/CE (Annex II, table A), the maximum allowed VOC content for the product subcategory i, type WB is 140 g/l (2010) for the ready-to-use product.

The ready-to-use product ISOFLEX-T25 contains 3.86 g/l VOC.

The technical information and instructions supplied in this datasheet are based on the knowledge and experience of the Research and Development Department of our company and on results from long-term applications of the product in practice. The recommendations and suggestions referring to the use of the product are provided without guarantee, since site conditions during the applications are beyond the control of our company. Therefore the user is responsible for confirming that the chosen product is suitable for the envisaged application. The present edition of this technical datasheet automatically cancels any previous one concerning the same product.



ISOFLEX-T25



2032

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Greece

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2032-CPR-10.11

EN 1504-2

Surface protection products

Coating

Permeability to CO₂: Sd > 50m

Water vapor permeability: Class I
(permeable)

Capillary absorption: $w < 0.1 \text{ kg/m}^2 \cdot \text{h}^{0.5}$

Adhesion strength: $\geq 0.8 \text{ N/mm}^2$

Artificial weathering: Pass

Reaction to fire: Euroclass F

Dangerous substances comply with 5.3

ISOMAT S.A.

BUILDING CHEMICALS AND MORTARS

MAIN OFFICES - FACTORY:

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HA4 (i)



styropan XPS

ARTIFICIALLY MADE ORGANIC
EXTRUDED POLYSTYRENE
THERMAL INSULATING
MATERIAL

DESCRIPTION

Styropan XPS extruded polystyrene is an artificially made organic thermal insulating material, with a closed-cell structure which, by polymerization and constant extrusion, takes the form of a solid foam board.

It is made from thermoplastic polystyrene, additives, colouring agents, flame retardants and propellant gases free of CFCs (chlorofluorocarbon gases).

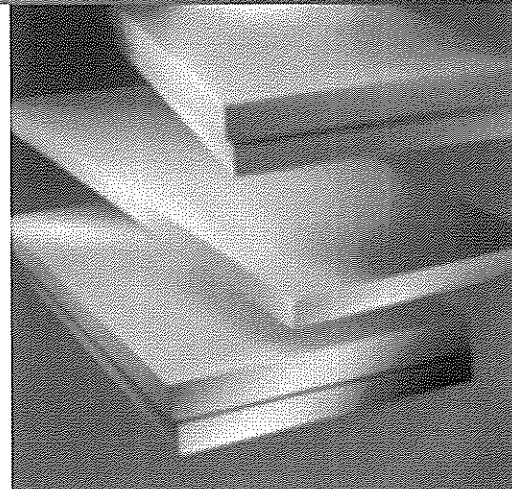
During the production process of Styropan XPS, this mixture is homogenized and liquefied in extruders, under controlled temperature and pressure conditions. This fluid is then processed through a die, from where it

emerges as a foam board and is shaped, trimmed and cut to dimension. The end product is a homogeneous insulation material with closed polyhedral cells of a diameter ranging from 0.05mm to 0.5mm and walls of just 1µm thickness.

What is impressive is that despite the fact that 97% of its volume is composed of inert gas and the remaining 3% are the cell structure's walls, extruded polystyrene Styropan XPS is a solid material with excellent thermal insulating and mechanical properties.

PROPERTIES

Thanks to these properties, Styropan XPS can be used in a number of applications, such as



- Thermal insulation of concrete elements (beams, pillars, walls, concrete wall ties, wooden shuttering boards)
- Insulation of exterior walls (prevention of dampness – mildew)
- Thermal insulation of roofs (flat roofs, pitched roofs, tiled roofs)

ADVANTAGES

Styropan XPS is a unique thermal insulating, money-saving and environmentally friendly building solution thanks to its properties, which are:

- Almost zero heat loss, which contributes to energy saving
- High durability
- Zero hydro absorbency
- Compression stability
- Self-extinguishing properties
- Homogenous mass density
- Dimension stability
- Excellent compatibility with other building materials

Styropan XPS is manufactured according to the European Union's norm EN13164 concerning extruded polystyrene products and the Quality Management system EN ISO 9001:2000 and is CE marked.

Styropan XPS is 100% recyclable and free of CFC, HCFC and HFC gases (chlorofluorocarbon, hydro chlorofluorocarbon and

hydro fluorocarbon gases), thus contributing to the reduction of the ozone layer depletion.

Its exceptional durability which exceeds a building's life span, contributes to the environment's protection by saving on resources and energy.

styropan XPS

TECHNICAL SPECIFICATIONS

PROPERTY	STANDARD	UNIT	VALUE
Minimum Density	EN 1602	kg/m ³	32
			30mm
			0.033
Thermal Conductivity λ at 10°C	EN 12667	W/(m·K)	0.035
			50mm
			80mm
			0.038
COMPRESSION STRENGTH			
STYROPAN XPS General Use (with surface skin)	EN 826	KPa	300
STYROPAN XPS External Thermal Insulation (diamond-shaped surface)			250
Water Absorption Total Immersion (maximum)	EN 12087	%	≤ 0,7
Temperature Coefficient of Linear Expansion		mm/mK	0.07
Fire resistance	EN 13501-1		Euroclass E
Resistance to Vapor Permeability μ (Air $\mu=1$)	EN 12086		100mij
Minimum / Maximum Limits of Temperature at application		°C	-50 / 175
Dimensions	Length	mm	1250
	Width	mm	600
Thicknesses	EN 823	mm	30, 50, 80

Thickness of Extruded Polystyrene sheet mm	R Value m ² K/W	U Value W/(m ² K)
30	0.91	1.10
50	1.43	0.70
80	2.11	0.47

JMV
BUILDING SOLUTIONS

DISTRIBUTOR
J. M. VASSALLO VIBRO STEEL LTD
MDINA ROAD ZEBBUG ZBG 9019
TEL: (356) 2146 7421 FAX: (356) 2146 5202
SALES@JMVIBRO.COM / WWW.JMVIBRO.COM

I. TECHNICAL QUESTIONNAIRE (Note 3)

Note: Where in this tender document a standard is quoted, it is to be understood that the Contracting Authority will accept equivalent standards. However, it will be the responsibility of the respective bidders, at tendering stage, to prove that the standards they quoted are equivalent to the standards requested by the Contracting Authority.

Item No.	Description	Reference in Section 3 of the tender document - Technical Specifications	Bidders are to tick the word Agreed if in agreement with the respective specification	Bidders are to insert the Manufacturer / Brand/ Supplier of the items being offered (as part of their technical offer ^{Note 3}). These are to be inserted next to each item in the space provided below
1	Masonry Units a) Hollow Concrete blocks b) <i>Franka</i> stone	Spec C-1 Clause 1.5- 1.6 Spec C-1 Clause 1.1-1.4	Agreed X	A) Ballut Blocks / Attard Brothers B) Maltese Quarry – Zibgi (Siggiwji)
2	Concrete	Spec C-2 Clause 2	Agreed X	ROCKCUT
3	Testing of Concrete	Spec C-2 Clause 2.24	Agreed X	SOLIDBASE / TERRACORE
4	Formwork for Concrete	Spec C-3 Clause 3	Agreed X	Attard Brothers
5	Re-enforcement of Concrete	Spec C-4 Clause 4.2	Agreed X	Attard Brothers / JM Vibro / Marsa Rebar

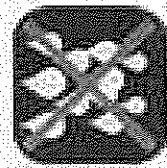
6	Manholes, Inspection Chambers, Gullies, Drains and pipes	Spec C-7 Clause 7	Agreed X	ACO – JM Vibro
7	Thermal Insulation	Spec C-9 Clause 9	Agreed X	Styropan XPS – JM Vibro
8	Damp proofing	Spec C-10 Clause 10	Agreed X	Novaglass / Plysolene / Visqueen / Gutta JM Vibro and/or Bitmac Ltd.
9	Waterproofing Specs	Spec C-11 Clause 11	Agreed X	ISOFLEX – JM Vibro
10	Earthworks	Spec D-2 Clause 2.1.2	Agreed X	SOLIDBASE

Declaration (This should be confirmed through the tender response format):

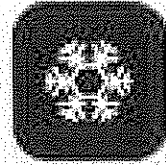
Declaration:

I/We declare that as part of our technical offer, we confirm that the works will be carried out in accordance with the Technical Specifications (Section 3), as detailed in the Bills of Quantities and as per Drawings.

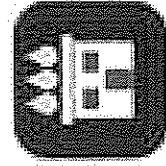
**absolute
& durable
waterproofing**



**permanent
waterproofing**



**excellent mechanical,
chemical and weather
resistance**



**application also
on terraces
without slope**

MAB (i)

ISOFLEX-T25

Elastomeric, liquid waterproofing membrane for flat roofs

Description

ISOFLEX-T25 is an elastomeric, waterborne, liquid waterproofing membrane for flat roofs. Has excellent bonding to various substrates, such as concrete, wood, metal and any type of waterproofing membranes, applicable even to irregular substrates. After curing, it forms a continuous, elastic, waterproof and vapor-permeable membrane, without seams or joints, offering:

- Exceptional durability, even in extreme temperature conditions.
- High elasticity.
- High resistance to weather and aging.
- High whiteness and solar reflectance.
- Improvement of building energy efficiency by decreasing the roof temperature.

Certified according to EN 1504-2 and classified as a coating for surface protection of concrete. CE marked.
Certificate No.: 2032-CPR-10.11.

Fields of application

ISOFLEX-T25 is ideal for the waterproofing of flat roofs, curved roofs, etc. Constitutes a simple and safe solution for waterproofing roof details, such as corners, edges and joints between different adjacent materials, as well as isolated cracks.

Furthermore, thanks to its high solar reflectance, it can be used as cool roof paint.

Technical data

Colors: white, red-brown
 Density: 1.44 kg/l ± 0.02 kg/l
 Elongation at break: > 400%
 (EN ISO 527)
 Permeability to CO₂: Sd > 50 m
 (EN 1062-6)

Capillary water absorption: 0.03 kg/m²·h^{0.5}
 (EN 1062-3, requirement of EN 1504-2: w < 0.1)
 Water vapor permeability: Sd=0.84 m (permeable)
 (EN ISO 7783-2, Class I < 5m)
 Adhesion strength: 1.4 N/mm²
 (EN 1542, requirement for flexible systems with no traffic: 0.8 N/mm²)
 Artificial weathering: Pass (no blistering, cracking or flaking)
 (EN 1062-11, after 2000 h)
 Reaction to fire: Euroclass F
 (EN 13501-1)
 Viscosity: ≈ 50.000 mPa·s
 (EN ISO 2884-2)
 Solar reflectance: 89%
 (ISOFLEX-T25 white) (ASTM E903-96)
 Infrared thermal emittance: ε = 0.90
 (ISOFLEX-T25 white) (ASTM E408-71)
 Minimum application temperature: +5°C
 Service temperature: from -25°C to +80°C
 Resistance to temporary exposure: from -25°C to +120°C
 Drying time at +20°C: 3 h (touch dry)
 (EN ISO 2811-1)
 Recoat time at +20°C: 20 h (touch dry)
 (EN ISO 2811-1)

ISOFLEX-T25

Directions for use

1. Substrate preparation

The substrate must be dry, clean, free of grease, loose particles, dust, etc. Any existing cavities in concrete should be repaired in advance. The substrate is then primed with the special primer ISO-PRIMER at a consumption of approx. 200 g/m².

2. Application

a) Total waterproofing of the surface

ISOFLEX-T25 is applied by brush or roller in 2 layers, after the primer has dried. The second layer should be applied crosswise after the first one has dried.

In areas of severe cracks, it is recommended to reinforce ISOFLEX-T25 with a 10 cm wide strip of fiberglass mesh (65 g/m²) or polyester fleece (30 g/m²) along the cracks. In that case, after the primer has dried, the first layer of ISOFLEX-T25 is applied along the cracks and, while still fresh, the 10 cm wide strip of fiberglass mesh or polyester fleece is embedded lengthwise. Then, two more layers of ISOFLEX-T25 are applied over the entire surface.

Consumption: 1.0-1.5 kg/m², depending on the substrate.

In case of dense, multiple cracks appearing all over the surface, it is strongly recommended to fully reinforce ISOFLEX-T25 membrane with 100 cm wide strips of fiberglass mesh (65 g/m²) or polyester fleece (30 g/m²). These placed strips must overlap by 5-10 cm.

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Tools should be cleaned with water, while ISOFLEX-T25 is still fresh.

Packaging

ISOFLEX-T25 is available in 1 kg, 5 kg, 15 kg and 25 kg plastic containers and in 150 kg drums.

Shelf life – Storage

24 months from production date if stored in original, unopened packaging at temperatures between +5°C and +35°C. Protect from direct sunlight and frost.

Volatile Organic Compounds (VOCs)

According to Directive 2004/42/CE (Annex II, table A), the maximum allowed VOC content for the product subcategory i, type WB is 140 g/l (2010) for the ready-to-use product.

The ready-to-use product ISOFLEX-T25 contains 3.86 g/l VOC.

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ISOFLEX-T25



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2032-CPR-10.11

EN 1504-2

Surface protection products

Coating

Permeability to CO₂: Sd > 50m

Water vapor permeability: Class I
(permeable)

Capillary absorption: $w < 0.1 \text{ kg/m}^2 \cdot \text{h}^{0.5}$

Adhesion strength: $\geq 0.8 \text{ N/mm}^2$

Artificial weathering: Pass

Reaction to fire: Euroclass F

Dangerous substances comply with 5.3

ISOMAT S.A.

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HA 6(Gi)



styropan XPS

ARTIFICIALLY MADE ORGANIC
EXTRUDED POLYSTYRENE
THERMAL INSULATING
MATERIAL

DESCRIPTION

Styropan XPS extruded polystyrene is an artificially made organic thermal insulating material, with a closed-cell structure which, by polymerization and constant extrusion, takes the form of a solid foam board.

It is made from thermoplastic polystyrene, additives, colouring agents, flame retardants and propellant gases free of CFCs (chlorofluorocarbon gases).

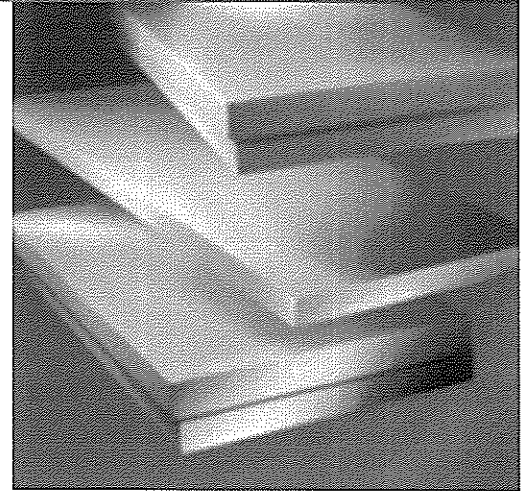
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What is impressive is that despite the fact that 97% of its volume is composed of inert gas and the remaining 3% are the cell structure's walls, extruded polystyrene Styropan XPS is a solid material with excellent thermal insulating and mechanical properties.

PROPERTIES

Thanks to these properties, Styropan XPS can be used in a number of applications, such as



- Thermal insulation of concrete elements (beams, pillars, walls, concrete wall ties, wooden shuttering boards)
- Insulation of exterior walls (prevention of dampness – mildew)
- Thermal insulation of roofs (flat roofs, pitched roofs, tiled roofs)

ADVANTAGES

Styropan XPS is a unique thermal insulating, money-saving and environmentally friendly building solution thanks to its properties, which are:

- Almost zero heat loss, which contributes to energy saving
- High durability
- Zero hydro absorbency
- Compression stability
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styropan XPS

TECHNICAL SPECIFICATIONS

PROPERTY	STANDARD	UNIT	VALUE
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			30mm
			0.033
Thermal Conductivity λ at 10°C	EN 12667	W/(m·K)	0.035
			50mm
			80mm
			0.038
COMPRESSION STRENGTH			
STYROPAN XPS General Use (with surface skin)	EN 826	KPa	300
STYROPAN XPS External Thermal Insulation (diamond-shaped surface)			250
Water Absorption Total Immersion (maximum)	EN 12087	%	≤ 0,7
Temperature Coefficient of Linear Expansion		mm/mK	0.07
Fire resistance	EN 13501-1		Euroclass E
Resistance to Vapor Permeability μ (Air $\mu=1$)	EN 12086		100mij
Minimum / Maximum Limits of Temperature at application		°C	-50 / +75
Dimensions	Length	mm	1250
	Width	mm	600
Thicknesses	EN 823	mm	30, 50, 80

Thickness of Extruded Polystyrene sheet mm	R Value m ² K/W	U Value W/(m ² K)
30	0.91	1.10
50	1.43	0.70
80	2.11	0.47