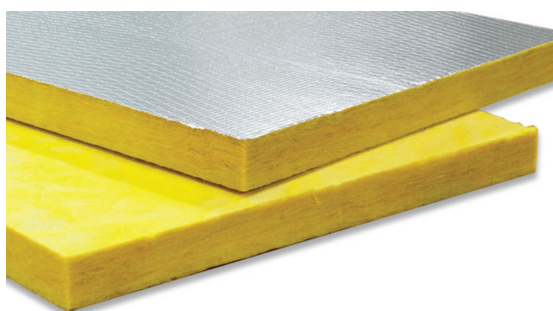




FIBERGLAS™ 700 SERIES BOARD TYPE 703 AND 705

FIBERGLASS INSULATION



Physical Properties

| PROPERTY | TEST METHOD | VALUE |
|--|---------------------------------|--|
| Density | ASTM C303 | Type 703: 3.0 pcf (48 kg/m ³) Type 705: 6.0 pcf (96 kg/m ³) |
| Equipment Operating Temperature Limitation ² | ASTM C411 | 0 to 450°F (-18 to 232°C) |
| Insulation Jacket Temperature Limitation | ASTM C1136 | -20 to 150°F (-29 to 66°C) |
| Jacket Permeance | ASTM E96, Proc. A | 0.02 perm |
| Jacket Burst Strength | ASTM D774 | ASJ Max: 100 psi |
| Compressive Strength (minimum) at 10% deformation at 25% deformation | ASTM C165 | 703 Board 25 lb/ft ² (1197 Pa) 705 Board 200 lb/ft ² (9576 Pa) 90 lb/ft ² (4309 Pa) — |
| Water Vapor Sorption | ASTM C1104 | <2% by weight at 120°F (49°C), 95% R.H. |
| Surface Burning Characteristics ³ | UL 723 ASTM E84 or CAN/ULC S102 | FACED: Flame Spread Index 25 Smoke Developed Index 50 UNFACED: Flame Spread Index 5 Smoke Developed Index 5 |

2. Maximum thickness at 450°F (232°C) – 703 and 705: 4" (102mm).

3. The surface burning characteristics of these products have been determined in accordance with UL 723, ASTM E84 or CAN/ULC-S102. Values are reported to the nearest 5 rating.

Description

Types 703 and 705 Series Insulation Boards are made of inorganic glass fibers with a thermosetting resin binder and formed into semi-rigid or rigid rectangular boards. Types 703 and 705 are available with factory-applied FRK or poly encapsulated ASJ Max facings. Both facings are vapor retarders and provide a neat, finished appearance in mechanical applications.

Applications

- Type 703—Semi-rigid boards for use on mechanical equipment and air conditioning ductwork, and walls and ceilings
- Type 705—A high strength rigid board for use on chillers, other mechanical equipment, walls and ceilings, and heating and air conditioning ductwork, where high abuse resistance and good finished appearance is important

Standards, Codes Compliance

- ASTM C612, Mineral Fiber Block & Board Thermal Insulation, Types IA, IB – Types 703 and 705
- ASTM C795, Thermal Insulation For Use Over Austenitic Stainless Steel4
- ASTM C1136, Flexible Low Permeance Vapor Retarders for Thermal Insulation, Type I: ASJ Max; Type II: FRK
- Nuclear Regulatory Commission Guide 1.36, Non-Metallic Thermal Insulation4
- Does not contain the fire retardant decabrominated diphenyl ether (decaBDE)
- CAN/CGSB-51.10 – Type I, Class I – Type 703
- NFPA 90A and 90B
- California Insulation Quality Standards CA-T052

4. Preproduction qualification testing complete and on file. Chemical analysis of each production lot required for total conformance. Certification needs to be specified at time of order.

703 Board Transportation

- 703 Board FRK faced and unfaced; Complies to following Transportation Test:
- ASTM E162, Surface Flammability of Materials Using a Radiant Heat Energy Source
 - ASTM E662, Specific Optical Density of Smoke Generated by Solid Materials
 - BSS 7238, Test Method for Smoke Generation by Materials on Combustion

Features

- Save and reduce heat transfer, lowering operating costs
- ASJ Max is an all-service-jacket with a polymer film exterior surface that is smooth, durable, cleanable, wrinkle-resistant, resists water staining and doesn't support mold or mildew growth¹
- The ASJ Max facing can resist short durations of liquid water exposure that can occur during construction
- Resists damage and maintains structural integrity and efficiency
- Efficiently reduces sound transmission
- 703 and 705 are lightweight, resilient, easy to handle and fabricate on the job site

1. ASJ Max jacket does not support mold growth when tested in accordance with ASTM C1338.

Thermal Conductivity

| MEAN TEMP °F | K | | MEAN TEMP °C | λ W/M · °C | |
|--------------|------------------------------------|------|--------------|------------|-------|
| | BTU · IN/HR · FT ² · °F | | | | |
| | 703 | 705 | | 703 | 705 |
| 50 | 0.21 | 0.22 | 10 | 0.030 | 0.032 |
| 75 | 0.23 | 0.23 | 25 | 0.033 | 0.034 |
| 100 | 0.24 | 0.25 | 50 | 0.036 | 0.037 |
| 150 | 0.27 | 0.27 | 75 | 0.040 | 0.041 |
| 200 | 0.30 | 0.30 | 100 | 0.045 | 0.045 |
| 250 | 0.34 | 0.33 | 125 | 0.050 | 0.049 |
| 300 | 0.38 | 0.37 | 150 | 0.055 | 0.053 |

Thermal Performance

ASTM C680 (Type 703)

| THICKNESS IN | (MM) | OPERATING TEMPERATURE, °F (°C) | | | | | | | | | |
|-----------------|-------|--------------------------------|----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|
| | | 250 (121) | | 300 (149) | | 350 (177) | | 400 (204) | | 450 (232) | |
| | | HL | ST | HL | ST | HL | ST | HL | ST | HL | ST |
| 1.0 | (25) | 27 | 98 | 42 | 106 | 57 | 114 | 75 | 123 | 95 | 133 |
| 1.5 | (38) | 19 | 93 | 29 | 99 | 40 | 105 | 52 | 112 | 66 | 119 |
| 2.0 | (51) | 15 | 90 | 22 | 95 | 31 | 100 | 40 | 105 | 50 | 111 |
| 2.5 | (64) | 12 | 88 | 18 | 92 | 25 | 196 | 32 | 101 | 41 | 106 |
| 3.0 | (76) | 10 | 87 | 15 | 91 | 21 | 194 | 27 | 198 | 34 | 102 |
| 3.5 | (89) | 9 | 86 | 13 | 89 | 18 | 192 | 23 | 196 | 30 | 199 |
| 4.0 | (102) | 8 | 86 | 11 | 88 | 16 | 191 | 21 | 194 | 26 | 197 |

The above table provides approximate heat loss values (HL), Btu/hr-ft², and Surface Temperatures (ST), °F, for flat surfaces. Values are based on horizontal heat flow, vertical flat surface, 80°F ambient temperature, still air, ASJ Max facing. To convert heat loss values to W/m², multiply values by 3.15. To convert surface temperatures, use the formula: °C = (°F-32)/1.8. For similar information using other assumptions, contact your Owens Corning Representative.

700 Series R-Values at 75° F Mean

| PRODUCT | NOMINAL K-VALUE AT THICKNESS | | | | |
|---------|------------------------------|---------|-------|---------|-------|
| | 1-IN. | 1.5-IN. | 2-IN. | 2.5-IN. | 3-IN. |
| 703 | 4.3 | 6.5 | 8.7 | 10.9 | 13.0 |
| 705 | 4.3 | 6.5 | 8.7 | 10.9 | 13.0 |

To determine R-Value at other thickness or other temperatures on the Thermal Conductive Table above, use the following calculation:

Thickness = R-value

k-value

Sound Absorption Coefficients

ASTM C423; Mounting: Type A—Material placed against a solid backing

| PRODUCT TYPE | THICKNESS | | OCTAVE BAND CENTER FREQUENCIES, Hz | | | | | | |
|--------------|-----------|------|------------------------------------|------|------|------|------|------|------|
| | IN. | (MM) | 125 | 250 | 500 | 1000 | 2000 | 4000 | NRC |
| 703 Unfaced | 1 | 25 | 0.03 | 0.25 | 0.65 | 0.93 | 0.99 | 0.89 | 0.70 |
| | 2 | 51 | 0.10 | 0.71 | 1.14 | 1.14 | 1.03 | 0.95 | 1.00 |
| | 3 | 76 | 0.31 | 1.07 | 1.26 | 1.15 | 1.05 | 0.97 | 1.15 |
| | 4 | 100 | 0.51 | 1.19 | 1.24 | 1.13 | 1.04 | 0.94 | 1.15 |
| 705 Unfaced | 1 | 25 | 0.01 | 0.22 | 0.67 | 0.97 | 1.05 | 1.06 | 0.75 |
| | 2 | 51 | 0.19 | 0.78 | 1.16 | 1.13 | 1.06 | 1.06 | 1.05 |
| | 3 | 76 | 0.40 | 1.13 | 1.19 | 1.12 | 1.07 | 1.06 | 1.15 |
| | 4 | 102 | 0.60 | 1.16 | 1.15 | 1.09 | 1.10 | 1.06 | 1.15 |
| 703 FRK | 1 | 25 | 0.18 | 0.75 | 0.58 | 0.72 | 0.62 | 0.35 | 0.65 |
| | 2 | 51 | 0.63 | 0.56 | 0.95 | 0.79 | 0.60 | 0.35 | 0.75 |
| 705 FRK | 1 | 25 | 0.27 | 0.66 | 0.33 | 0.66 | 0.51 | 0.41 | 0.55 |
| | 2 | 51 | 0.60 | 0.50 | 0.63 | 0.82 | 0.45 | 0.34 | 0.60 |
| 703 ASJ Max | 1 | 25 | 0.17 | 0.71 | 0.59 | 0.68 | 0.54 | 0.30 | 0.65 |
| | 2 | 51 | 0.47 | 0.62 | 1.01 | 0.81 | 0.51 | 0.32 | 0.75 |
| 705 ASJ Max | 1 | 25 | 0.20 | 0.64 | 0.33 | 0.56 | 0.54 | 0.33 | 0.50 |
| | 2 | 51 | 0.58 | 0.49 | 0.73 | 0.76 | 0.55 | 0.35 | 0.65 |

Availability

Type 703 and 705 Insulations are available in:

- Width Dimensions: 45" - 49" (1,143.0mm - 1,244.6mm)
- Length Dimensions: 24" - 121" (609.6mm - 3,073.4mm)
- Thickness:
 - 703: 3/4" - 4" (19.05mm - 101.6mm)
 - 705: 1/2" - 2 1/2" (12.7mm - 63.5mm)

1. Minimum order requirements and lead-times contingent upon size. Contact your local Area Sales Manager for details.

Environmental and Sustainability

Owens Corning is a worldwide leader in building material systems, insulation and composite solutions, delivering a broad range of high-quality products and services. Owens Corning is committed to driving sustainability by delivering solutions, transforming markets and enhancing lives. More information can be found at www.owenscorning.com.

Certificates and Sustainable

- Certified by SCS Global Services to contain an average of 53% recycled glass content, 31% pre-consumer and 22% post-consumer
- Environmental Product Declaration (EPD) has been certified by UL Environment
- For unfaced products only: Material Health Certificate from Cradle to Cradle Products Innovation Institute
- Health Product Declaration® (HPD)



AVERAGE 53% RECYCLED CONTENT
31% PRE-CONSUMER
22% POST-CONSUMER

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