

# TWL

Thermal insulation made of bio soluble glass wool, flexible, uniform texture presented in rolls. Generally, is used for stoves, ovens and home heaters. The product is presented in rolls.



## END USE CHARACTERISTICS AND LIMITATIONS

This product is designed to be used as a thermal insulation for stoves, ovens and home heaters, with service temperatures up to 538°C (1000°F). **ASTM C553 Standard Specification for Mineral Fiber Blanket Thermal Insulation for Commercial and Industrial Applications Type V**

Some odor may be detected when the first heating begins, however this odor disappears quickly when the system reaches the maximum operating temperature.

Avoid damaging the package during storage and transport, in this way is recommended to avoid placing excessive weight over the product and unpack only when installing.

Cuts should be made on flat Surfaces, with fine edge knives, in an isolated area.

Surface Burning Characteristics of TWL; have been classified as Class 1, FS/SD 25/50, File R25157. (**UL723**, Surface Burning Characteristics of Building Materials and CAN/ULC-S102-M /**ASTM E84**, Surface Burning Characteristics Test). (FS, Flame Spread – SD, Smoke Developed).

## PRODUCT SPECIFICATION

PRODUCT	LENGTH (mm)	WIDE mm	THICKNESS (1) mm	NET WEIGHT ± 10% kg/m2 (g/ft2)
600"x 48" x 2"	15240 +20mm	1219 +2mm	50.8 ± 3 mm	0.81 (75.27)

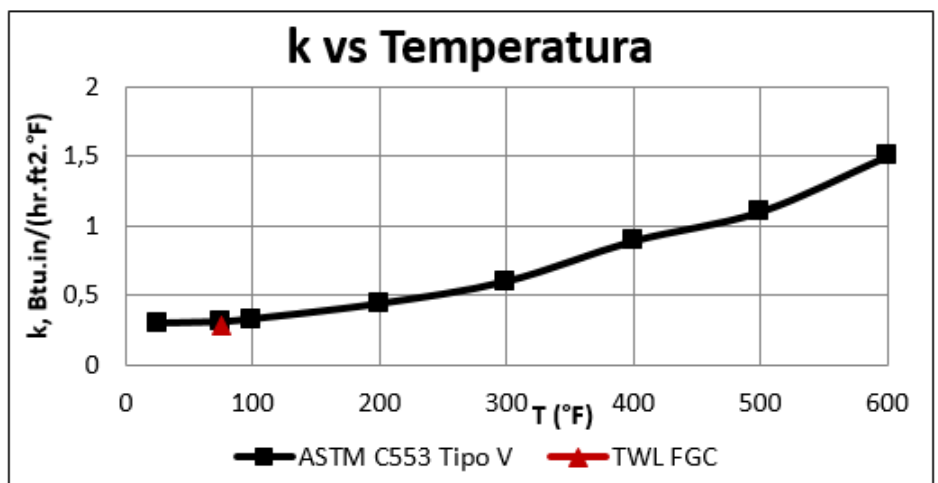
(1) The product has a thickness of 2 inches when is produced, however the product is manufactured with a package height greater than the nominal thickness, it tends to lose its thickness during winding and storage, because resiliency is not a feature associated with the product. For this reason, the product is warrantable by weight.

PROPERTIES	STANDARD	DESCRIPTION
Water vapor Sorption	ASTM C1104/ C1104M	<5% weight-120°F (49°C), 95% R.H.
Surface Burning Characteristics	E84 / UL723	Flame Spread Index < 25 Smoke Developed Index<50
Fungi resistance	ASTM C1338	Meets requirements
Odor Emission	ASTM 1304	Meets requirements
Thermal Conductivity	ASTM C518	Typical Value 0.29 BTU.in/hr.ft².°F at 75°F Mean Temp. (0.041 W/m.°C at 24°C Mean Temp. )
Operating Limits	ASTM C411 / ASTM C447	Max. Use Temp: 538°C (1000°F)
Corrosiveness	ASTM C665 / ASTM 795	Meets requirements
Flexibility	ASTM C1101/c1101M	Classified as Flexible
DBE Content	Oregon State	FREE, Meets requirements

Data presented below are a guide for the thermal performance based on qualification requirements on ASTM C553 Type V compared with a reference point of the product (TWL)

ASTM C553 TYPE V			
TEMPERATURE		THERMAL CONDUCTIVITY	
°F	°C	BTU.in/hr.ft².°F	W/m.°C
25	-3.9	0.30	0.043
<b>75</b>	<b>23.9</b>	<b>0.31</b>	<b>0.045</b>
100	37.8	0.33	0.048
200	93.3	0.44	0.063
300	148.9	0.60	0.087
400	204.4	0.89	0.128
500	260.0	1.10	0.159
600	315.6	1.50	0.216

TWL FGC			
TEMPERATURE		THERMAL CONDUCTIVITY	
°F	°C	BTU.in/hr.ft².°F	W/m.°C
<b>75</b>	<b>23.9</b>	<b>0.29</b>	<b>0.041</b>



**VISUAL STANDARD**

CHARACTERISTICS	ACCEPTANCE GUIDE
Color	The product is white; however, the presence of areas with some coloration does not affect the thermal properties of the product. During heating, the red spots may generate some spicy odor.
Surface Appearance	Generally, Surfaces are uniform, without patches. The orientation of the fibers generates a wrinkled appearance on the surface, which makes the product highly flexible.
	The product has a homogeneous surface without tearing in the glass wool. However, parts obtained from the material are usable as insulation.
	The roll may present a characteristic aspect "flat" at the moment of unroll it, and a less condensation inside the bags, which are features of the product. Moisture content more than 3% is considered inappropriate for the product.

**PACKAGING**

PRODUCT	AREA/PACKAGE (m <sup>2</sup> )	NET WEIGHT /PACKAGE kg (+/-10%)
600"x 48" x 2"	37.161	15.05

(\*) m<sup>2</sup>x in thick (when packing). GROSS WEIGHT= NET WEIGHT (±10%) + 1.5 kg aprox.

Package: Polyethylene, metallic clamp and autoadhesive label. (Extreme open)

**RECYCLED CONTENT**

- (1) PI Post Industrial Recycled Content: Collected from Manufacturers or industry.
- (2) PC Recycled Content Post-Consumer: Collected from end uses.

TOTAL RECYCLED CONTENT	POST-INDUSTRIAL RECYCLED CONTENT PI (1)	POST-CONSUMER RECYCLED CONTENT PC (2)
78%	78%	0 %

**INSTALLATION RECOMMENDATIONS**

**1. Before Installation**

All surfaces must be clean, completely dry and covered with anticorrosive painting or any other protective coating according with the operating temperature. For this purpose, is necessary to employ the appropriate chemical cleaning or mechanical cleaning methods.

**2. During Installation**

- Install metallic rings on the tank Wall that will support the insulation. There are cases where there are supports installed on the equipment, and those elements can have the same function.
- The rings or supports are conformed with plates which have an equal wide to the insulation thickness. These plates are in contact with the tank wall by short stretches of the same plate, welded to the wall of the equipment.

- The rings or supports must be placed with a distance each other, according to the Thickness Insulation.
- Once the Insulation is supported over the rings, must be secured to the tank wall with metal strips of 1" wide.
- Once installed the insulation, proceed to place the galvanized wire mesh by "sewing" joining the edges of the wire mesh with staples or nails on the outer surface of the insulation.
- You must leave a minimum overlap of 2 ", both longitudinal joints and transverse.

**3. After Installation**

- The Insulations should remain always protected of rain and sun.
- In case there exist manholes, supports, pipe endings or measuring equipments, joints with those parts must be sealed with a mastique.



**Fiberglass Colombia S.A - Colombia**  
**Planta Mosquera**  
**Mineral Glass Wool AA1**

Certificate No.385 Bio soluble Mineral glass wool FGC.  
 Note Q of the Regulation EC 1272/2008 of the European Parliament and of the Council as Currently in force.

European Certification Board for Mineral Wool Products

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FIBERGLASS COLOMBIA S.A PROVEEDOR AUTORIZADO

**N° CO11/4442**

Sistema de Gestión de la Calidad para la producción y venta de membranas impermeabilizantes modificadas (mantos, con o sin recubrimiento autoprotector) y emulsiones asfálticas, Cielo rasos en fibra de vidrio con acabado decorativo, Láminas y rollos flexibles en fibra de vidrio para la fabricación y recubrimiento interno y externo de conductos para transporte de aire acondicionado, Aislamientos térmicos y acústicos rígidos, flexibles y preformados.

**Norma - ISO 9001:2015**

Producto fabricado bajo un sistema de administración de calidad certificado de conformidad con ISO 9001.

Reported values are typical of tests carried out on samples taken from standard production and may be update without notice.

The user is responsible for determining if the product is recommended for a particular surface and if it satisfies the application requirements. The user must make application testing and product testing required for that purpose.

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