

# Exhaust Insulation

UniTherm International offers high temperature, removable insulation jackets for exhaust systems. UniTherm exhaust system insulation provides a complete, weather resistant system. Our blankets are uv-stable, water proof, and can easily be removed and reused.

We understand in today's environment manufacturers are challenged to continually improve performance and safety. UniTherm meets those demands by creating efficient designs with the best materials to ensure systems work at peak performance. We are constantly developing and refining our insulation materials to meet our customers' needs. Our experience enables us to provide custom solutions that comply with new EPA and EU regulations.

## Ideal insulation solutions for

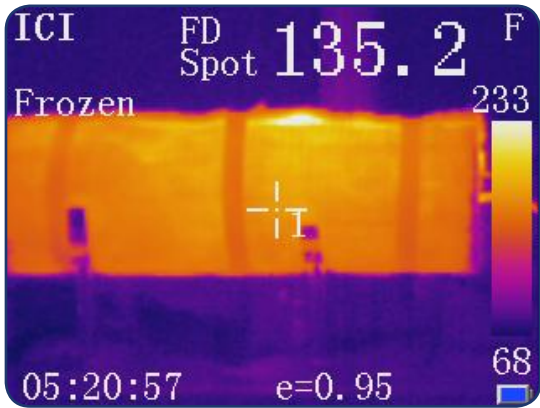
- » Gas and diesel exhaust systems
- » Hot oil and steam piping
- » Backup/portable power generation
- » Recreational vehicles and bus exhaust systems
- » EPA Tier 4 and EU Stage 111B engine exhaust applications

## Benefits

- » Personnel/operator safety
- » Cooler working environment
- » Noise reduction
- » Enhance efficiency of equipment



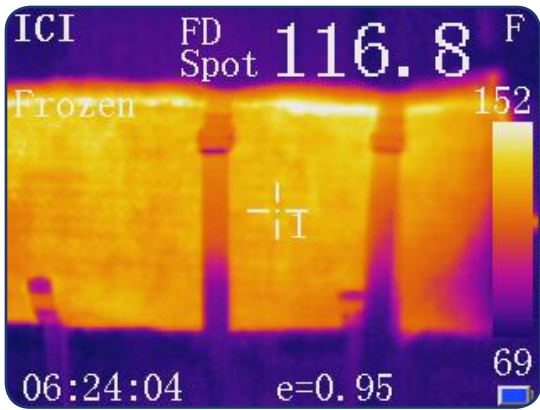




## How do you know you'll get the right solution for the job?

We test different combinations of materials at different thicknesses until we reach best possible solution for you.

Thermal imaging shows how the temperature drops as we perfect your custom cover.



The images to the left represent a thermal image test we ran for a major U.S. oil field services company. The company came to us looking for a material that would bring the touch surface of an exhaust pipe to below 100°F.

We simulated the 600°F pipe in our laboratory, and tested materials until we found the best match with our proprietary IsoRock mineral wool insulation material.

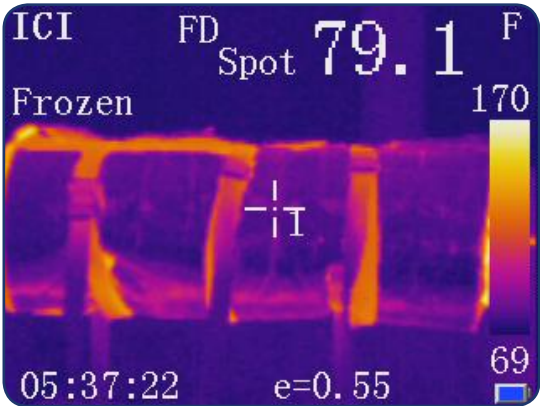


fig 1: 1/2" 10# Needlemat

fig 2: 1" 10# Needlemat

fig 3: 2" IsoRock



# Exhaust Insulation Specifications

**Typical Application:** Suitable for exhaust applications

Div 1	Material	Continuous Temperature	Water Resistance	Abrasion Resistance
	Teflon	450°F	High	Medium/High
	Stainless Steel Mesh	1450°F	High	High
	Temp Mat	1000°F	Insoluble/Low	Medium

- » Max Hot Face: 1450°F
- » Max Cold Face: 450°F

**Typical Application:** Suitable for harsh applications

Div 2	Material	Continuous Temperature	Water Resistance	Abrasion Resistance
	Teflon	450°F	High	Medium/High
	Stainless Steel Mesh	1450°F	High	High
	Vertex	1100°F	Insoluble/Low	Medium
	Needle Mat	1000°F	Insoluble/Low	Medium

- » Max Hot Face: 1100°F
- » Max Cold Face: 450°F

**Typical Application:** Suitable for exhaust applications

Div 3	Material	Continuous Temperature	Water Resistance	Abrasion Resistance
	Silicon	420°F	Medium	Medium
	Needle Mat	1000°F	Insoluble/Low	Medium

- » Max Hot Face: 420°F
- » Max Cold Face: 420°F

## Optional Rigid Enclosure

SolarShell UV cured fiberglass laminate is ideal for use in conjunction with exhaust insulation jackets. SolarShell creates a hard, impenetrable, removable shell that prevents corrosion and damage while greatly extending the life of the insulation jacket.

Material	Continuous Temperature	Water Resistance	Abrasion Resistance
SolarShell	450°F	High	High

## Freeze Protection for Diesel Exhaust Fluid

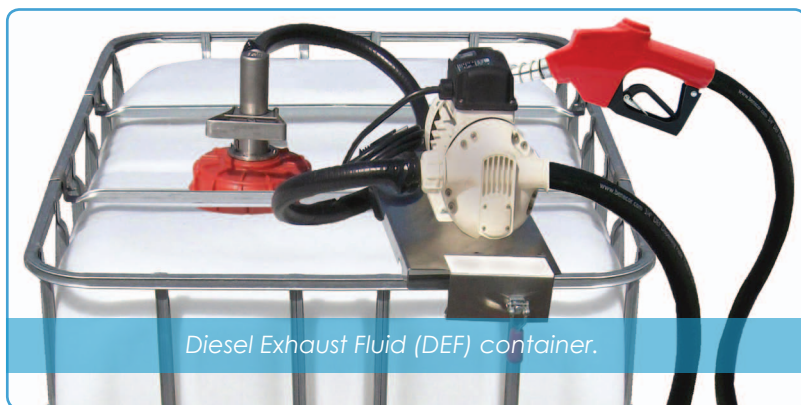
FlexWatt Diesel Exhaust Fluid (DEF) heated blankets provide freeze protection to any size DEF container. FlexWatt provides consistent, controlled heat in an easy to apply, removable, reusable blanket.

### FlexWatt for DEF Container Options

- » Thermostat for precise temperature control
- » Hose and nozzle protection available
- » Fit to any drum, tank, tote, or even small 1 gallon jugs
- » Custom flaps for refilling and equipment access

### FlexWatt Users

FlexWatt for DEF containers are ideal for anyone transporting, storing, or selling Diesel Exhaust Fluid. Filling stations, fleet operators, vehicle operators, and DEF distributors can benefit from FlexWatt freeze protection jackets.



*Custom sizes, cut-outs, and optional controller make FlexWatt ideal for DEF storage.*

