XIAMETER® ADH-6066 Adhesive

One component, fast heat cure silicone adhesive

FEATURES

- One-part flowable material
- Red silicone adhesive
- Rapid heat cure
- Primerless adhesion to a wide variety of substrates such as metals, glass and ceramics
- Addition cure system: no cure by-products
- Stable and flexible from -50°C (-58°F) to +200°C (392°F)

APPLICATIONS

- Designed to provide long term heat stable bonding of various metal, glass and ceramic substrates.
- Typical applications are: steam chamber sealing and sole bonding in steam irons, bonding of heating elements.

TYPICAL PROPERTIES

Specification Writers: These values are not intended for use in preparing specifications. Please contact your local XIAMETER® sales representative prior to writing specifications on this product.

CTM[1]	ASTM[2]	Test	Unit	Value
		As supplied		
		Color		Red
0050	D1084	Viscosity at 23°C (73°F)[3]	mPa.s	33,000
0022	D792	Specific gravity		1.40
		Physical properties, cured 1 hour at 150°C (302°F)		
		Color		Red
0099	D2240	Durometer hardness	Shore A	38
0137A	D412	Tensile strength	MPa	2.5
0137A	D412	Elongation at break	%	210
		Adhesive properties, cured 1 hour at 150°C (302°F)		
0243		Lap shear strength Al / Al	MPa	1.5

[1]CTM: Corporate Test Method, copies of CTMs are available on request.
[2]ASTM: American Society for Testing and Materials.
[3]Brookfield RVT, spindle #7 at 20rpm.

HOW TO USE

Surface preparation

For best adhesion, all surfaces should be cleaned and degreased with a suitable solvent. Care should be taken to ensure that all solvent is removed.

Adhesion to non-solvent cleaned surfaces is normally possible; however, the result will depend upon the degree and nature of the contaminants on the substrate to be bonded.

Mixing

During long periods of storage, some of the filler may settle at the bottom of the container and should be homogenized prior to use.

Vacuum de-airing is recommended. A residual pressure of 10-20mm mercury applied for 10 minutes will sufficiently de-air the material.

How to Apply

Apply XIAMETER® ADH-6066 Adhesive to one of the prepared surfaces and bond the surfaces together. Alternatively, apply the product to the mechanically fixed components.

For information on appropriate dispensing equipment for your application, please contact Dow Corning.

Curing
For complete cure, and more importantly for optimum adhesion, XIAMETER ADH-6066 Adhesive should be cured using one of the following recommended schedules:

20 minutes at 180°C (356°F), or
30 minutes at 150°C (302°F), or
1 hour at 120°C (248°F)

Large components and assemblies may require longer times in order to reach the curing temperature.

With direct heat e.g., by infrared lamps, heating elements or induction heating of the bonded parts, cure times of less than 3 minutes can be achieved. Do not expose XIAMETER ADH-6066 Adhesive to temperatures of more than 200°C (392°F) before it is fully cured.

Compatibility
In some cases, XIAMETER ADH-6066 Adhesive may fail to achieve optimum cure properties when in contact with certain plastics or rubbers.

Cleaning the substrate with solvent or baking slightly above the cure temperature can eliminate the problem.

Certain chemicals, curing agents and plasticizers can inhibit cure. These include:

- Organo-tin compounds
- Silicone rubber containing organo-tin catalysts
- Sulphur, polysulphides, polysulphones and other sulphur containing materials
- Amines, urethanes, amides and azides.

Thermal Stability
At very high temperatures, oxygen will slowly react with the silicone, leading to increased crosslinking of the elastomer. Tensile strength is essentially not affected very much, but the silicone loses elasticity during heat ageing. The ageing effect depends on the extent to which the silicone is exposed to air.

After 6 weeks exposure to 250°C (482°F) in a ventilated air oven, the hardness of XIAMETER ADH-6066 Adhesive will increase to approximately 65 Shore A, while the lap shear strength will remain essentially constant.

For more information on thermal stability of XIAMETER ADH-6066 Adhesive please contact Dow Corning.

PRODUCT SAFETY INFORMATION

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL, ENVIRONMENTAL, AND HEALTH HAZARD INFORMATION. THE MATERIAL SAFETY DATA SHEET IS AVAILABLE ON THE XIAMETER WEB SITE AT WWW.XIAMETER.COM.

STORAGE

Product should be stored at or below 25°C (77°F) in original, unopened containers. The most up-to-date shelf life information can be found on the XIAMETER Web site in the Product Detail page under Sales Specification.

LIMITATIONS

This product is neither tested nor represented as suitable for medical or pharmaceutical uses. Not intended for human injection. Not intended for food use.

LIMITED WARRANTY INFORMATION – PLEASE READ CAREFULLY

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that our products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

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Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

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