

Inzonex Insulation Systems – Technical Specification

1. Outer Fabrics

Glass Fabric with Silicone Coating

- Continuous temperature: **up to +260 °C** (short-term +300 °C).
- Properties: Flame-retardant, resistant to acids, alkalis, UV, and weathering.
- Certifications: EN 13501-1 (Euroclass), REACH & RoHS compliant.
- Origin: UK and Germany.

PTFE Fabric

- Operating range: **–200 °C to +260 °C**.
- Properties: Non-flammable, resistant to oils and most industrial chemicals, washable and reusable.
- Certifications: ASTM E84, UL94 V-0.
- Origin: UK and Germany.

Silica Fabric with Vermiculite Coating

- Continuous resistance: **up to +1000 °C**.
 - Properties: Superior abrasion resistance, outstanding flame protection.
 - Certifications: EN 13501-1 (Euroclass A1), IMO FTP Code.
 - Origin: Germany.
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2. Insulation Cores

Basalt Insulation (Rockwool Mat with Aluminum Foil Covering)

- Continuous temperature: **up to +250 °C**.
- Density: **$\approx 50 \text{ kg/m}^3$** .
- Properties: Non-combustible (Euroclass A1), chemically inert.
- Aluminum foil layer improves durability, mechanical protection, and resistance to moisture.
- Thermal conductivity: **$\lambda \approx 0.038 \text{ W/m}\cdot\text{K}$ (at 50 °C)**.
- Origin: Finland and Poland.
- Available thicknesses: **25 mm, 50 mm, 75 mm**.

High-Temperature Rockwool Insulation (Industrial Grade)

- Continuous temperature: **up to +600 °C**.
- Density range: **80 – 130 kg/m³**.
- Available thicknesses: **50 mm – 150 mm**.
- Properties: High-density mineral wool for demanding industrial environments, improved compression resistance, non-combustible (Euroclass A1).
- Thermal conductivity: **$\lambda \approx 0.042 \text{ W/m}\cdot\text{K}$ (at 200 °C)**.
- Certifications: EN 13501-1 (Euroclass A1), REACH & RoHS compliant.
- Origin: Europe.

Armaflex Insulation (Cold Systems – Refrigeration & HVAC)

- Operating range: **–50 °C to +105 °C**.
- Thermal conductivity: **0.033 W/m·K (at 0 °C)**.

- Properties: Flexible, lightweight, closed-cell elastomeric insulation that prevents condensation.
 - Certifications: FM Approved, UL94, REACH & RoHS compliant.
 - Origin: Europe.
 - Available thicknesses: **13 mm, 19 mm, 25 mm.**
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3. Sewing Threads

- **Meta-aramid:** up to +220 °C, flame-resistant, flexible.
 - **Ceramic:** up to +1000 °C, extreme high-temperature capability.
 - Origin: Germany.
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4. Fixings & Closures

- **Industrial snap fasteners** (standard) – corrosion-resistant.
 - **Marine-grade snap fasteners** (AISI 316 stainless steel) – high durability in humid, offshore, and chemical environments.
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5. Design & Production

- Insulation is **custom-made using CAD** to precisely fit valves, flanges, turbines, boilers, and other industrial equipment.
- **Reusable and removable**, allowing easy maintenance and inspection.
- **Asbestos-free, environmentally safe**, compliant with REACH and RoHS.