

AFTC High Performance Tapes

Industrial 5046, 5032, 5008, 5011, 5013, 5056, 5091 (1/2)

PRODUCT INFORMATION 08.2011

1/3

Application

SilverTape® Industrial 5046, 5032, 5008, 5011, 5013, 5056, 5091

Are double sided high performance acrylic based adhesive tapes, which are especially designed for a wide variety of materials with high and medium surface energy such as glass, glass / epoxy, sprouts, stainless steel, galvanized steel. The tapes are capable of absorbing the differing thermal expansions of the two different materials. These types maintain high impact resistance even at temperatures below 0 °Celsius.

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The 50-series are high performance double sided adhesive tapes with the highest inner strength, good shear and good peel properties. The tapes are capable of absorbing the differing thermal expansions of the two different materials. One should avoid shear stress on both substrates during bonding. These products are very suitable for bonding a wide variety of materials with high and medium surface energy such as glass, glass/epoxy, sprouts, stainless steel, and galvanized steel. Due to their conformability they are capable of bonding a variety of different thin and structured materials full surface and tension free. Furthermore these AFT tapes find wide use in applications like reinforcement of profiles on aluminum, road signs, and various types of plastics such as nylon, polycarbonate, rigid PVC or ABS. This acrylic foam tape has a very high temperature resistance, and is suitable for pre-powder coating applications. In combination with a primer this AFT tape family guarantees excellent adhesion performance. For low surface energy applications we recommend our Low Surface Energy (LSE) tapes, the AFT 6404, AFT 6406, AFT 6408, AFT 6411 and the 6415.

General Information

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Have a closed cell structure which is wind and water resistant. Because they are 100% acrylic based, they will form an almost indestructible bond between the materials. This family is resistant to UV, ageing, softening agents and solvents (good plasticizer resistance). These tapes bond immediately and offer a perfect resistance to the peel and shear loads that can affect a bond. These types are very well suited to absorb dynamic loads as they are viscoelastic, they can act as a sealant, form a permanent tension free bond, and are suitable to bond many different types of synthetic materials. Our production facilities have more than 15 years of experience producing these acrylic foam tapes and are ISO 14001, ISO 9001 and ISO/TS 16949 certified.

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Industrial 5046, 5032, 5008, 5011, 5013, 5056, 5091 (1/2)

PRODUCT INFORMATION 08.2011

2/3

Structure

Tape type:	5046	5032	5008	5011
Adhesive:	High Performance Acrylic			
Adhesive carrier:	Conformable Closed Cell Acrylic Foam			
Description:	High Performance			
Coating:	Direct (liner side) Direct (open side)			
Thickness:	0,64 mm	0,80 mm	0,80 mm	1,10 mm
Tolerance:	± 0,1 mm	± 0,1 mm	± 0,1 mm	± 0,1 mm
Density:	880	880	880	880
Tape Color:	Gray	White	Gray	Gray
Liner:	Red PE film (paper liner is optional)			

Tape Characteristics

Tape type:	5046	5032	5008	5011
Peel Adhesion (ASTM D 3330):	310 N/100mm	320 N/100mm	320 N/100mm	380 N/100mm
Normal Tensile (ASTM 897):	740 kPa	650 kPa	650 kPa	590 kPa
Dynamic Shear:	490 kPa 20min.	370 kPa 20min.	370 kPa 20min.	350 kPa 20min.
Overlap (ASTM 1002):	640 kPa 24h.	650 kPa 24h.	650 kPa 24h.	590 kPa 24h.
Static Shear (ASTM 3654):	670 kPa	510 kPa	510 kPa	530 kPa
Solvent Resistance:		Excellent		
UV Resistance:		Excellent		
Temperature Resistance				
Long term:		160 °C		
Short term:		240 °C		

Available Sizes

Standard Length:	33,0 m
Maximum Length:	66,0 m
Core Diameter:	75,0 mm
Standard Width Tolerance:	± 0,4 mm

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PRODUCT INFORMATION 08.2011

3/3

Manual Production

Every good bond starts with good preparation. This preparation consists of several steps, such as cleaning, use of a primer and the right working area. Please ensure that your workshop area is in a dust free environment and has a minimum room temperature of ca. 15 °Celsius.

Cleaning

Before you begin, always check how dirty the materials that you want to bond are. If they are highly contaminated with oil or grease, clean it with an industrial cleaner (SilverTape® Cleaner) or a heptanes solution. Even when the surface is clean, use our SilverTape® Cleaner, which is a 100% Isopropanol solution. Ensure that you wipe the surface in just one direction, so that the dirt is wiped off. If you do not do this you will always leave some dust or dirt on the substrate.

Quality

The quality of the bond also depends largely on the contact that the two surfaces make with each other. Because of its viscoelasticity, the tape is able to flow into the microscopic pores of the materials. However, if there is a big surface mismatch or if the materials are not pressed together the bond will reach its end strength more slowly, or not at all. Therefore we advise you to put pressure on the bond of at least 100 kPa to allow the tape to make a perfect bond between the two materials.

Maximum Bond

The end strength will be reached much faster if you use our SilverTape® Primer no. 22. This enables the tape to reach its end bond within 5 – 20 minutes instead of taking 72 hours. On making the bond the tape without the primer normally has 50% of its final bond strength and with use of the primer this will be boosted up to 80%. If you have any questions regarding the primer, the manual or the mechanical application, please contact our technical sales team.

Storage & Shelf life

Please make sure that the tape is stored in its original packaging, in a dry place and at a temperature of preferably between 4 °C and 38 °Celsius. When the tape is stored under the right conditions it has a shelf life of 18 months.

Important Information

All technical data in this product data sheet is based on our own experience and external test institutes. These values are representative and cannot automatically be used for your own specific application. You will first need to test whether the tape is suitable for your application or project. We must point out that you need to follow the rules and regulations that are applicable in the state, county or country that you are using our product in. If you have any questions regarding the use of our acrylic foam tape, please contact our technical service or technical sales team. For questions on the warranty we refer to our delivery terms and conditions, or another warranty document should be agreed on in writing between us and the customer. SilverTape® is a brand name of AFTC.