

AFTC High Performance Tapes

Industrial 83-serie

PRODUCT INFORMATION 04.2010

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Application

SilverTape® Industrial 8302, 8304

Are very thin double sided high performance acrylic-based adhesive tapes, which are mainly used because of their technical, economical and aesthetic advantages. These tapes replace and eliminate the usage of mechanical fasteners and are used in a wide variety of applications, particularly in the electronics and assembly industry, where durability, precision, invisibility, withstanding process heat and other harsh environmental conditions are important.

SilverTape® Industrial 8302, 8304

These thin tapes are designed to adhere to various surfaces, such as ABS, polycarbonate, rigid PVC, phenolic resins, glass / epoxy, aluminum, galvanized steel, enameled steel, stainless steel, nickel steel, and ceramic. The thin adhesive film allows a good adhesive performance on a variety of molded parts. These AFT Types have excellent UV, aging, solvent and high temperature resistance (+ 150 °C to + 260 ° Celsius). These series are in many situations virtually invisible and allow the usage of light weight, thin and small materials in many shapes and sizes. Therefore they find wide use in various die-cutting shapes, irregular and curved surfaces and in a diversity of electronic assembly bonding applications, like digital cameras, portable audio devices (cell phone), display attachment, process control systems, decorative bezel and (TV) screen attachment, flex circuit rigidizer, lens and antenna attachment. For difficult to bond surfaces, as being used in today's modern electronic assembly industry, we refer to SilverTape® AFT 8402 or AFT 8404. In situations where the bond needs to be invisible we recommend to use SilverTape® AFT 8502 and AFT 8504.

General Information

SilverTape® Industrial 8302, 8304

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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Structure

Tape type:	8302	8304
Adhesive:	High Performance Acrylic	
Adhesive carrier:	Conformable Closed Cell Acrylic Foam	
Description:	Thin, High Performance	
Coating:	Direct (liner side) Direct (open side)	
Thickness:	0,25 mm	0,40 mm
Tolerance:	$\pm 0,1$ mm	$\pm 0,1$ mm
Density:	840	840
Tape Color:	Gray	Gray
Liner:	Red PE film (paper liner is optional)	

Tape Characteristics

Tape type:	8302	8304
Peel Adhesion (ASTM D 3330):	280 N/100mm	290 N/100mm
Normal Tensile (ASTM 897):	760 kPa	750 kPa
Dynamic Shear:	580 kPa 20min.	530 kPa 20min.
Overlap (ASTM 1002):	710 kPa 24h.	670 kPa 24h.
Static Shear (ASTM 3654):	720 kPa	690 kPa
Solvent Resistance:	Excellent	Excellent
UV Resistance:	Excellent	Excellent
Temperature Resistance		
Long term:	150 °C	120 °C
Short term:	250 °C	190 °C

Available Sizes

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

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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.