

# AFTC High Performance Tapes

Industrial 5305, 5310, 5315, 5320, 5321

PRODUCT INFORMATION 08.2010

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## Application

### ***SilverTape® Industrial 5305, 5310, 5315, 5320, 5321***

Are double sided high performance acrylic based adhesive tapes, which are especially designed for the bonding of high and medium energy surfaces as well as glass and various transparent plastics where a highly transparent bond is required and no stress corrosion may occur. 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.

### ***SilverTape® Industrial 5305, 5310, 5315, 5320, 5321***

These AFT tapes have a very high transparency and are very well suited for the bonding of high and medium energy surfaces as well as glass and various transparent plastics where a highly transparent bond is required and no stress corrosion may occur. Due to their conformability they are capable of bonding a variety of different thin and structured materials full surface and tension free. The tapes are capable of absorbing the differing thermal expansions of the two different materials. Important is to avoid stress and tension on the bond during application. This 53-series maintain high impact resistance even at temperatures below 0 °Celsius. More advantages: vibration dampening, very good sealing properties, very good resistance to weathering, aging, yellowing (UV influence), chemicals, plasticizers, resulting in excellent long term stability. Applications are attaching light box/neon advertisements and signs, strip lighting assemblies etc.

## General Information

### ***SilverTape® Industrial 5305, 5310, 5315, 5320, 5321***

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:	<b>5305</b>	<b>5310</b>	<b>5315</b>	<b>5320</b>	<b>5321</b>
Adhesive:	High Performance Acrylic				
Adhesive carrier:	Conformable Closed Cell Acrylic Foam				
Description:	Transparent				
Coating:	Clear (liner side)		Clear (open side)		
Thickness:	0,50 mm	1,00 mm	1,50 mm	2,00 mm	3,00 mm
Tolerance:	$\pm 0,1$ mm	$\pm 0,1$ mm	$\pm 0,1$ mm	$\pm 0,1$ mm	$\pm 0,1$ mm
Density:	900	900	900	900	900
Tape Color:	Transparent	Transparent	Transparent	Transparent	Transparent
Liner:	Red PE film (paper liner is optional)				

## Tape Characteristics

Tape type:	<b>5305</b>	<b>5310</b>	<b>5315</b>	<b>5320</b>	<b>5321</b>
Peel Adhesion (ASTM D 3330):	300 N/100mm	330 N/100mm	350 N/100mm	370 N/100mm	400 N/100mm
Normal Tensile (ASTM 897):	680 kPa	590 kPa	540 kPa	490 kPa	410 kPa
Dynamic Shear:	610 kPa 20min.	520 kPa 20min.	480 kPa 20min.	430 kPa 20min.	350 kPa 20min.
Overlap (ASTM 1002):					
Static Shear (ASTM 3654):	540 kPa	440 kPa	390 kPa	340 kPa	300 kPa
Solvent Resistance:				Excellent	
UV Resistance:				Excellent	
Temperature Resistance:					
Long term:				100 °C	
Short term:				160 °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.