

AMW™ Heat Shield

Technical Data Sheet 4043

Product Overview

GrafTech's GRAFSHIELD AMW heat shield is a high temperature laminated heat shield and insulator. GRAFOIL® flexible graphite and low thermal conductivity carbonaceous inter-layers are used to form a laminated structure that gives the AMW heat shield its strength and stiffness. The low z-direction thermal conductivity of the structure ensures good insulation value. In addition, the GRAFOIL flexible graphite facing ensures that the AMW heat shield has excellent radiant heat properties.

In the x-y direction, the AMW heat shield makes use of the GRAFOIL flexible graphite sheet's extremely high thermal conductivity to rapidly dissipate heat, reducing hot and cold spots and improving temperature uniformity throughout the hot zone. The AMW heat shield's strength also provides superior resistance to impact and mechanical damage in high traffic applications.

Applications

- Vacuum furnace insulation
- Inert gas furnace insulation
- Inert gas atmosphere process equipment insulation

Sizes*

Thickness	Standard Cut Sizes			
0.25"	24 x 48"	24 x 52"	40 x 60"	6 x 1000 x 1500 mm
0.375			38 x 38"	

Typical Properties at Room Temperature**

Characteristic	Unit	WG	AG	Unit	WG	AG
Service Temperature	°F	5400		°C	3000	
Flexural Strength	psi	750		MPa	5.2	
Thermal Conductivity 25°C	BTU-ft/hr ft² °F	140	1.7	W/mK	240	3
Thickness Variation	%	± 10		%	± 10	
Sealability (ASTM F-37)	MI/hr	0.5		MI/hr	0.5	
CTE (RT to 2000°C, x-y)	10 ⁻⁶ in/in/°F	15		10 ⁻⁶ m/m/K	27	

Notes:

* Custom sizes and shapes are available on request

** Properties listed are typical and cannot be used as accept/reject specifications

www.graftech.com | grafshield@graftech.com

United States of America

101 N. Philippi Pike
Anmoore, WV 26323-0120
Ph: +1-800-842-8805
+1-304-624-1253

China

Unit 2104 of International Capital Plaza
1318, Sichuan Road North
Hongkou District, Shanghai China
Ph: +86-21-8625-8018

Italy

Via Forno Allione, 2
1-25040 Malonno, Brescia, Italy
Ph: +39-036-463-0131

France

La Lechere
73264 Aigueblanche Cedex, France
Ph: +33-4-79-41-45-00

Redefining limits