

# DEFENDER SERIES THERMAL INSULATION™

Designed to meet the unique challenges of the most demanding applications, **DuraFlex Defender Series Thermal Insulation™** components & complete systems are engineered to out-perform & endure at the most extreme levels. Our advanced controlled processes & materials ensure the ultimate combination of **thermal control, protection, performance & affordability.**



## PRODUCTS

*Custom & Standard*

- Heat Shields
- High Temp Covers
- Insulators
- Thermal Barriers
- Vibration Dampeners
- Weatherization Devices

## SERVICES

- Drawings
- Engineering Design
- Prototyping
- Testing

## APPLICATIONS

- Commercial
- Engines
- Generators
- Heat Barriers
- Heat Sources
- Industrial
- Motors
- Piping
- Refrigeration
- Safety Covers

## INDUSTRIES

- Aerospace
- Agriculture
- Marine
- Military
- Off Highway
- Performance Vehicles
- Power Distribution
- Process / Machinery

## MATERIALS\*

*Non-fiberglass*

- Carbon Fiber Elements
  - Organo Silicates
  - Spun Inconel / Nickel
  - Graphite Bonding
  - Kevlar Threads
  - Ceramic Deposition
  - Basalt Coatings
  - Spec Sheet Per Material Available Per Order
- \*potential*

## USAGE

- Abrasion Protection
- Designed to Exceed Standard Life Cycles
- Emissions Control
- **↓K** Where Low Thermal Conductivity is Required with a High Insulation Capability **↑R**
- Noise Suppression/Reduction
- Prevents External Corrosion Contaminants
- Protects Key Components from Mechanical Damage
- Regeneration Reduction
- Retains Heat to Maintain:
  - *Minimum Heat Working Temps*
  - *Safe Low Skin Temps*

## COMPLIANCE

*Industry Codes*

- NSF
- ABS
- USCG
- NAVSEA
- ISO
- CE

## DEFENDER SERIES ADVANTAGES

- >2000° F ...*With Continuous Protection!*
- American Made
- Compliance...*With extreme motion!*
- Configuration: •*Ease of Use* •*Flexibility* •*Light Weight*
- Cost Competitive
- Ease of Installation & Removal...*Straps & Snaps*

- Engineered Design...*2D & 3D Models*
- High Temp Material Composition
- No Minimums
- Professional Aerospace Appearance
- Short Lead Times
- Water Resistant



# ENGINE EXHAUST INSULATION DESIGN

All content & images are proprietary to Duraflex, Inc. Use is expressly prohibited unless agreed in writing by Duraflex, Inc.

**DURAFLEX, INC.**  
 877.462.1007 | info@duraflexinc.com | www.duraflexinc.com  
 © Copyrights 2015 Duraflex, Inc.™ All rights reserved.

CUSTOMER INFORMATION									
Submitted Date		RFQ / Project #			Website				
Project Engineer Name				Address					
Company Name				Division/Department					
E-Mail		Phone Number		Fax Number					
TECHNICAL SPECIFICATIONS									
Bellows Only ▶					Tube Assembly or Other ▶				
Bellows / Assembly Drawing Number's ▶		1)			Tube / Other Assembly Drawing Number's ▶		1)		
		2)					2)		
		3)					3)		
Insulation Materials Required ▶									
Reason Insulation Required ▶					Life Expectancy ▶				
Tube OD, in ▶		Bellows OD, in				Insulation Available OD, in ▶			
Is a Preheater Required ▶					F° Temperature Range for Preheat ▶				
F°	1) Internal Gas Temperature								
			a) Operating ▼					b) Peak ▼	
	2) External Allowed Temperature								
			a) Operating ▼					b) Peak ▼	
	3) Temperature Drop Allowed – Insulation Section								
			a) Operating ▼					b) Peak ▼	
Fit Requirements / Restrictions									
Type of Fasteners ▶									
Environmental Issues ▶									
Weight Limits / Requirements ▶									
Test Requirements ▶									
ADDITIONAL INFORMATION									
Prototype ▶		a) Quantity		Production ▶		a) Quantity		Target Price ▶	
		b) Date Req				b) Date Req			
Warranty Requirements ▶									
Currently ▶		a) Product Type							
		b) Supplier							
		c) Problems with Current Supplier							