



Acrylic Foam Tapes

High Performance Double Sided Tapes

for Automotive, Shipbuilding-, Electrical-, Glas-, Solar-, Aerospace-, Display-, Furniture- and White Goods industry, as well as machine construction, Structural-facings sector and lots of other industries.



Product	Sample	Colour	Thickness (mm)	Foam Density (kg/m ³)	Liner Type	Dynamic Shear (N/25mm)	180° Peel Adhesion (N/25mm)	Tensile (N/25mm)	Temperature Resistance	Perm. Temperature	Description
74040-08		White (08)	0,4	850	Film	196,00	34,30	269,50	- 40°C up to +160°C	+100 °C	High bond strength for a wide range of applications. Different thicknesses give a choice of tape, allowing flexibility. Bonds well to a wide range of metals, plastics ceramics and composites.
74064-08		White (08)	0,64	850	Film	176,40	40,18	257,25	- 40°C up to +160°C	+100 °C	
74110-08		White (08)	1,1	850	Film / Paper	139,65	44,10	242,55	- 40°C up to +160°C	+100 °C	
74200-08		White (08)	2,0	850	Film	117,60	34,30	160,48	- 40°C up to +160°C	+100 °C	
74025-00		Clear (00)	0,25	1000	Film	355,25	15,68	247,45	- 40°C up to +250°C	+150 °C	This tape gives high shear and peel performance and very high temperature resistance
74050-00		Clear (00)	0,5	1000	Film / Paper	120,05	20,58	172,24	- 40°C up to +150°C	+90 °C	For bonding glass, clear plastics and applications requiring an invisible bondline. These foams are soft, tacky and conformable. Acts as a very good seal and bonding tape. Applications in solar energy industry, glass partitions, windows, doors and safety glass manufacture.
74100-00		Clear (00)	1,0	1000	Film / Paper	120,05	26,46	172,24	- 40°C up to +150°C	+90 °C	
74150-00		Clear (00)	1,5	1000	Film	98,00	32,24	147,00	- 40°C up to +150°C	+90 °C	
74200-00		Clear (00)	2,0	1000	Film	98,00	32,34	171,50	- 40°C up to +150°C	+90 °C	
74040-55		Grey (55)	0,4	850	Film	196,00	34,30	269,50	- 40°C up to +160°C	+100 °C	This range is ideal for bonding engineering plastics, sheet plastics and a wide range of metals particularly stainless steel and aluminium. Very good for powder coated painted surfaces and automotive paints.
74064-55		Grey (55)	0,64	850	Film	176,40	32,83	186,20	- 40°C up to +160°C	+100 °C	
74080-55		Grey (55)	0,8	850	Film	159,25	36,26	171,50	- 40°C up to +160°C	+100 °C	
74110-55		Grey (55)	1,1	850	Film	154,35	38,22	147,00	- 40°C up to +160°C	+100 °C	
74150-55		Grey (55)	1,5	850	Film	151,90	38,22	122,50	- 40°C up to +150°C	+100 °C	
75064-08		White (08)	0,64	850	Film	173,95	35,28	276,85	- 40°C up to +150°C	+90 °C	This range is formulated for bonding low surface energy plastics, giving excellent bond strength on Polypropylene and Polystyrene. Also suitable for many other substrates.
75110-08		White (08)	1,1	850	Film / Paper	164,15	36,26	176,40	- 40°C up to +150°C	+90 °C	

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76040-55		Grey (55)	0,40	780	Film / Paper	171,50	32,34	183,75	- 40°C up to +160°C	+100 °C	This series has been developed for the automotive industry and has excellent adhesion to automotive plastics and painted steel. Other applications in the sign industry, construction industry and automotive aftercare market.
76064-55		Grey (55)	0,64	780	Film	166,60	34,30	171,50	- 40°C up to +160°C	+100 °C	
76080-55		Grey (55)	0,8	780	Film / Paper	159,25	36,26	159,25	- 40°C up to +160°C	+100 °C	
76110-55		Grey (55)	1,1	780	Film / Paper	147,00	38,22	147,00	- 40°C up to +160°C	+100 °C	
76150-55		Grey (55)	1,5	780	Film	134,75	38,22	134,75	- 40°C up to +160°C	+100 °C	
76200-55		Grey (55)	2,0	780	Film	129,85	38,22	122,50	- 40°C up to +160°C	+100 °C	
76025-04		Black (04)	0,25	780	Film	183,75	30,38	191,10	- 40°C up to +160°C	+100 °C	
73040-55		Grey (55)	0,4	780	Film	200,90	61,74	249,90	- 40°C up to +160°C	+100 °C	Low application temperature and LSE. This tape provides a good combination of adhesion to low surface energy surfaces, conformability and initial tack. Specifically formulated for application in low temperatures approaching freezing.
73120-55		Grey (55)	1,2	780	Film	176,40	64,68	208,25	- 40°C up to +160°C	+100 °C	
73200-55		Grey (55)	2,0	780	Film	110,25	38,22	122,50	- 40°C up to +160°C	+80 °C	
77025-08		White (08)	0,25	1500	Film / Paper	196,00	11,76	220,50	- 40°C up to +160°C	+100 °C	Thermally conductive. Combines the excellent bonding properties of acrylic foam tape with the ability to conduct heat away from heat sources. Contains ceramic particles which act as the conduction medium. A typical use includes bonding heat sinks in many electronics applications.
77064-08		White (08)	0,64	1500	Film	193,55	20,58	205,80	- 40°C up to +160°C	+100 °C	
77120-08		White (08)	1,2	1500	Film	147,00	15,68	205,80	- 40°C up to +160°C	+100 °C	
76064 FR-08		White (08)	0,64	1500	Film	193,55	20,58	205,80	- 40°C up to +160°C	+100 °C	Flame retardant. These products have been tested to and passed aerospace (FAR / JAR) flammability, smoke emission and toxic gas emission requirements. Typical applications include bonding parts in aircraft, ships and trains. Also approved to UL97 VLO.
76110 FR-08		White (08)	1,1	1500	Film	181,30	18,62	205,80	- 40°C up to +160°C	+100 °C	

Test Methods

Dynamic Shear = ASTM D 1002
Temperature Resistance = days / weeks

180° Peel Adhesion = ASTM D 3300
Temperature Resistance short term = minutes / hours

Tensile Adhesion = ASTM D 897

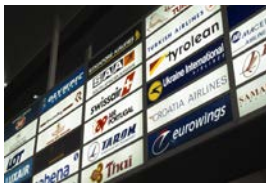
Transportation: Automotive, Bus & Truck Manufacture



- 1 Fixing roof and side panels to the framework
- 1 Fixing bodyside mouldings
- 1 Badge and emblem mounting, fixing trims (external), spoiler etc., fixing interior trims, mirror mounting, rain sensor bonding, fixing light units components
- 1 Fixing skylights, tread plates, air inlet grills, fixing floor trims
- 1 Bonding reinforcing profiles in refrigerated trucks
- 1 Fixing roof panels and framework in trucks and buses



Sign Industry



- 1 Used in traffic signs – fixing panels stiffeners
- 1 Bonding large panel signs to stiffeners
- 1 Bonding translucent polycarbonate for illuminated signs
- 1 Fixing individual letter signs
- 1 Fixing light units in emergency illuminated signs

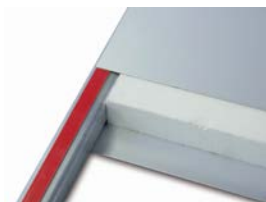
Solar Industry



- 1 Bonding of Junction Box (vapour - proof)
- 1 Bonding of panels while installation
- 1 Mainly are die-cuts used, which can be fully integrated in the production process.



Glass & Windows



- 1 Bonding sheets of glass for lamination to produce safety glass
- 1 Mirror fixing
- 1 Bonding muntin bars externally to windows
- 1 Fixing weather strip around windows bond extrusions to window frames
- 1 Fixing double glazed units in door panels fixing polycarbonate to glass
- 1 Shower cabinet assembly

Electronics Industry



- 1 Bonding electronic components, e.g. battery packs
- 1 Fixing integrated circuit boards
- 1 Fixing ribbon cable securely
- 1 Fixing components in mobile phones and telecommunication equipment
- 1 Bonding LCD windows
- 1 Bonding components in domestic electrical goods, - freezers / fridges, stereos televisions, microwave ovens, washing machines, etc.

Construction, Metal & Plastics Fabrication



- 1 Bonding architectural cladding panels
- 1 Fixing skylight domes seals etc.
- 1 Fixing architectural hardware, push and pull plates – kick plates and wall protection profiles
- 1 Mounting panels in interior partition systems
- 1 Die-cuts are used for all types of moulded plastic components used in a wired range of applications for machine parts, electronic goods, computers etc.
- 1 Used for bonding many types of plastic sheeting to metal, wood or other plastics
- 1 Used in air conditioning, heating and ventilation systems to bond ducting sheeting
- 1 Used widely with automotive plastic for interior trim on dashboards
- 1 Sealing and bonding of industrial machinery casing and cabinets
- 1 Fixing multi-chamber plastic sheeting for roofs of conservatories / winter gardens

How much pressure should be applied when applying acrylic foam tape ?

The aim of applying pressure is to achieve 100% wet-out of the adhesive. To achieve good wet out and ultimately a good bond, it is essential to ensure that this is firm and even. As a rule, a minimum of 15 PSI (100 kpa) should be used for rigid materials. More flexible components may need less pressure. The size, shape of the components being bonded and tape placement will also need to be considered in determining how much pressure should be applied.

Why does acrylic foam tape not feel very sticky to the touch ?

Whilst acrylic adhesives tend to be firm and dry to the touch, this is not an indication of their final bonding properties. An acrylic foam tapes adhesion builds over a 72 hour period to form an unsurpassable bond. Adhesives such as rubbers and hot melts, whilst feeling very tacky, do not have the same physical properties from a temperature, plasticizer or solvent resistance point of view. Certain acrylic adhesives are modified by adding tackifiers to increase initial adhesion, but this is generally at the expense of a lessening of performance in the factors mentioned above.

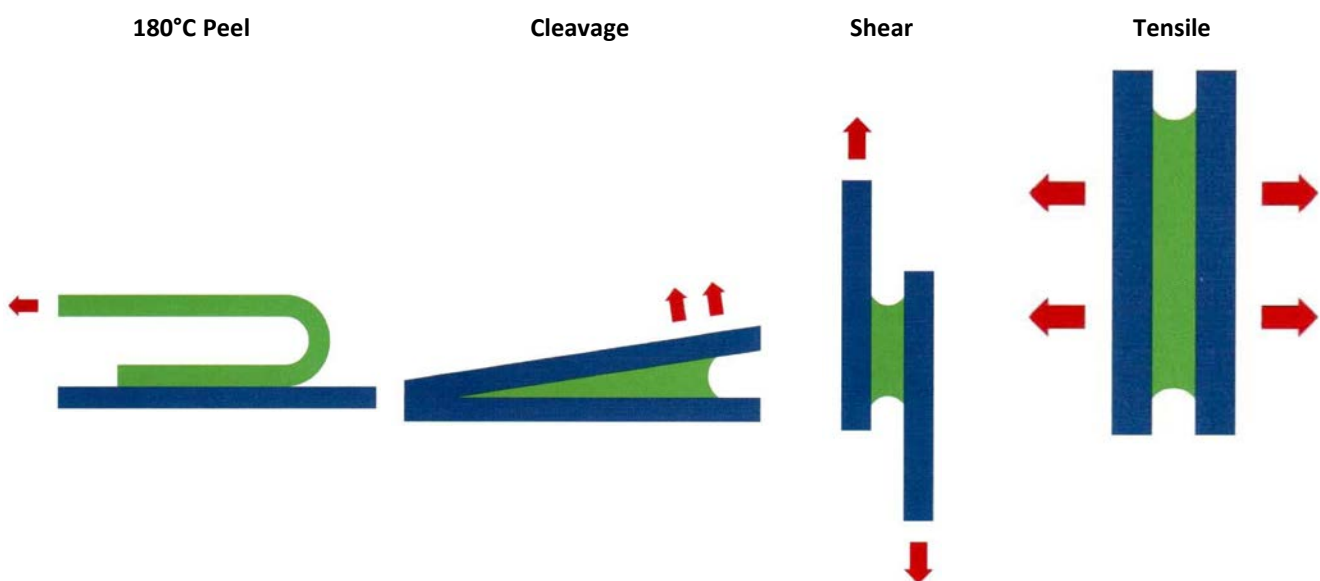
What is the purpose of having varying thicknesses of tape ?

The thickness of an acrylic foam tape allows it to compensate for mismatch between two surfaces. By choosing a tape that accommodates mismatch, the tape is allowed to achieve optimum coverage of the surfaces that it is bonding. The greater the surface coverage achieved, the more effective the bond will be. For rigid materials, a good rule of thumb is that the tape should be twice as thick as the material mismatch.

Acrylic foam tapes are designed to provide stress relaxation properties. Its acrylic foam core allows the tape to elongate and relax when stressed. This means the stress is distributed throughout the foam core and not concentrated in the adhesive bond line, which is often a cause of adhesive failure. Acrylic foam tape can stretch up to three times its thickness to accommodate thermal expansion.

What are the different types of forces that the tape can be subject to ?

The following are schematic diagrams of forces that bonds can be subjected to. Designs should maximise shear and tensile and minimise cleavage and peel.



Bonding to Difficult Substrates

The surface energy of any substrate that requires bonding will determine how easy or difficult it will be to bond to that surface. Surfaces with a high surface energy are easier to bond to and surfaces with low surface energy more difficult.

The surface energy of a substrate will ultimately determine the ability of acrylic foam tapes to “wet out” surfaces to allow for adhesion. Wet out refers to how well the acrylic foam tape flows and ultimately covers the surfaces that it is bonding. Maximum adhesion occurs when the acrylic foam tape thoroughly wets out the surfaces being bonded. The better the wet out, the greater the surface coverage, which turn will allow the attractive forces between the adhesive and substrate to develop to its fullest potential.

Low surface energy substrates often require special surface preparation to raise surface energy and make them easier to bond to. Surface preparation usually takes the form of cleaning with solvents, abrasion, priming, flame treatment, plasma, and acid or corona treatment. The effect of these treatments is that the surface of the substrate will be improved to allow adhesives to key to it.

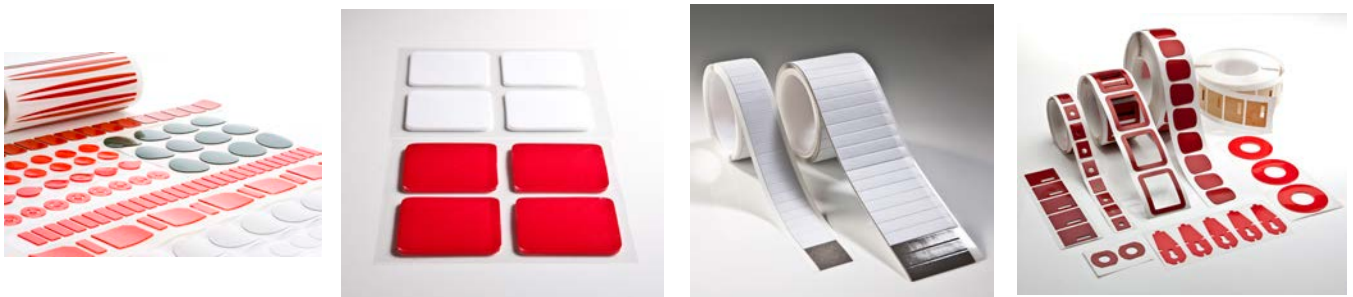
Relative Surface Energy Table

High Surface Energy		Medium Surface Energy		Low Surface Energy	
Aluminium	Stainless Steel	Kapton®	ABS	EVA	Polyethylene
Lead	Glass	Epoxy Paint	Acrylic	Polypropylene	Tedlar®
Zinc	Copper	Polyester	PVC	Silicone	Teflon®
Anodized Aluminium		Nylon	Polycarbonate		

Kapton®, Tedlar® and Teflon® are registered Trademarks of DuPont.

Die-Cuts made of AcrylicFoamTapes – What is the advantage ?

Die-Cuts made of AcrylicFoamTapes are good for consistent production processes as well for automatic or manually applications. We are able to deliver them on rolls or as a single die-cut. Especially in production processes which are mostly work automatically, e.g. Bonding of junction boxes in the solar industries, bonding of GPS antennas or modules or bonding of displays in production of mobile phones guarantee die-cuts process reliability. The easy handling and the fast possibilities in production are making die-cuts in lots of applications’ irreplaceable. We support you gladly.



Application Instructions

- 1 Ensure that the surfaces to be bonded are completely clean and free from dust and grease.
- 2 The surfaces to be bonded should be dry and free from any loose particles.
- 3 The best cleaning medium is a solvent such as Isopropyl alcohol applied with a clean cloth or tissue.
- 4 To attain the optimum bond sufficient pressure should be applied to the surface area to be bonded. To ensure good adhesive "wet out" typical pressure should be 15PSI+100KPA.
- 5 The adhesive is pressure sensitive and best results are achieved with maximum surface contact under pressure.
- 6 50 % of bond strength is attained after 20 minutes. 90 % of the optimum bond strength will be achieved after 24 hours. 100 % is achieved after 72 hours.
- 7 Avoid significant load bearing to the bond directly after application.
- 8 Recommended application temperature +20°C to +36°C.
- 9 Minimum application temperature should not be below +10°C, (unless using the 3 series tapes, which accommodate lower application temperatures).
- 10 Certain Surfaces will require priming or sealing such as porous surfaces – plaster and concrete, also absorbent surfaces such as untreated wood and fabrics.
- 11 Metals with Oxidised surfaces such as aluminium, copper and brass may need priming or abrading. Low energy surfaces such as Polypropylene plastics containing aggressive plasticisers may also need treatment.

Characteristics, Features and Benefits

- 1 Excellent load bearing capability.
- 2 Excellent high performance.
- 3 Stops metal fatigue and mechanical degradation caused by fixings such as screws, nuts and bolts.
- 4 Has vibration dampening and shock absorption properties. Acts as a complete water, dust and air seal. Thermal expansion and contraction is taken up by the visco-elastic nature of the tape, which is highly conformable.
- 5 Labour saving, reduces re-finishing work, touch up and clean-up time required with other forms of bonding/fixing.
- 6 When replacing spot welding, there is no distortion of the sheet metal or grinding of welding beads.

Slitting Tolerances

Length < 33m	± 0,4mm	(± 1/64")
Length > 33m	± 0,8mm	(± 1/32")

other tolerances on request

Dimensions

Material Thickness	Length / Roll
0,25 mm	66 m
up to 1,5 mm	33 m
of 1,5 mm up to 2,0 mm	25 m
of 2,0 mm up to 3,0 mm	16,5 m
of 3,0 mm	12 m

Widths

Slitted Rolls 4mm up to Logwidth

Logrolls 400mm Standard

Spools and other widths on request

Storage Conditions

The adhesive tape rolls should always be stored in their original cartons, upright and not in a horizontal position. Always protect the tape of incident solar radiation. For the best shelf life, storage temperature should be between 15°C and 25°C with a relative humidity of 50% (± 30%). To get their characteristics after storage below 15°C, the adhesive tapes should warm up within room temperature for a min. of 24 hours before they will be used.

Quality Management System



CERTIFICATE



This is to certify that



Volz Selbstklebetechnik GmbH
Fischerinsel 3
79227 Schallstadt
Germany

has implemented and maintains a Quality Management System.

Scope:
Development, converting, production and distribution of customer specific cuttings, self-adhesive and non-adhesive die-cutting parts from technical self-adhesive tapes, label materials, foam materials and electrical insulating materials in slitting, rewinding, die-cutting and laminating technology as well as the distribution and trade of technical self-adhesive tapes, electrical insulating materials, processing equipment, packing materials and adhesives, development and production of self-adhesive tapes

Through an audit, documented in a report, it was verified that the management system fulfills the requirements of the following standard:

ISO 9001 : 2015

Certificate registration no.	388757 GM15
Date of revision	2017-05-02
Valid from	2016-12-09
Valid until	2019-12-08
Date of certification	2017-05-02



DQS GmbH



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