



THERMORANGE SYSTEM[®] INSULATION



Owens Corning ThermoRange[®] System (TRS) insulation products are flexible white blankets of inorganic glass fibers bonded with a proprietary thermoset resin. TRS is designed to provide excellent handling characteristics and dimensional stability during installation at OEM facilities and also provides low smoke and odor during the initial self-clean cycle for ranges.

Features

- **Health & Safety** — Our proprietary binder chemistry is designed to eliminate consumer concerns about emissions and to ensure compliance with safe levels of Volatile Organic Compounds. TRS user-friendly fibers make for ease of handling and install. This product does not contain any Proposition 65 chemicals and is GREENGUARD Gold Certified.
- **Low Smoke & Odor** — The proprietary binder chemistry of TRS and the low binder content reduces smoke and odor at elevated temperatures.
- **Dimensional Stability** — The resilience and proven thickness control of TRS ensures that the space to be insulated is completely filled, providing maximum range efficiency.
- **Easy Installation** — Good tensile strength and thickness control make TRS easy to handle and install.
- **Corrosion** — TRS will not accelerate corrosion on copper and aluminum per ASTM C665.
- **Corrosion to Steel** — TRS will not accelerate corrosion on steel per ASTM C1617.
- **Design Flexibility** — ThermoRange[®] System insulation is available in five thermal performance levels, providing maximum performance at minimum cost.
- **High Temperature Performance** — The proprietary binder chemistry, low smoke and odor characteristics, easy handling, and high resilience of TRS make it the preferred insulation for self-clean ranges and other high-temperature applications.
- **Availability** — TRS insulation is available in both batt and roll form in ¼-inch increments and the following thicknesses:

PRODUCT	THICKNESS
TRS-10	1"–5" (Rolls only)
TRS-20	1"–5" (Rolls only)
TRS-30	1"–3" (Rolls & Batts)
TRS-40	¾"–2½" (Rolls & Batts)
TRS-50	¾"–2" (Rolls & Batts)

Physical Properties

PROPERTY	TEST METHOD	VALUE
Density	ASTM C167	TRS-10: 1.02 pcf (16.3 kg/m ³) TRS-20: 1.26 pcf (20.2 kg/m ³) TRS-30: 1.76 pcf (28.2 kg/m ³) TRS-40: 2.50 pcf (40.1 kg/m ³) TRS-50: 3.71 pcf (59.4 kg/m ³)
Operating Temperature Range	ASTM C411	Rated to 1,000°F (538°C)
CORROSION RESISTANCE	TEST METHOD	VALUE
Corrosion to Copper and Aluminum	ASTM C665	Pass — copper and aluminum
Corrosion to Steel	ASTM C1617	Pass
Stress Corrosion on Austenitic Stainless Steel	ASTM C795 ¹	Pass
FIRE	TEST METHOD	VALUE
Surface Burning Characteristics ²	UL 723, ASTM E84, and CAN/ULC S102	UNFACED: Flame Spread Index 0 Smoke Developed Index 0

1 Preproduction qualification testing complete and on file. Chemical analysis of each production lot required for total conformance.
2 The surface burning characteristics of these products have been determined in accordance with UL 723, ASTM E84, and CAN/ULC-S102. Values are reported to the nearest 5 rating.

Applications

TRS insulation may be used in applications from subzero to 1,000°F, making it an excellent application for:

- Self-clean ranges, standard ranges, and countertop ranges
- Broilers
- Oven panels
- Commercial ovens
- Fireplaces
- Solar collectors
- Incinerators
- Any heated appliance applications

Thermal Conductivity³ per ASTM C177

MEAN TEMPERATURE °F	k = (Btu·in/hr·ft ² ·°F)				
	TRS-10	TRS-20	TRS-30	TRS-40	TRS-50
75°F	0.24	0.24	0.22	0.22	0.22
100°F	0.25	0.26	0.24	0.23	0.23
200°F	0.33	0.33	0.30	0.28	0.26
300°F	0.42	0.42	0.37	0.34	0.30
400°F	0.54	0.54	0.47	0.42	0.36
500°F	0.69	0.69	0.59	0.51	0.42

MEAN TEMPERATURE °C	λ W/m·°C				
	TRS-10	TRS-20	TRS-30	TRS-40	TRS-50
24°C	0.034	0.033	0.032	0.031	0.031
38°C	0.037	0.037	0.034	0.033	0.033
93°C	0.047	0.048	0.043	0.040	0.037
149°C	0.060	0.061	0.054	0.049	0.043
204°C	0.078	0.078	0.067	0.061	0.052
260°C	0.099	0.100	0.084	0.074	0.060

³ Apparent thermal conductivity values determined in accordance with ASTM practice C1045 with data obtained by ASTM test method C177. Values are nominal, subject to normal testing and manufacturing tolerance.

Sound Absorption Coefficient, ASTM C423 — Type A Mounting⁴

PRODUCT	THICKNESS (INCHES)	1/3 OCTAVE BAND CENTER FREQUENCIES, Hz							
		125	250	500	1000	2000	4000	NRC	SAA
TRS-10	1.0	0.08	0.38	0.76	0.81	0.92	0.96	0.75	0.74
	2.0	0.18	0.75	1.10	1.06	1.00	1.01	1.00	0.97
TRS-20	1.0	0.09	0.38	0.80	0.95	0.94	0.99	0.75	0.77
	2.0	0.22	0.86	1.18	1.10	1.02	1.03	1.05	1.03
TRS-30	1.0	0.13	0.39	0.83	1.00	0.96	1.03	0.80	0.79
	2.0	0.25	0.99	1.22	1.14	1.05	1.07	1.10	1.10
TRS-40	1.0	0.12	0.46	0.95	1.07	1.04	1.06	0.90	0.88
	2.0	0.32	1.19	1.25	1.17	1.11	1.13	1.20	1.17
TRS-50	1.0	0.12	0.56	1.09	1.16	1.06	1.07	0.95	0.97
	2.0	0.36	1.15	1.16	1.11	1.06	1.10	1.10	1.11

⁴ Nominal samples were measured in accordance with ASTM C423. These measured absorption coefficients were adjusted to values representative of the product with mean specification properties. While these values are an accurate representation of our product, they are for design approximations only. Production, testing, and application variabilities will alter results. Specific designs should be evaluated in end-use configuration.

Certificates and Sustainability

- Certified to meet indoor air quality standards under the stringent GREENGUARD Indoor Air Quality Certification Program, and the GREENGUARD Gold Certification.
- Certified by SCS Global Services to contain a minimum of 53% recycled glass content, 31% pre-consumer, and 22% post-consumer.



Notes

For additional information, refer to the Safe Use Instruction Sheet (SUIS) found in the SDS Database via <http://sds.owenscorning.com>.

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SCS Global Services provides independent verification of recycled content in building materials and verifies recycled content claims made by manufacturers. For more information, visit www.SCSglobalservices.com.

GREENGUARD Certified products are certified to GREENGUARD standards for low chemical emissions into indoor air during product usage. For more information, visit ul.com/gg.

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