

ERGONOMIC AND PRODUCT IMPROVEMENTS OF
INFINITY RANGE OF THERMAL SHIELDS



Removable Insulation Blankets are used to insulate engine parts, exhaust piping and components, industrial process piping and machinery. In particular applications which use diesel engines, such as power generation, off highway equipment, trucks, light vehicles, and marine vessels, they often require insulation blankets to manage the heat that these engines generate. With our extensive library of patterns and designs we can offer custom removable blanket kits to suit

nearly all makes of engines and machines including Caterpillar®, Atlas Copco, M.T.U, Detroit, Komatsu, Liebherr, Hitachi and Terex.

What are Removable Insulation Blankets used for?

1. Protecting employee personnel from burn related injuries therefor reducing OH & S risks
2. Increase exhaust system efficiencies and reduce engine compartment temperatures
3. Protecting hoses, wiring, and solenoids from excess heat generated from engines and exhaust systems

4. Reduce the potential of fires hazards caused by hydraulic oil and diesel leaks igniting on hot surfaces
5. Many Mine and Construction sites OH & S regulations stipulate a mandatory requirement for all machines to meet thermal protection customers to comply with through the provision, back up support and service of their products.
6. The dense fibrous composition of some of the materials used for heat insulation is also an effective acoustic absorber and these characteristics can be further increased by using multiple layers within the removable blanket products construction. All materials used in our products meet fire rating standards.

Blanket Composition and Specification details

Layer	Material	Service Temp	Function
Inner (Optional)	Knitted Stainless Steel mesh	650 -980	Provides extra strength and durability to the inner of the blanket helping to contain insulating media
Secondary Inner	Vermiculite Coated Silica Cloth	1000	High temperature resistant insulating cloth layer for the primary high temperatures
Middle	E Glass Needle Felt Fibreglass	600	This insulating layer is the material which provides the main reduction in temperatures emanated from the heat source
Outer	Silicone Impregnated fiberglass Teflon Impregnated and coated fibreglass Aluminized Fibreglass	315 285 260-540	Protective outer layer

THERMAL INSULATION IDENTIFICATION

- We will only focus on two different types of insulation mediums in this document to explain the hazards and functionality of the materials.
- Infinity Insulation medium
 - **Belcotex 110 Needled Mat.**
- Market Standard Insulation Medium
 - **Refractory Ceramic Wool.**

TECHNICAL AND SAFETY INFORMATION

MARKET STANDARD REFRACTORY CERAMIC WOOL

- 1093 deg c working temperature.
- Wool type look and feel.
- High exposure to fibre fly due to it being a spun construction of fibres.
- **Category 2b carcinogen to human exposure and high skin and respiratory exposure risk.**
- Looses insulation efficiency when exposed to vibration and condensation.
- High PPE Demand for handling and storage.
- Shortened installed life span.

PLEASE REFER TO THE ATTACHED MSDS SHEET.

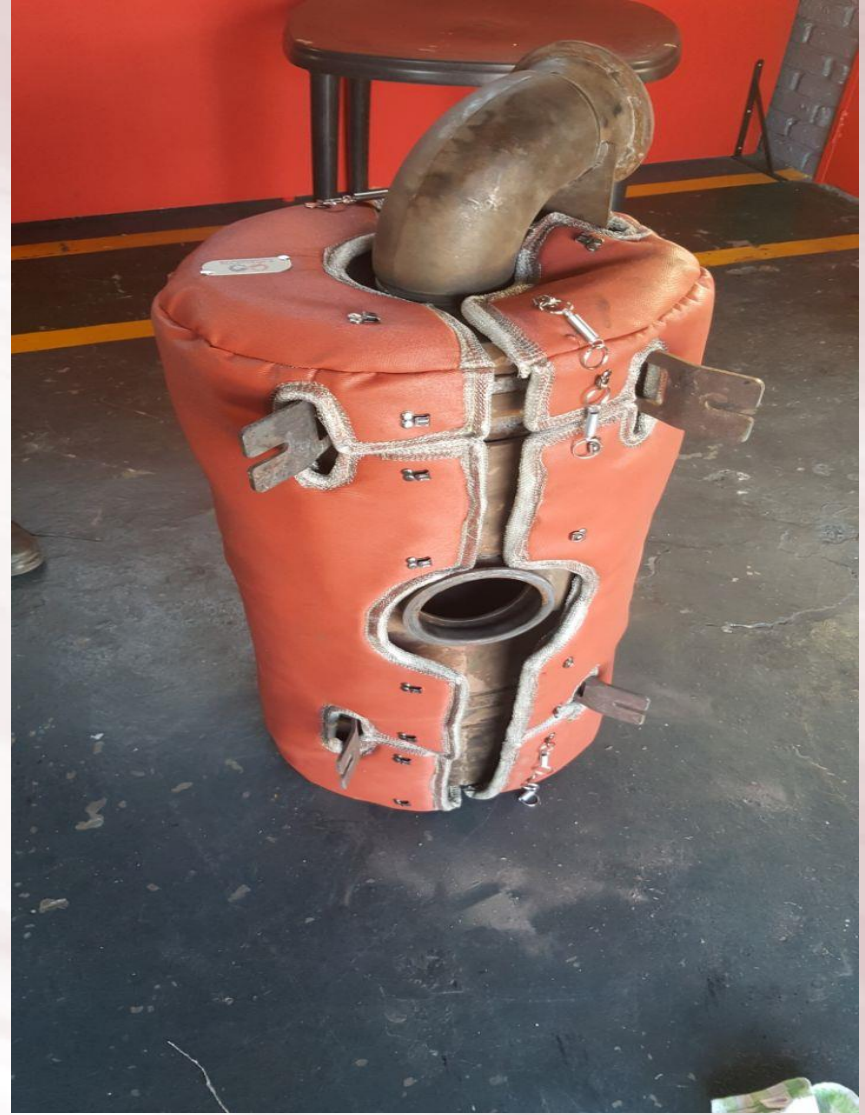
TECHNICAL AND SAFETY INFORMATION

INFINITY THERMAL BELCOTEX 110 NEEDLEMAT

- 1050 deg c working temperature.
- Compressed sheet / mat look and feel.
- No fibre fly due to it being a needled woven mat material.
- **It is non-respirable , environmentally friendly and non hazardous, absolutely no itching or irritation whatsoever.**
- Keeps full insulation functionality even when exposed to vibration and condensation.
- No PPE demand for handling and storage , no harmful effects.
- Increased installed lifespan due to tensile strength of insulation construction.

PLEASE REFER TO THE ATTACHED MSDS SHEET

Examples



Examples



Examples



Examples

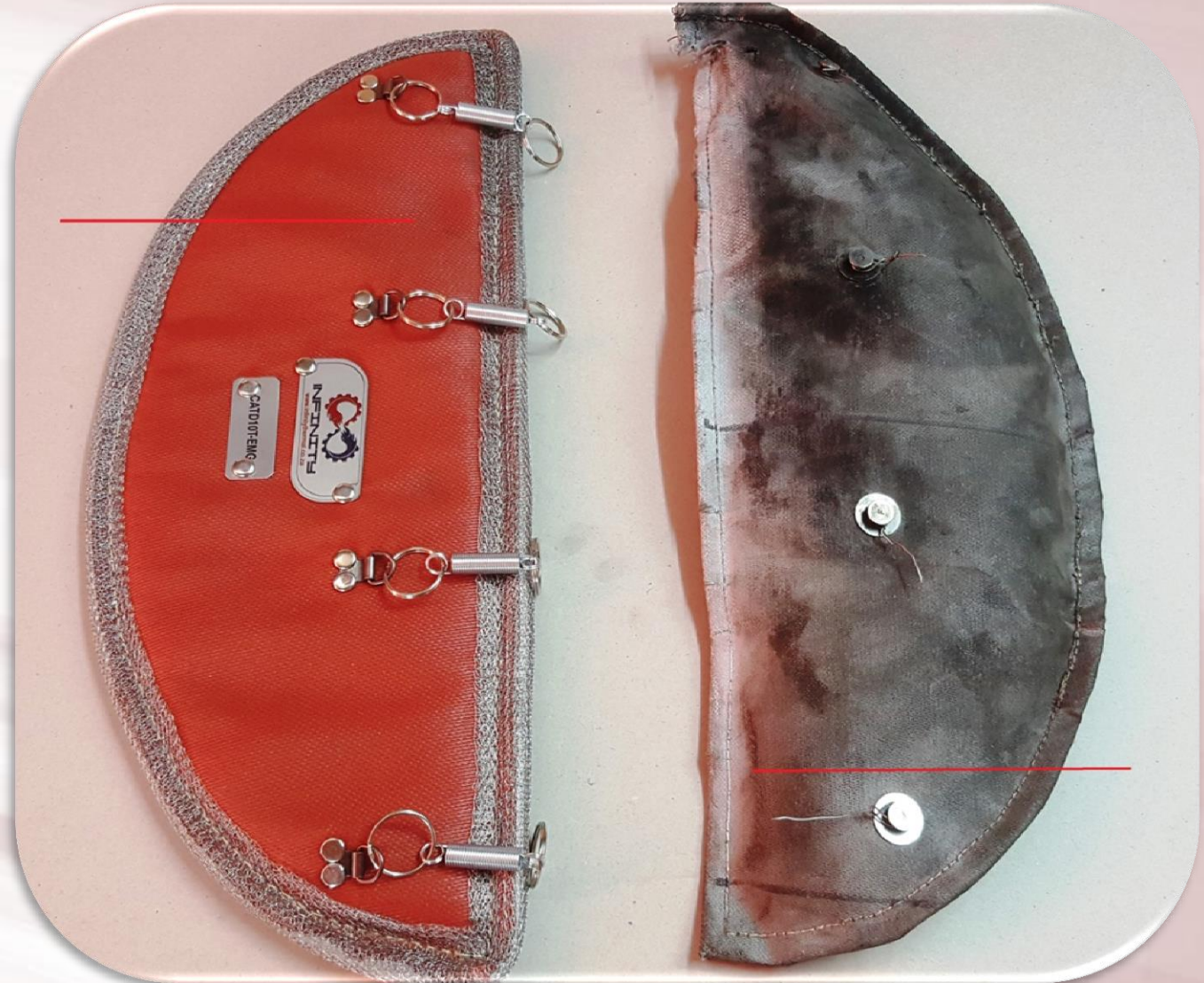


Examples



INFINITY IMPROVEMENTS

- Spring Retainers.
- Insulation on the full surface area of the shield.
- Stainless Steel Edge Protection.
- Part Number Tag per Shield.
- Silicone Non-Soakable outer Material.
- Additional Hot Surface Protection.
- Superior insulating Properties.
- Increased Lifespan



**BELCOTEC
110 mat**



**Refractory
Ceramic
wool**

**BELCOTEC
110 mat**

**Infinity
Shields**



**Refractory
Ceramic
wool**

**Market
Standard
Suppliers**



Perfect example of “Fibre Fly” fibre separation that causes skin and respiratory health hazards.

REF Refractory Ceramic Fibre MSDS Sheet

Perfect example **no** “Fibre Fly” **no fibres separation** present due to rigid woven construction.

REF Belcotex 110 MSDS Sheet



EXAMPLES OF EXPOSURE TO WATER, HANDLING AND VIBRATION



No change in insulation or construction integrity

Failure and Health Hazard



**Refractory Ceramic Fibre
Exposure**



**Belcotex 110 Fibre
Exposure**

Infinity Sourcing prides itself in :

1. Custom manufactured covers to meet the clients specific needs and requirements.
2. All our thermal shields (covers) are locally manufactured.
3. Only market leading textiles used in construction of the thermal shields.
4. Prolonged lifespan.
5. Designed specifically for mobile equipment and harsh mining environment.
6. Lead time and costing.
7. World class insulation values.
8. Installation ease and ergonomical advancements with relation to fibre exposure.



Our Value Add Proposal will offer the following;

- 1) On Site full time Representation
- 2) Stock Management
- 3) Critical Stock Holding
- 4) Optimisation of Stock
- 5) On Site Application Training
- 6) Long Term Cost Saving
- 7) Decrease in Rand per Ton cost
- 8) Increase in Operating Profit

We thank you for the opportunity.

Kind Regards,

Derrick Du Plessis
Managing Director
Infinity Sourcing Pty Ltd

Hannes De Beer
Technical Sales Manager
Infinity Sourcing Pty Ltd

