Teroson

Solutions for Industrial Markets

Bonding | Elastic Bonding | Sealing | Soundproofing | Equipment

Henkel

The Henkel Group
Truly Integrated, Truly International

Henkel is a worldwide operating specialist in brands and technologies with affiliates in over 75 countries, providing technology competence from one single source. People in 125 countries around the world trust in brands and technologies from Henkel. Teroson Industrial Adhesives and Sealants are incorporated into this common platform.

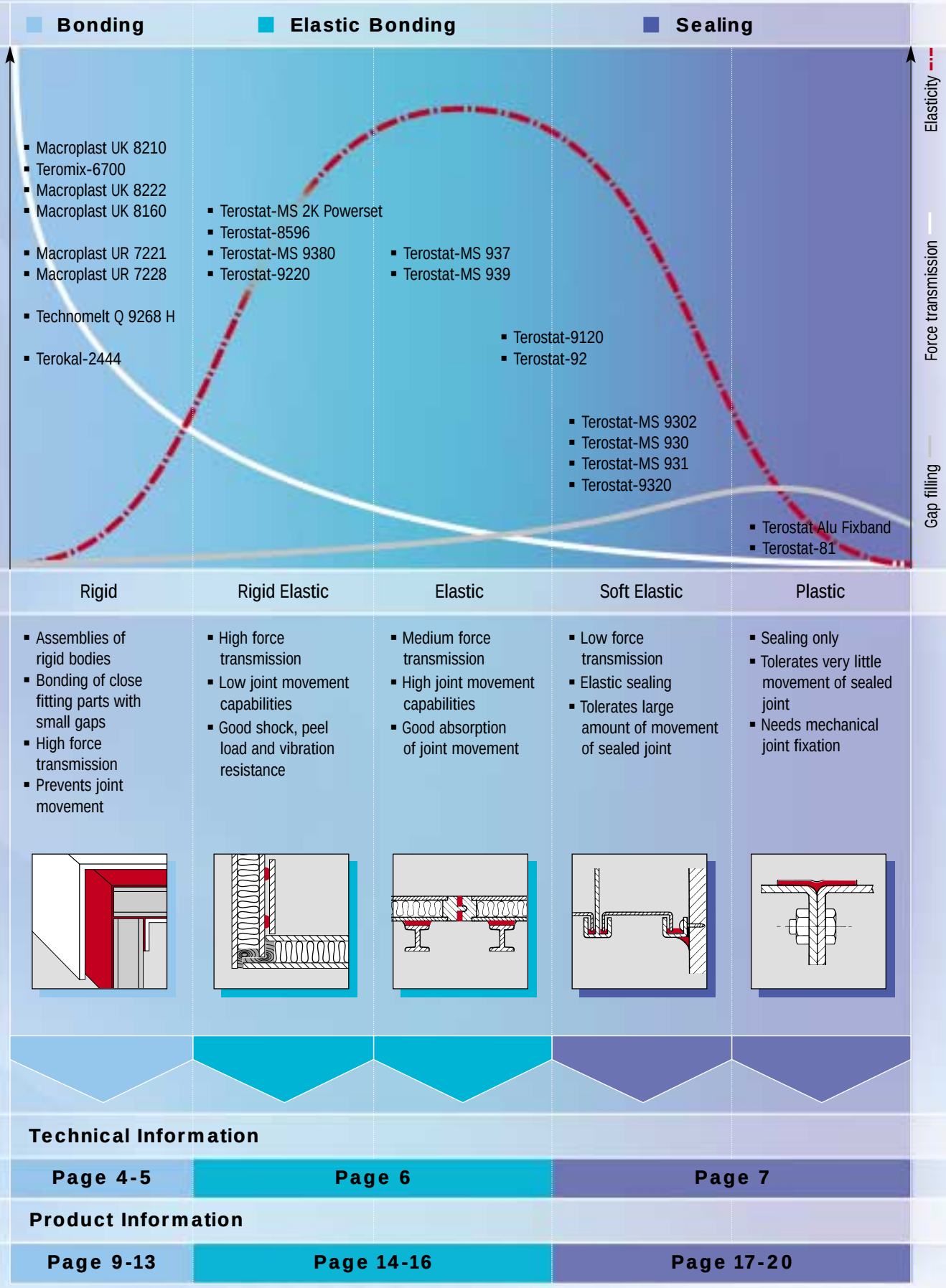
The Teroson line covers one of the most extensive range of chemical-based technologies for a wide variety of industry sectors. In addition, Henkel Teroson is a worldwide partner of its customers for the successful introduction of chemical based technological systems, using innovative research and development resources to solve – in many cases, anticipate – technically demanding problems and integrate the solutions into the production process.

The Teroson portfolio covers a complete range of products for mechanical and plant engineering and for making wall and sandwich elements. Here are just a few examples to illustrate where our products can be used:

- Panel bonding
- Container manufacture
- Insulation technology
- Domestic appliance industry
- Air conditioning and ventilation technology
- Electrical industry
- Wood and paint drying
- Equipment engineering
- Metal and sheet metal working
- Coating to seal large porous surfaces

Find in our catalogue a detailed overview of our Teroson Industrial Adhesives and Sealants, their performance, main characteristics and examples for usage.

Application Selection Overview



Technical Information

Page 4-5	Page 6	Page 7

Product Information

Page 9-13	Page 14-16	Page 17-20

Note: *For adhesive selection tables see pages 22 to 24*

General Technical Information

The Teroson industrial adhesive & sealant range marketed under the Henkel umbrella offers a wide choice of solutions to meet the different requirements and conditions that apply equally to industrial design and construction as well as to the crafts and trades.

Bonding

Adhesive bonding is a process in which two similar or dissimilar materials are solidly and permanently assembled using an adhesive. Adhesives build "bridges" between the surfaces of substrates to be joined.

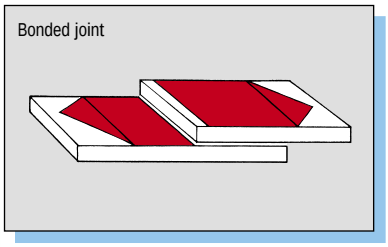
To achieve the optimal bonding result, the following prerequisites must be met:

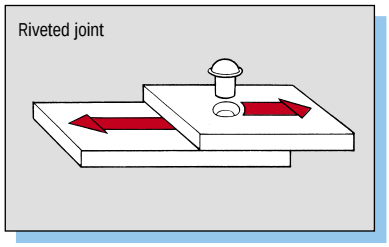
- Compatibility of the adhesive with the materials to be bonded.
- Compatibility of the adhesive with the specified requirements.
- Correct processing of the adhesive.

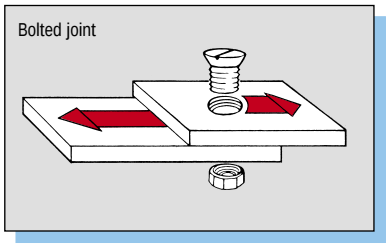
Benefits of adhesive bonding vs. conventional joining methods

More uniform stress distribution over the entire bonding surface:

This has a very positive effect on the static and dynamic strength achieved. Where welding and riveting result in localised stress peaks, adhesive bonding achieves uniform distribution and absorption of stress loads.







No change in surface and texture of the joined materials:

Welding temperatures may change the texture and therefore the mechanical properties of materials. In addition, welding, riveting and bolting all affect the visual appearance of the parts.

Weight saving:

Adhesives are particularly popular for light-weight constructions, where thin-walled parts (wall thickness < 0.5 mm) must be joined.

Sealed joints:

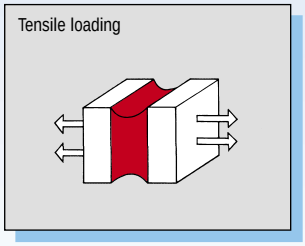
Adhesives also act as sealants, preventing loss of pressure or liquids, blocking the penetration of condensation water and protecting against corrosion.

Joining dissimilar materials and reducing the risk of corrosion:

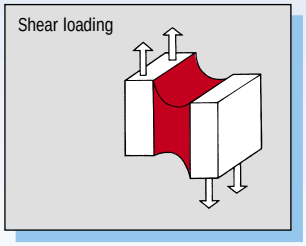
The adhesive forms an insulating film to prevent contact corrosion when different types of metals are joined.
It also acts as electrical and thermal insulator.

Special design features of bonded constructions:

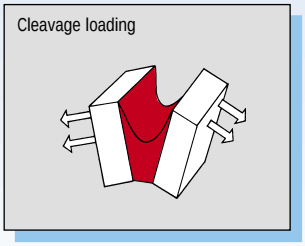
The behaviour of bonded joints under stress is different from that of welded or riveted joints. Specific requirements must be taken into consideration:



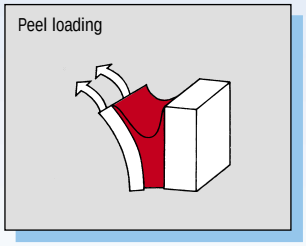
Favourable



Favourable



Unfavourable

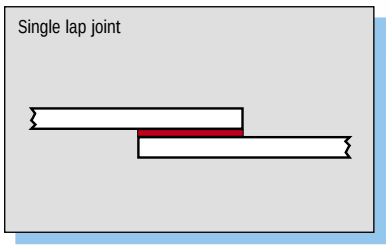


Unfavourable

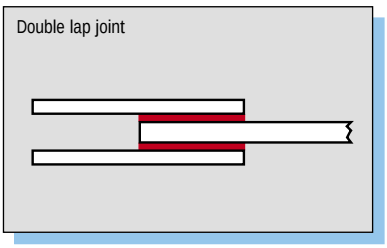
The following key points should be observed for the design of bonded joints:

- The surfaces to be joined should be as large as possible for maximum load transmission capability.
- Forces acting on the joint should be distributed across the entire bond line.

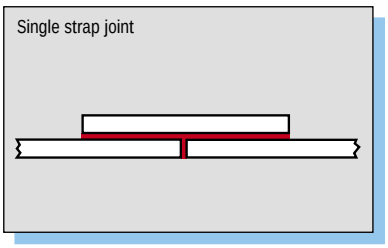
Joint designs suitable for adhesive bonding:



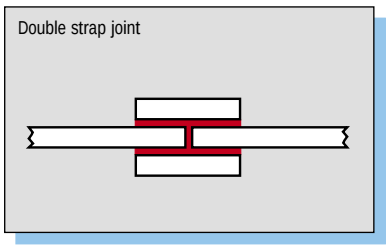
Preferred for thin sections. Simple design and good strength properties.



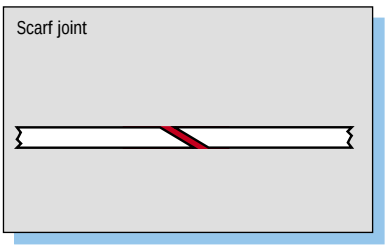
Achieves very good joint strength.



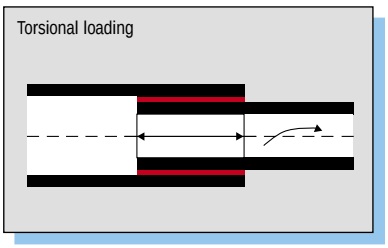
Frequently used to get smooth faces without extra preparatory work.



Provides better strength than a single strap, but is more complicated. Seldom used as none of the visible faces are plane.

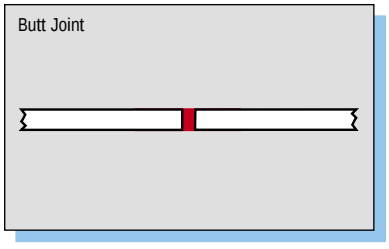


Offers excellent strength, but is very complicated to produce and only feasible with thicker substrates.

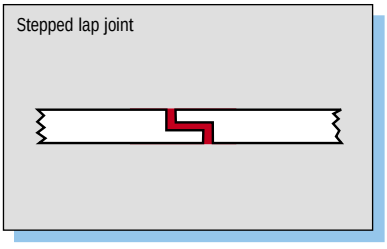


Thin-walled pipe lap or strap joints which are subjected to torsion can reach the same strength as the metals involved.

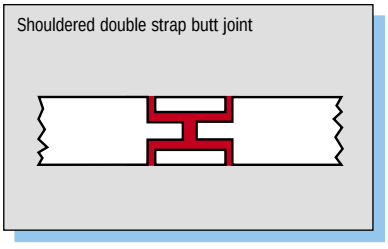
The following design types are unfavourable for adhesive bonding:



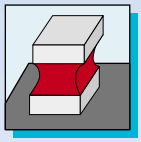
Unfavourable because of low strength.



Unfavourable because of costs.



Unfavourable because of costs.



Elastic Bonding

Elastic bonding/sealing is a highly efficient and reliable technique for joining parts; it is widely accepted in numerous sectors of industrial manufacture and assembly.

Elastic adhesives combine the advantages of bonding and sealing in one single operation:

- Prevent undesired materials entering or leaking from assemblies, even in wider joints or gaps.
- Create a friction-locked joint of mating parts by means of adhesion to the substrates and inherent strength or cohesion within the adhesive itself.

Elastic adhesives are selected mainly for their capability to elastically absorb and/or compensate dynamic stresses, besides the load transmission properties of the adhesive assembly. Besides their elastic properties, many elastic adhesives from Henkel Teroson exhibit a high inherent strength (cohesion) and a relatively high modulus, achieving friction-locked joints which, at the same time, have elastic properties.

Elastic bonding offers significant benefits for the users (see Fig. 1):

- Simplifies construction by increasing strength/rigidity to withstand dynamic loads.
- Prevents material fatigue and failure by achieving uniform transmission of the load (stress distribution) and by maintaining the structural integrity (no thermal or mechanical weakening of parts).
- Saves production costs by replacing conventional mechanical fasteners (screws, rivets or welding).
- Allows the most varied substrate combinations, eg. metal/plastics, metal/glass, metal/wood etc. and reduces and/or compensates stress caused by differential thermal expansion of joint substrates.
- Compensates the tolerances of the parts to be joined.

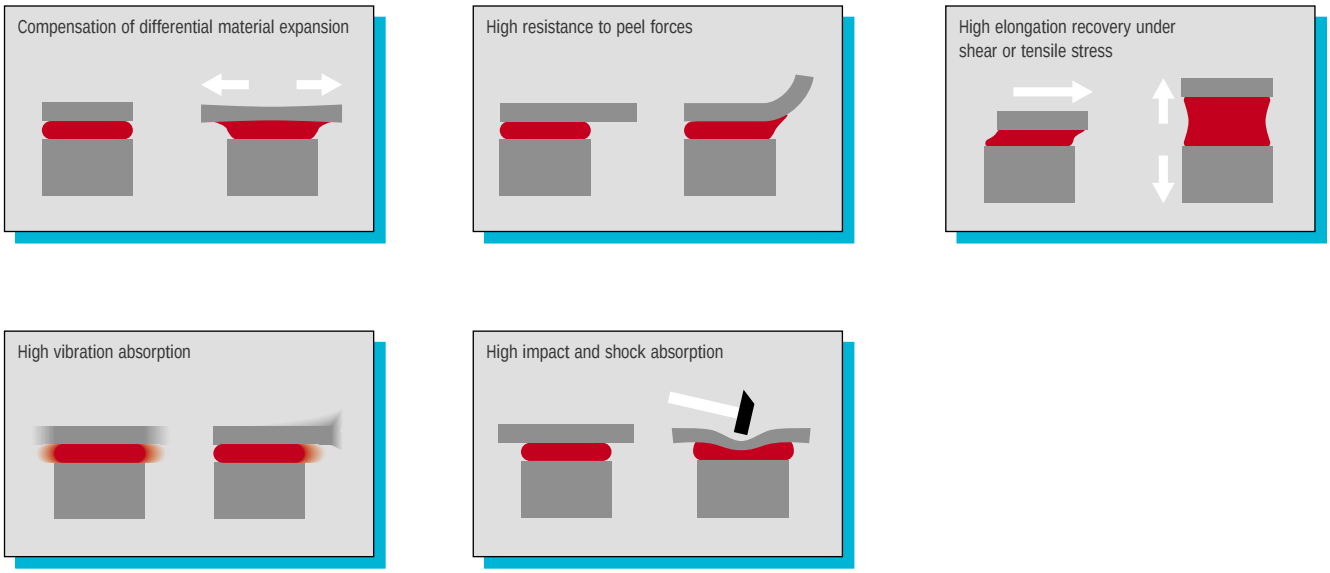
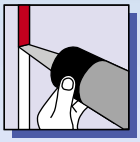


Figure 1: Advantages of elastic bonding and sealing



Sealing

The safety and reliability of equipment, machinery and mechanical structures often depend heavily on the way in which components are joined together, on a positive seal created between these parts and on the trouble-free, consistent performance of the sealants used.

Suitable sealants:

- Prevent possible damage (e.g. by protecting against unfavourable environmental influences, penetration or leakage of hazardous materials and gases, corrosion etc.).
- Allow simplified designs and provide an aesthetically pleasing appearance.

Sealants form a ”bridge“ between similar or dissimilar part surfaces (see Fig. 2). The strength of a bond depends upon the following factors:

- Adhesion of the sealant to the surface of the substrate.
- Cohesion, i.e. the strength within the sealant itself.

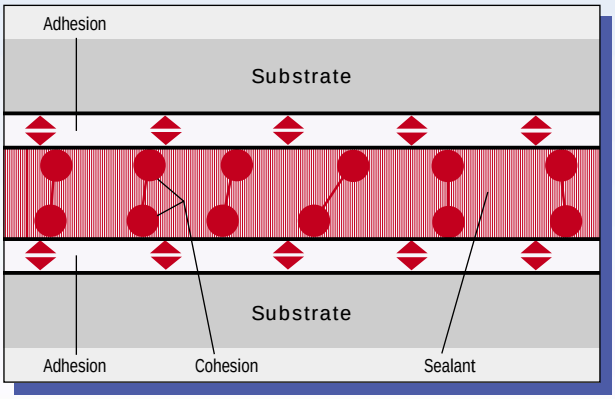


Figure 2: Functional mechanism of sealants

Characterisation of sealants:

The physical and chemical properties of sealants depend to a large extent on the selected raw material basis. Therefore a variety of different properties can be achieved simply by modifying the formulation of these materials.

Classification according to physical properties:

- Elastic sealants have a high admissible total deformation of >20 %. Once the chemical reaction is completed, they can be reversibly deformed with a high recovery of >70 %. (see Fig. 3)
- Plastic sealants display only slight or no recovery and low admissible total deformation (< 5 %). Once the physical or chemical reaction is completed, forces applied easily entail permanent deformation or tears. (see Fig. 3)
- Elasto-plastic and plasto-elastic sealants are mixed or transitional forms between elastic and plastic sealants.

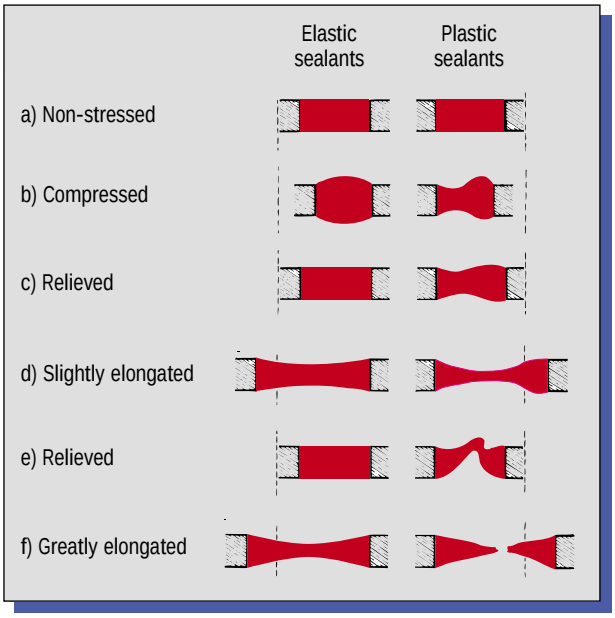
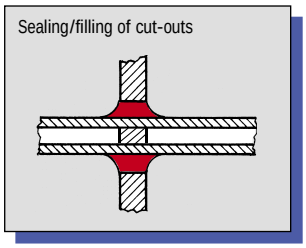


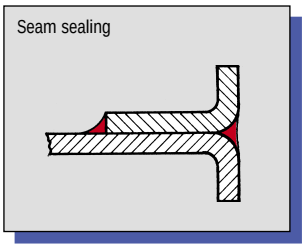
Figure 3: Behaviour of sealants under deformation

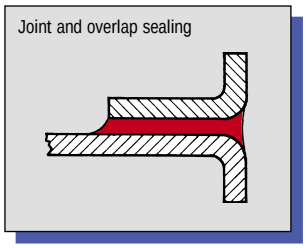
Potential application areas for sealants:

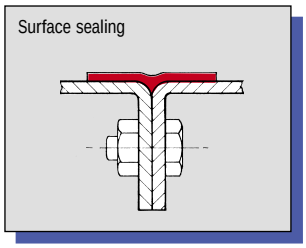
As a result of the progress achieved in sealing technology and on account of new, modern construction methods, the sealants available from Henkel Teroson lend themselves to a virtually unlimited spectrum of application possibilities.

Basically, applications can be broken down into a few categories:



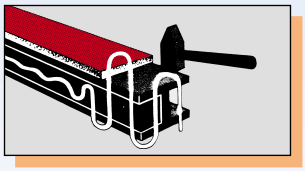






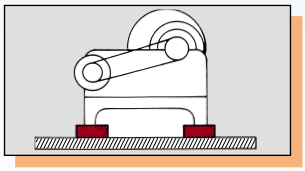
Soundproofing

There are two options for controlling noise: It can be insulated or absorbed. As both options can be applied to airborne and to structure-borne sound, there are in fact four different types of noise control:



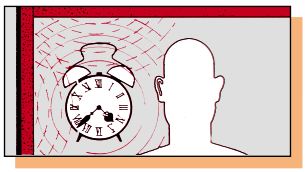
1. Absorption of structure-borne sound

Absorption of structure-borne sound is achieved by converting part of the sound energy into thermal energy while the sound travels through homogeneous materials attached or bonded to a solid body. In this way, the structure-borne sound is absorbed before it generates air-borne sound. The better the absorption properties of such damping materials, the better the structure-borne sound absorption. The "loss factor" is a parameter for measuring this effect.



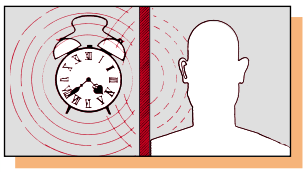
2. Insulation against structure-borne sound

Insulation against structure-borne sound is achieved by attenuating the propagation of sound by using a flexible material for sound insulation. The softer and more voluminous this material, the better the structure-borne sound insulation.



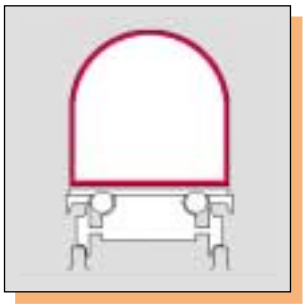
3. Absorption of air-borne sound

Absorption of air-borne sound is achieved by converting part of the air-borne sound energy into thermal energy as the sound penetrates into fibrous or foam materials. The thicker the fibrous or foam materials, the better the air-borne sound absorption.



4. Insulation against air-borne sound

Insulation against air-borne sound is achieved when part of the sound energy is reflected by a wall. The remaining sound energy is transmitted through the wall and re-radiated on the opposite side in the form of air-borne sound. The heavier and more flexible the partitioning wall, the better the air-borne sound insulation.



Sound measurement and evaluation:

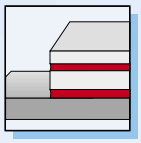
The pressure of air-borne sound waves is measured by means of a sound level meter with a microphone. Sound levels are measured in units of decibels (dB). As the subjective response to noise as perceived by the human ear is largely dependent on the frequency or the frequency spectrum of a sound, level meters are provided with weighting filters for equalisation. The A-weighted sound level, expressed as dBA, will be sufficiently accurate for most comparative noise measurements.

Loss factor "d":

The acoustic loss factor "d" is used as a measure of the noise absorption capability of a material. This factor indicates how much of the sound energy propagated in the form of flexural waves will be absorbed and converted into heat energy. The loss factor of a material depends on frequency and temperature. It does not, however, provide a meaningful indication of the actual reduction of noise level which can be achieved. It must therefore be measured on site. Striking a reasonable compromise between economic cost and benefit, a loss factor of approx. 0.1 has been found acceptable for a wide range of applications.

Air-borne sound absorption coefficient α:

The absorption capability of a material is expressed as air-borne sound absorption coefficient α. It describes the percentage of incident sound energy which is absorbed and converted into heat energy. The absorption coefficient α depends to a great extent on frequency. The lower (deeper) the frequency, the thicker the absorbent material to be used!



Bonding
Solvent Based

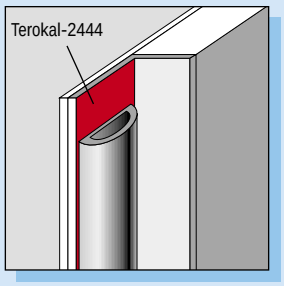
Solvent based adhesives (polychloroprene) are formulated with different raw material groups including natural and synthetic rubbers and suitable resin combinations (naphthas, ketones, esters or aromatics). Adhesive films will be formed upon evaporation of solvents. Assemblies may be made by contact bonding (adhesive application to both surfaces) or wet bonding (applied to one of the bond faces).

- Most of the contact adhesives are based on polychloroprene rubber. They display good initial strength and achieve high strengths on numerous substrates.

Products/Data	Terokal-2444
Density (at 20 °C)	0.9 g/cm³
Solids Content	30 %
Evaporation Time / Open Time	5 to 20 min.
Tensile Shear Strength (DIN EN 1465)	1.2 N/mm²
Peel Strength	22 N/cm
Temperature Resistance	-40 to 80 °C
Frost Sensitive	Conditionally
Shelf Life	12 months
Pack Sizes	340 g, 670 g Tin

➢ *Practical Hints*

Parts to be bonded with Terokal-2444 should be assembled when the adhesive, if gently touched with the fingertip, is touch-dry but not wet (so called finger test). Cleaner and Diluent R can be used for cleanup or dilution of Terokal-2444.



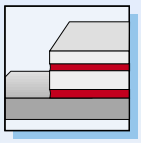
Bonding of rubber profiles to metal

Note:
The Teroson range includes other solvent based adhesives which are available on request.

- High initial tack.
- Polychloroprene based contact adhesive.
- Suitable for brush or spatula application.
- Good contact bonding capability.
- Bonds are flexible and resistant to water and heat (90 °C).

Area of application:

- For bonding rubber to rubber and rubber to metal. Specially suited for bonding solid and sponge rubber materials, soft foams, leather, felt to rubber and metals.
- Key application areas include bonding of rubber and insulating mats to concrete, masonry, wood and steel.
  Not suitable for bonding polystyrene foams and plasticised PVC.



Bonding
Hot Melt Adhesives

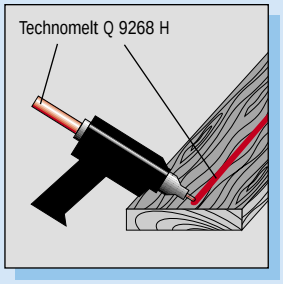
Hot melt adhesives are available in solid form as granulates, cubes or sticks. They are based on various raw material groups, such as ethylene-vinyl acetate copolymer (EVA), polyamide (PA), polyolefin copolymer (aPP). Reactive hot melt adhesives based on polyurethane (PUR hot melts) undergo an additional crosslinking reaction after cooling.

- Hot melts are used for rapid initial strength.
- Are applied by means of special equipment or hot melt guns.

Products/Data	Technomelt Q 9268 H
Density (at 20 °C)	1.0 g/cm³
Solids Content	100 %
Evaporation Time / Open Time	15 to 30 s
Tensile Shear Strength (DIN EN 1465)	N.A.
Peel Strength	N.A.
Temperature Resistance	-20 to 80 °C
Frost Sensitive	No
Shelf Life	24 months
Pack Sizes	11.3 x 200 mm Stick

➢ *Practical Hints*

Open time depends on amount of adhesive applied and on thermal conductivity of parts. Prolonged overheating or excessive remelting will cause degradation of adhesive. If necessary, discard a few drops of melted adhesive.



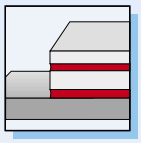
Application by means of a hot melt gun

Note:
The Teroson range includes other hot melt adhesives which are available on request.

- Elastic.
- Good impact strength.
- Good flexibility at low temperature.
- Available in stick form for application with suitable Teroson hot melt guns.

Area of application:

- Used for bonding a wide variety of materials such as wood, cardboard, leather, fabric, different plastics, aluminium or steel.
- Can be used for short production runs and for repairs in workshops or on site. Also used for holding parts in place during assembly work.



Bonding
Polyurethane Reactive Adhesives (PUR)

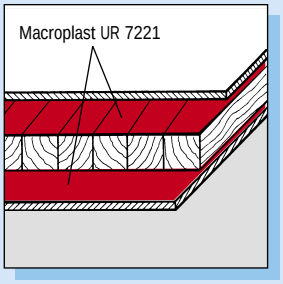
1-Component systems:

1-Component polyurethane adhesives (1K PUR) are based on isocyanate-containing prepolymers which are cured by exposure to moisture. As many substrates do not contain sufficient moisture, the adhesive film is sprayed with finely atomised water before the parts are assembled. As moisture reaction causes foaming of the adhesive, the adhesive has gap filling capability. To achieve high strength and avoid bubbling, assemblies are clamped and pressure is applied during curing. Heating may be used to reduce cure time.

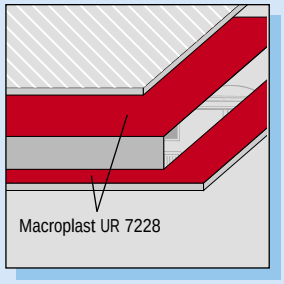
Products/Data	Macroplast UR 7221	Macroplast UR 7228
Density (at 20 °C)	1.1 g/cm³	1.1 g/cm³
Solids Content	100 %	100 %
Open Time	40 to 60 min.	7 to 9 min.
Tensile Shear Strength (DIN EN 1465)	6 N/mm²	6 N/mm²
Consumption (depending on surface)	150 – 400 g/m²	150 – 400 g/m²
Temperature Range	-40 to 80 °C	-40 to 80 °C
Frost Sensitive	Yes	Yes
Shelf Life	9 months	9 months
Pack Sizes	30 kg Can	30 kg Can

➢ *Practical Hints*

Whenever spray guns are used to accelerate application, it is recommended to provide work stations with air extraction systems. Operators should always wear masks for protection.



Laminating of rigid PVC foam or composite wooden core materials with aluminium sheets



Bonding of sandwich elements in caravan manufacture

Area of application 1K PUR adhesives:

- 1K PUR adhesives are used for the manufacture of sandwich elements, e.g. partitioning walls, caravan doors or side walls.
- Commonly used methods of application are spray coating, squeegee or roller.

Macroplast UR 7221 and 7228 are solvent-free, moisture curing 1-component adhesives based on polyurethane. They have different open times. Curing may be accelerated by using a hot press.

Area of application:

Macroplast UR adhesives are used for manufacturing sandwich elements made of porous materials which may contain moisture (e.g. wood). Various combinations of substrates can be bonded, such as metals, laminated boards, wood, plastics, polystyrene foam, polyurethane foam, high density PVC foam, etc. Major application areas include manual or industrial manufacture of sandwich elements such as partitioning walls (thermal insulation, noise protection), facade and roof elements, with mineral fibre plates or mats being bonded to primer-coated steel sheet or press boards. The products are also used for the manufacture of sandwich elements in the caravan industry as well as for laminating plaster boards with aluminium foil.

Bonding
Polyurethane Reactive Adhesives (PUR)

2-Component systems:

2-Component polyurethane adhesives (2K PUR) consist of a resin (part A) and a hardener (part B).

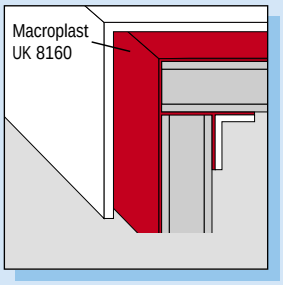
Important criteria for the users are:

- Specified A:B mix ratio.
- Pot life. It may range from minutes to several hours. Automatic mixing and dispensing equipment may be required.
- The viscosity range of our products vary from pourable to paste.

Products/Data	Macroplast UK 8160
Density (at 20 °C)	1.4 g/cm³
Solids Content	100 %
Pot Life	60 to 90 min.
Tensile Shear Strength (DIN EN 1465)	10 N/mm²
Consumption (depending on surface)	200 – 500 g/m²
Temperature Resistance	-190 to 100 °C
Frost Sensitive	Yes
Shelf Life	12 months
Pack Sizes	9 kg Combi (A = 7.5 kg; B = 1.5 kg)

➢ *Practical Hints*

To accelerate the cure speed of 2K PUR adhesives, add UK 6100 Accelerator to the resin. For mix ratio refer to the 6100 Technical Data Sheet. Generally, the faster the cure, the shorter the pot life.



Bonding of panels and sidewall assembly

Area of application 2K PUR adhesives:

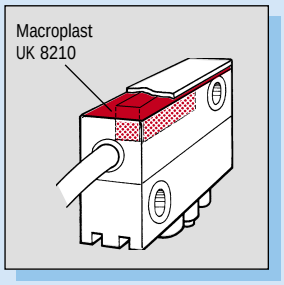
Used for bonding large surfaces of vehicle superstructures (sandwich construction), facade elements and in shipbuilding. Furthermore, bonding of structural assemblies, corner brackets, as well as potting of components. Applied either by means of a special 2K PUR dispensing system, or manually using a spatula, squeegee or roller.

- Hard-elastic.
- Free of solvents.
- Can be applied with a spatula.
- Medium strength.
- Resistant to low temperatures (-190 °C).
- Part B is Hardener Macroplast UK 5400.
- A:B mix ratio = 5:1.
- Parts A + B are provided in a combi pack.
- High viscosity paste.
- Can be over-painted.

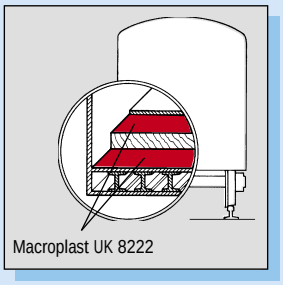
Area of application:

- Used for bonding of primer coated metals, wood, and plastics to rigid foams.
- Particularly for sandwich elements in vehicles and containers, in shipbuilding, in the construction industry and for industrial insulation.
- Particularly suitable for structural bonding applications.
- Tried and tested also for repairing (trowelling) damaged sandwich elements.

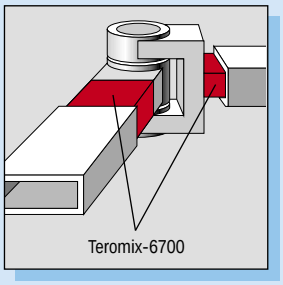
Macroplast UK 8210 Terokal-4310	Macroplast UK 8222 Terokal-722	Teromix-6700
1.35 g/cm³	1.50 g/cm³	1.55 g/cm³
100 %	100 %	> 98 %
45 min.	45 min.	10 min.
20 N/mm²	8.5 N/mm²	13 N/mm²
150 – 300 g/m²	200 – 500 g/m²	N.A.
-30 to 100 °C	-30 to 100 °C	-40 to 80 °C
No	No	No
12 months	12 months	12 months
3.5 kg Pail	5 kg Pail	50 g Dual Cartridge



Potting material for electronic components, bonding of housings made of ABS/rigid PVC



Bonding of rigid foams to metal and multiple-bond plywood



Metal/metal bond with high tensile and tensile shear strength

- Hard-elastic.
- Free of solvents.
- Can be used as potting material.
- High strength.
- A:B mix ratio = 3.5:1.
- Part B is Hardener Macroplast UK 5480 (Terokal-700).
- Can be over-painted.

Area of application:

- Main areas of application are bonding of PVC and polyurethane rigid foams, phenolic resin foam, mineral fibres and other insulation materials to painted and primer-coated metals, wood, and plaster board.
- The product is also used for bonding glass to itself and to aluminium, also for outdoor use, e.g. sandwich systems for facade elements, partitioning walls and as potting material in the electronic industry.

- Hard-elastic.
- Free of solvents.
- Good flow properties.
- Medium strength.
- A:B mix ratio = 5:1
- Cold and heat curable.
- Part B is Hardener Terokal-700.
- Can be over-painted.

Area of application:

Main areas of application are bonding of PVC and polyurethane rigid foams, phenolic resin foam, mineral fibres and other insulation materials to painted and primer-coated metals, wood, masonry, and plaster board. The product has also proved to be suitable for outdoor applications, e.g. sandwich systems for facade elements.

- Hard-elastic.
- Easy to apply: directly from twin cartridge with static mixer.
- High strength.
- Excellent resistance to chemicals.
- Can be over-painted.
- High viscosity paste.

Area of application:

Used in metalworking where high strength, high speed and hard elastic properties are required for bonding stiffening elements, e.g. in office furniture. Specially suitable for structural metal bonds, e.g. stainless steel/anodized aluminium, and in vehicle manufacturing for the efficient and rapid bonding of trim parts.

Elastic Bonding
Silane Modified Polymer Based

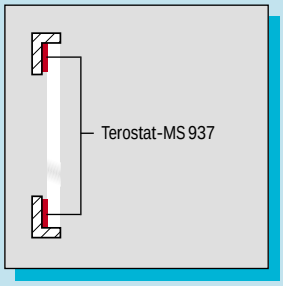
1- and 2-Component adhesive/sealants based on silane modified polymer:

- All MS sealants in this range are free of isocyanate and silicone.
- Exhibit good weathering and ageing resistance as well as good adhesion without the use of primers.
- Uncured MS sealants can be over-painted with water and solvent-based paints.
- Are resistant to weathering and UV radiation, no need to over-paint for outdoor use.
- Bond lines should be adequately controlled, e.g. by using elastic spacers or by pressure fitting parts with a clearance.

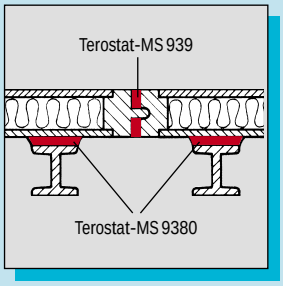
Products/Data	Terostat-MS 937	Terostat-MS 939
Density	1.5 g/cm³	1.5 g/cm³
Volume Change (DIN 52 451)	< 2 %	< 2 %
Solids Content	100 %	100 %
Skin Formation Time (DIN 50 014)	10 to 20 min.	10 min.
Cure Rate (DIN 50 014)	5 mm/24 hrs	3 mm/24 hrs
Hardness Shore A (DIN 53 505)	50	55
Tensile Strength (DIN 53 504)	3.0 MPa	3.0 MPa
Tensile Shear Strength (DIN EN 53283)	3.0 MPa	2.5 MPa
Elongation to Break (DIN 53 504)	220 %	250 %
UV Resistant	Good	Good
Temperature Range	- 40 to 100 °C	- 40 to 100 °C
Shelf Life	12 months	12 months
Pack Sizes	310 ml Cartridge, 570 ml Sausage	310 ml Cartridge, 570 ml Sausage

➢ *Practical Hints*

Use Terostat-MS 2K Power Set for applications that require curing independent of ambient moisture. Cure starts immediately after mixing of the two components. This product needs only about one hour to reach adhesive strength througout the bondline.



Bonding of basement windows into metal frames



Bonding/sealing of side panels to/on load-bearing structures

- Strong-elastic adhesive, allows dynamic stresses to be compensated and conventional fasteners (screws, rivets, etc.) to be partially or completely replaced.
- Can also be used as a filler.
- Rapid curing.
- Medium modulus.

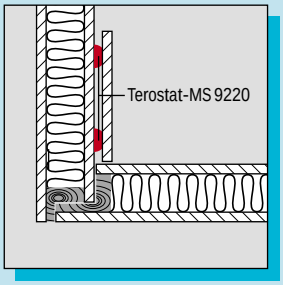
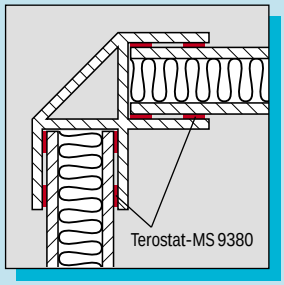
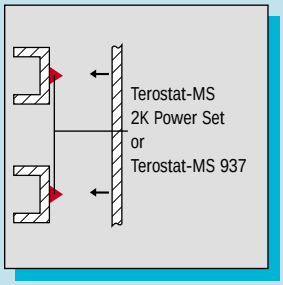
Area of application:

Bonding of parts in railway carriage and container manufacture, equipment engineering, metal and sheet metal working, plastics technology, air conditioning and ventilation, clean-room technology as well as elastic sealing of joints and seams.

- Strong-elastic adhesive, allows dynamic stresses to be compensated and conventional fasteners (screws, rivets etc.) to be partially or completely replaced.
- High position tack immediately after joining of the parts.
- Can also be used as a filler.
- Medium modulus.

Area of application:

Bonding of parts in railway carriage and container manufacture, equipment engineering, metal and sheet metal working, plastics technology, air conditioning and ventilation, clean-room technology as well as elastic sealing of joints and seams.

Terostat-9220	Terostat-MS 9380	Terostat-MS 2K Power Set
1.4 g/cm³	1.5 g/cm³	1.5 g/cm³ after mix
< 2 %	< 2 %	< 2 %
100 %	100 %	100 %
10 to 20 min.	5 to 10 min.	Pot life: 20 min.
3 to 4 mm/24 hrs	3 mm/24 hrs	Full depth cure in 24 hrs
> 50	> 65	> 55
3.3 MPa	4.0 MPa	> 3.0 MPa
2.0 MPa	> 2.0 MPa	> 2.0 MPa
300 %	150 %	120 %
Good	Good	Good
-40 to 100 °C	-40 to 100 °C	-40 to 100 °C
12 months	12 months	9 months
310 ml Cartridge	310 ml Cartridge	330 ml Dual Cartridge
 Bonding of anti-ram rails in container manufacture and in vehicle superstructures	 Bonding/sealing of side panels on load-bearing structures	 Bonding of side panels, roofing or floor elements to load-bearing structures

- Strong-elastic adhesive, allows dynamic stresses to be compensated and conventional fasteners (screws, rivets etc.) to be partially or completely replaced.
- High modulus.

Area of application:

Elastic bonding to metal or painted substrates, as a bonding sealant in railway carriage and container manufacture, equipment engineering, metal and sheet metal working, plastics technology, air conditioning and ventilation as well as clean-room technology.

- Strong-elastic adhesive, allows dynamic stresses to be compensated and conventional fasteners (screws, rivets etc.) to be partially or completely replaced.
- High modulus.

Area of application:

Elastic bonding to metallic or painted substrates, as adhesive sealant in railway carriage and container manufacture, equipment engineering, metal and sheet metal working, plastics technology, air conditioning and ventilation as well as clean-room technology.

- High viscosity, sag-resistant 2-component adhesive.
- Cures to form an elastic material which is free of solvents, isocyanates and silicones.
- High modulus.

Area of application:

Used for elastic bonding of metal or painted substrates as well as for all types of adhesive sealing whenever the cure time of conventional single component adhesives is too long.

Elastic Bonding
Polyurethane Based

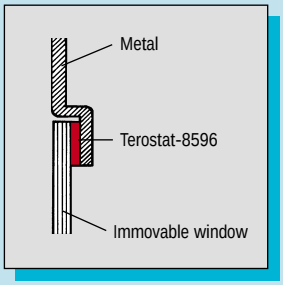
1-Component polyurethane-based adhesive/sealant:

- Cures into a strong elastic flexible bonding material by absorbing moisture from the air.
- Bond lines should be adequately controlled, e.g. by using elastic spacers or by pressure fitting parts with a clearance.
- High cure rate.
- Low volume change: less than 1 %.
- PUR based products are generally compatible with paints.

Products/Data	Terostat-8596
Density	1.2 g/cm³
Volume Change (DIN 52 451)	< 1 %
Solids Content	100 %
Skin Formation Time (DIN 50 014)	max. 25 min.
Cure Rate (DIN 50 014)	5 mm/24 hrs
Hardness Shore A (DIN 53 505)	55
Tensile Strength (DIN 53 504)	8.5 MPa
Tensile Shear Strength (DIN EN 53283)	5 to 6 MPa
Elongation to Break (DIN 53 504)	300 %
UV Resistant	Limited
Temperature Range	- 40 to 90 °C
Shelf Life	18 months
Pack Sizes	310 ml Cartridge

➢ *Practical Hints*

Sealing the bondline of Terostat-8596 with an MS Polymer can overcome the limited UV resistance of Terostat-8596. In this case, allow Terostat-8596 sufficient time to cure.



Bonding in place of immovable windows using Terostat-8596

- High strength.
- Rapid curing.
- Good ageing resistance.
- High initial strength and short setting times, therefore high reliability and rapid further processing.
- Free of solvents.

Area of application:

- Bonding fixed panes and window systems in railway carriage manufacture and repair work on ships, yachts and boats.
- Bonding fixed panes on cars, trucks, buses, caravans and agricultural machines.

Sealing
Butyl Rubber Based

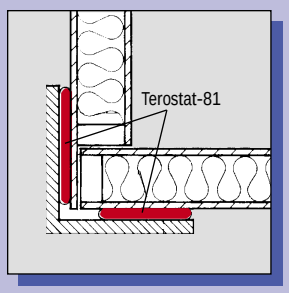
Laminated butyl rubber based sealing tapes:

- Multi-purpose sealing and bonding tapes based on butyl rubber.
- Very good adhesion to most substrates witch are try and free of dust.

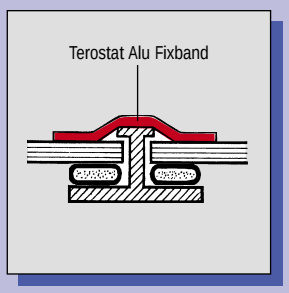
Products/Data	Terostat-81	Terostat Alu Fixband
Density	1.3 g/cm³	1.2 g/cm³
Solids Content	100 %	100 %
Adhesive Strength	Very strong	High
UV Resistance	None	Good
Processing Temperature	5 to 40 °C	5 to 40 °C
Temperature Range	-40 to 80 °C	-40 to 80 °C
Water Vapour Diffusion (DIN 53 122)	N.A.	μ = 645,000
Shelf Life	24 months	24 months
Pack Sizes	10 x 2 mm; 50 m Roll*	100 x 1.2 mm; 25 m Roll*

➢ *Practical Hints*

Be sure to align the sealing tape carefully:
It adheres so well that it is almost impossible to remove once it is applied and would be seriously damaged or destroyed if you try to pull it off.



Sealing of segments of longitudinal beams



Sealing of glass roofs

*Various roll sizes – see index on page 27

High-quality butyl rubber based sealing tape:

- High tack, self-welding.
- Very good water and ageing resistance.
- No corrosive constituents.

Area of application:

Use in equipment engineering, container making, electronics, metal working for vibration-resistant sealing/lining. On machinery and equipment for sealing sheet metal facing plates; for sealing and bonding sheet metal and plastic lap joints, seams and profiled sections; as a barrier to prevent corrosion between different types of metals.

- Elasto-plastic sealant with high adhesive strength, one side laminated with an aluminium composite foil.
- Surface resistant to tearing, weathering and UV radiation.
- Very high resistance to gas and water vapour diffusion.
- One side laminated with a non-woven aluminium composite foil or a plastic film/sheet.

Area of application:

- Multi-purpose sealing tape for sealing sheet metal seams and overlaps for indoor and outdoor applications, in conservatories, container manufacture and repair, facade construction, metal and sheet metal working as well as air conditioning and ventilation.
- Sealing of joints, seams, butt joints or edges which require gas and water vapour tight seals.

Sealing
Silane Modified Polymer Based

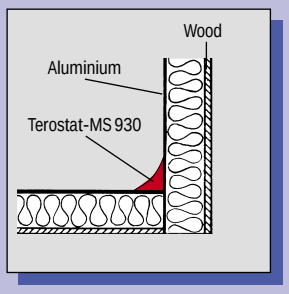
1-Component sealants based on silane modified polymer:

- Free of isocyanate and silicone.
- MS sealants exhibit good weathering and ageing resistance as well as good adhesion without the use of primers. Therefore MS sealants often provide solutions in areas where other systems don't.
- Over-paintable, even wet on wet.
- Uncured, MS sealants can be over-painted with water and solvent based paints.
- Depending on ambient conditions, curing rate may reach 5 mm/day.
- Resistant to weathering and UV radiation, no need to over-paint for outdoor use.

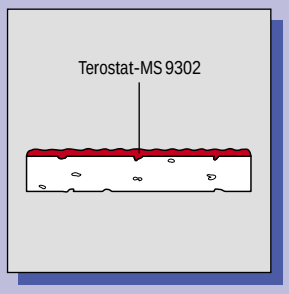
Products/Data	Terostat-MS 930	Terostat-MS 9302
Density	1.5 g/cm³	1.5 g/cm³
Solids Content	100 %	100 %
Skin Formation Time (DIN 50 014)	25 to 40 min.	10 min.
Cure Rate (DIN 50 014)	4 mm/24 hrs	4 mm/24 hrs
Hardness Shore A (DIN 53 505)	27	30
Tensile Strength (DIN 53 504)	1.0 MPa	1.0 MPa
Volume Change (DIN 52 451)	< 2 %	< 2 %
Elongation to Break (DIN 53 504)	300 %	250 %
UV Resistant	Very good	Very good
Paintable	Yes	Yes
Temperature Range	-50 to 80 °C	-50 to 100 °C
Shelf Life	12 months	12 months
Pack Sizes	310 ml Cartridge, 310 ml + 570 ml Sausage	310 ml Cartridge

➢ *Practical Hints*

To accelerate skin formation and cure in unfavourable conditions (low relative humidity), application of a fine fog spray of water on the sealed parts has been found successful.



Sealing of sandwich elements in cold stores



Coating to seal large porous surfaces

- Rapid skin formation.
- No H&S labelling required.
- Can be applied with a spatula or even sprayed using suitable equipment.
- Vibration absorbing properties.
- Spray-on seam sealing for large-surface applications.

Area of application:

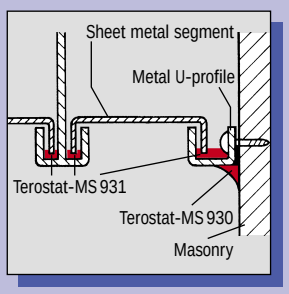
Elastic sealing of joints and seams in railway carriage and container manufacture, equipment engineering, metal working, plastics technology, air conditioning and ventilation, clean-room technology, soft-elastic bonding of sandwich structures for compensating movement and thermal expansion between panels and sheets.

- Sprayable.
- Elastic with good resistance to abrasion.
- UV- and ageing-resistant.
- Rapid curing.
- Good absorption of structure-borne noise.

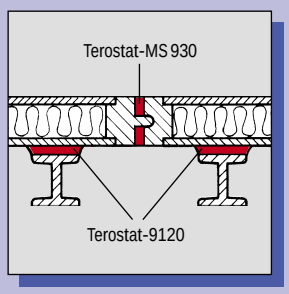
Area of application:

Spray-on large surface coating or sealing of seams in metal and sheet metal working.

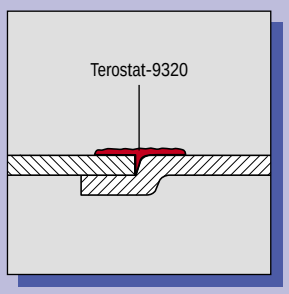
Terostat-MS 931	Terostat-9120	Terostat-9320
1.5 g/cm³	1.4 g/cm³	1.6 g/cm³
100 %	100 %	92 %
10 to 20 min.	10 to 20 min.	10 to 20 min.
5 mm/24 hrs	3 mm/24 hrs	4 mm/24 hrs
16	50	65
0.7 MPa	2.5 MPa	–
< 2 %	< 2 %	–
310 %	250 %	–
Very good	Very good	Very good
Yes	Yes	Yes
-40 to 100 °C	-30 to 100 °C	-40 to 90 °C
12 months	12 months	12 months
310 ml Cartridge	310 ml Cartridge	310 ml Cartridge



Sealing of clean-room ceilings



Sealing/bonding of side panels to load-bearing structures



- Self-spreading and pourable.
- Flows into close fitting joints and seams due to low viscosity.
- Soft-elastic after full curing.
- Sprayable for large surface coating.

Area of application:

- Potting material for electronic components or filters, fluid seal in frame profiles of modular clean-room ceilings.
- Sealing of close fitting joints and seams in railway carriage and container manufacture, equipment engineering, metal and sheet metal working, plastics technology, air conditioning and ventilation, clean-room technology.

- Elastic adhesive/sealant.
- Optimal processing, high sag resistance and easy smoothing.
- Can be applied with a spatula.

Area of application:

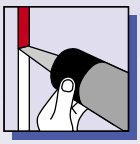
Sealing and bonding of parts in railway carriage and container manufacture, equipment engineering, metal and sheet metal working, plastics technology, air conditioning and ventilation, clean-room technology as well as elastic sealing of joints and seams.

"4 in 1" Multi-Functional Sealant

- Universal sealing compound + seam sealant.
- Achieves textured seams which replicate the original factory finish.
- High stability, non-sagging
- Sprayable, coarse and fine patterns.
- Sealed seams can be spot-welded.
- Brushable.

Area of application:

Elastic sealing of joints and seams like in container manufacture, metal working and equipment engineering.



Sealing
Polyurethane Based

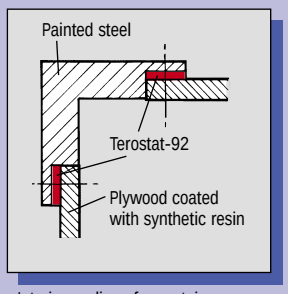
1-Component sealants based on polyurethane:

- Cure to an elastic sealing material by absorbing moisture from the air.
- Depending on their formulation, these materials are soft to hard elastic, but they can also be applied by means of a spatula/brush. Joint movement capability is 10 to 15 %.
- In general, polyurethane-based sealants are compatible with paints.

Products/Data	Terostat-92
Density	1.2 g/cm³
Solids Content	85 %
Skin Formation Time (DIN 50 014)	30 to 60 min.
Cure Rate (DIN 50 014)	4 mm/24 hrs
Hardness Shore A (DIN 53 505)	35
Tensile Strength (DIN 53 504)	1.6 MPa
Tensile Shear Strength (DIN EN 53283)	1 MPa
Elongation to Break (DIN 53 504)	620 to 650 %
UV Resistant	None
Paintable	Yes
Temperature Range	-40 to 70 °C
Shelf Life	12 months
Pack Sizes	310 ml Cartridge

➢ *Practical Hints*

To accelerate skin formation and cure in unfavourable conditions (low relative humidity), application of a fine fog spray of water on the sealed parts has been found successful.



Interior sealing of a container structure prior to the sidewall assembly

***Note:* Must be over-painted for outdoor use.**

- Vibration absorbing effect due to high elasticity.
- High sag resistance.
- Can be applied with a spatula and sanded.

Area of application:

Elastic bonding of metals and plastics, sealing of joints in railway carriage manufacture and repair, container, silo and vessel manufacture, plastics, metal and sheet metal processing, equipment engineering, air conditioning and ventilation, clean-room technology, vehicle and chassis construction, vehicle superstructures.

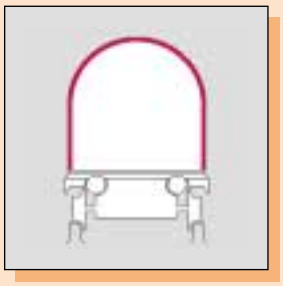
Soundproofing

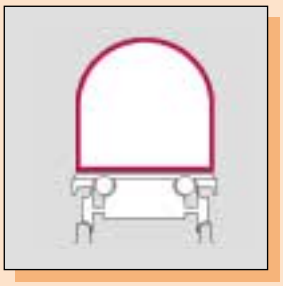
- Highly efficient paste-type soundproofing materials.
- Offer outstanding absorption capabilities.
- Help to reduce the propagation of structure-borne noise.
- Can be coated in any thickness to meet the most exacting requirements for universal structure-borne sound absorption.
- Can be applied by spatula or spray gun.
- Adhere to warped, corrugated or textured parts.

Products/Data	Terophon 112 DB	Terophon 123 WF
Density Wet/Dry	1.4 g/cm³ / 1.2 g/cm³	1.4 g/cm³ / 1.2 g/cm³
Solids Content	65 %	73 %
Drying Time (4 mm wet film) (DIN 50014)	24 hrs	15 hrs
Temperature Resistance	-50 to 120 °C	-50 to 120 °C
Pack Sizes	40 kg Pail	35 kg Pail

➢ *Practical Hints*

Never apply Terophon water-based products to bare steel sheets because there is a serious risk of corrosion while the aqueous product cures on the steel face and afterwards, when humidity migrates into the Terophon coating. Non-galvanized steel sheets or non-anodised aluminium substrates always require a water-impermeable primer protection.





- Solvent free, aqueous synthetic resin dispersion, supplied ready to apply from spray guns.
- Exhibits excellent fire resistance.
- Coats up to 6 mm can be spray applied vertically and overhead in one pass. Spatula may be used for horizontal faces.
- Drying time of a 4 mm film in standard ambient conditions is approx. 24 hours. Heating will significantly reduce the time required. Completely dried coats can be machined and/or over-painted.
- Absorbs condensation water and releases it into ambient air.
- Non-galvanised steel sheets and bare aluminium sheets require primer coating.
- Prolonged or direct contact with water is not recommended.

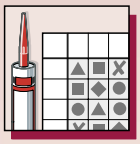
Area of application:

Specially suited for efficient absorption of structure-borne noise in thin-walled metal and plastic assemblies. As the dry coating weighs only approx. 1.2 kg per m² and mm of film thickness, the product is suitable for applications requiring a minimum of weight.

- Solvent free, aqueous synthetic resin dispersion, supplied ready to apply from spray guns.
- Moisture resistant.
- Coats up to 6 mm can be applied vertically and overhead by spray gun or spatula in one pass.
- Drying time of a 4 mm film in standard ambient conditions is approx. 15 hours. Heating will reduce the time required. Completely dried coats can be machined and/or over-painted.
- Non-galvanised steel sheets and bare aluminium sheets require primer coating.

Area of application:

Specially suited for efficient absorption of structure-borne noise in thin-walled metal and plastic assemblies. Water resistant to some degree – may therefore be subjected to direct moisture, even over longer periods. However, permanent water exposure is not recommended.



Selection Table
Sandwich Bonding

● Polyurethane reactive adhesives, 1-component, see page 11
■ Polyurethane reactive adhesives, 2-component, see page 12
◆ Silane modified polymer based elastic adhesives, see page 14

For silane modified polyurethanes, see primer selection table, page 24

		Wood	Metal (4)						Mineral substrates							Insulation materials					
	Substrates	*Wood/ wooden materials*	*Aluminium*	*Steel sheet, phosphated*	*Stainless steel*	*Galvanised steel sheet*	*Copper/copper foil*	*Lead/lead foil*	*Ceramics/stoneware*	*Concrete*	*Masonry*	*Plastered surfaces*	*Cement fibre boards*	*Plaster board*	*Glass, mirrors, enamelled*	*Glass/rock wool*	*Polystyrene rigid foam*	*Polyurethane rigid foam*	*Phenolic resin foam*	*PVC rigid foam*	*Foam glass*
Wood	Wood/wooden materials	●	●■	●■	●	●	■	■	■	■	●	■	●■	●	■◆	●	●	●	●	●	●
Metal (4)	Aluminium	●■	■	■	■	■	■	■	■	■	■	■	■	■	■◆	■	●■	■	■	■	■
	Steel sheet, phosphated, primer-coated	●■	■	■	■	■	■	■	■	■	■	■	■	■	◆	■	●■	■	■	■	■
	Stainless steel	●	■	■	■	■	■	■	■	◆	◆	◆	◆	■◆	◆	■	■	■	■	■	■
	Galvanised steel sheet	●	■	■	■	■	■	■	■	■	■	■	■	■	◆	■	■	■	■	■	■
	Copper/copper foil	■	■	■	■	■	■	■	■	■	■	■	■	■	■◆	■	■	■	■	■	■
	Lead/lead foil	■	■	■	■	■	■	■	■	■	■	■	■	■	■◆	■	■	■	■	■	■
Mineral substrates	Ceramics/stoneware	■	■	■	■	■	■	■	■	■	■	■	■	■	■◆	■	■	■	■	■	■
	Concrete	■	■	■	◆	■	■	■	■	–	–	–	■	■	■◆	■	■	■	■	■	■
	Masonry	●	■	■	◆	■	■	■	■	–	–	–	■	■	■◆	■	■	■	■	■	■
	Plastered surfaces	■	■	■	◆	■	■	■	■	–	–	–	■	■	■◆	■	■	■	■	■	■
	Cement fibre boards	●■	■	■	◆	■	■	■	■	■	■	■	■	■	■◆	■	■	■	■	■	■
	Plaster board	●	■	■	■◆	■	■	■	■	■	■	■	■	■	■◆	■	■	■	■	■	■
	Glass, mirrors, enamelled	■◆	■◆	◆	◆	◆	■◆	■◆	■◆	■◆	■◆	■◆	■◆	■◆	◆	■◆	■◆	■◆	■◆	■◆	■◆
Insulation materials	Glass/rock wool	●	■	■	■	■	■	■	■	■	■	■	■	■	■◆	■	■	■	■	●■	■
	Polystyrene rigid foam	●	■	■	■	■	■	■	■	■	■	■	■	■	■◆	■	■	■	■	■	■
	Polyurethane rigid foam	●	■	■	■	■	■	■	■	■	■	■	■	■	■◆	■	■	■	■	■	■
	Phenolic resin foam	●	■	■	–	■	■	■	■	■	■	■	■	■	■◆	■	■	■	■	■	■
	PVC rigid foam	●	■	■	■	■	■	■	■	■	■	■	■	■	■◆	●■	■	■	■	■	■
	Foam glass	●	■	■	■	■	■	■	■	■	■	■	■	■	■◆	■	■	■	■	■	■

Selection Table
General Technical Bonding

▲ Solvent based adhesive Terokal-2444, see page 9
● Polyurethane reactive adhesives, 1-component, see page 11
■ Polyurethane reactive adhesives, 2-component, see page 12

	Substrates	Rubber			Plastics			Wood	Metal (4)					
		Rubber mats, rubber coverings (1)	Solid rubber profiles (1)	Sponge rubber/foam rubber profiles (1)	Rigid PVC/ABS (2)	Pressed laminates (compression moulding compound)	Polyester and GRP (3)	Wood/ wooden materials	Aluminium	Steel sheet, phosphated, primer-coated	Stainless steel	Galvanised steel sheet	Copper/copper foil	Lead/lead foil
Rubber	Rubber mats, rubber coverings (1)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	–	–
	Solid rubber profiles (1)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	–	–
	Sponge rubber/ foam rubber profiles (1)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	–	–
Plastic	Rigid PVC/ABS (2)	▲	▲	▲	▲■	▲●■	■	●	▲	▲	▲	▲	■	■
	Pressed laminates (compression moulding compound)	▲	▲	▲	▲●■	■	▲●■	▲●	▲■	▲■	▲	▲	■	■
	Polyester and GRP (3)	▲	▲	▲	■	▲●■	●■	●■	■	■	■	■	■	▲■
Wood	Wood/wooden materials	▲	▲	▲	●	▲●	●■	●	●■	●■	●	●	■	■
Metal (4)	Aluminium	▲	▲	▲	▲	▲■	■	●■	■	■	■	■	■	■
	Steel sheet, phosphated, primer-coated	▲	▲	▲	▲	▲■	■	●■	■	■	■	■	■	■
	Stainless steel	▲	▲	▲	▲	▲	■	●	■	■	■	■	■	■
	Galvanised steel sheet	▲	▲	▲	▲	▲	■	●	■	■	■	■	■	■
	Copper/copper foil	–	–	–	■	■	■	■	■	■	■	■	■	■
	Lead/lead foil	–	–	–	■	■	▲■	■	■	■	■	■	■	■

For best performance, surfaces to be bonded should be cleaned with Cleaner FL.

(1) Except rubber types with high EPDM content.
(2) Quality of the bond depends on polymer formulation.
(3) GRP should be sanded lightly.
(4) Bonding of the metals after primer coating; applies also for outdoor use.

Note:
The selection tables on pages 22 to 24 provide a rough overview. We recommend that each user carry out appropriate trials to test his proposed application before repetitive use. Results may differ due to variations in plastics formulations, surfaces and types of paints/lacquers. For this reason, adhesion must be verified specifically for the proposed application, using substrate surfaces which are dry, clean and free of grease.

Primer Selection Table

	Products/Substrates	Terostat-92	Terostat-8596	Terostat-MS 930 Terostat-MS 9302 Terostat-MS 931 Terostat-9320	Terostat-9120 Terostat-MS 937 Terostat-MS 939	Terostat-9220 Terostat-MS 9380 Terostat-MS 2K Power Set	Terostat-81 Terostat Alu Fixband
Glass	Glazed ceramics	n.p.r.	8511	n.p.r.	n.p.r.	n.p.r.	PT
	Glass	n.p.r.	8511/ 8517H	n.p.r.	n.p.r.	n.p.r.	PT
Metals	Steel, raw	102	8511	n.p.r.	n.p.r.	n.p.r.	n.p.r.
	Steel, galvanised	102	8511	n.p.r.	n.p.r.	n.p.r.	n.p.r.
	Stainless steel	102	8511	n.p.r.	n.p.r.	n.p.r.	n.p.r.
	Aluminium, raw	102	8511	n.p.r.	n.p.r.	n.p.r.	n.p.r.
	Aluminium, anodised	102	PT/8521	n.p.r.	n.p.r.	n.p.r.	n.p.r.
	Aluminium, coated or painted	PT/102	8521	PT	PT	PT	n.p.r.
	Copper sheet	PT/102	8511	n.p.r.	n.p.r.	n.p.r.	n.p.r.
Plastics	GRP polyester	PT/136	PT/8511	n.p.r.	PT	PT	n.p.r.
	Rigid PVC	PT	PT	n.p.r.	PT	PT	n.p.r.
	Soft PVC	PT/914	PT/914	PT/914	PT/914	PT/914	PT/914
	EPDM	PT	PT	PT	PT	PT	n.p.r.
	PUR rigid	n.p.r.	PT	n.p.r.	PT	PT	n.p.r.
	PUR elastic	n.p.r.	PT	n.p.r.	PT	PT	n.p.r.
Lacquers, paints	Car paints/series production	n.p.r.	8521	PT	PT	PT	n.p.r.
	Car paints/repair	n.p.r.	8521/8511	PT	PT	PT	n.p.r.
	Alkyd resin paints/varnishes, open-pored wood	n.p.r.	-	n.p.r.	n.p.r.	n.p.r.	n.p.r.
	Water lacquers	n.p.r.	PT/136	n.p.r	n.p.r.	n.p.r.	n.p.r.
	Coating powders	PT/136	PT/136	PT/136	n.p.r.	n.p.r.	n.p.r.

n.p.r. No primer required

PT Varies: depending on application and requirements (pre-trials recommended)

Equipment

Teromix Hand Gun

For use with Teromix-6700 twin cartridge.

Hand Gun 410

For use with all 150 ml and 310 ml cartridges. Standard design with rack-and-pinion drive.

Teromix Static Mixer

Mixer element for Teromix-6700 2-component Vehicle Body Adhesive and Terokal-9225 Plastic Repair Adhesive.

Softpress Hand Gun

Handles all Presspack containers.

- Very rugged steel/plastic design.
- Smooth action.
- Long life.
- No run-on.
- Easy to maintain and to clean.

Teroson Multi-Press Telescopic Hand Gun

For applying Terostat-9320 and Terostat-MS 9302 sprayable seam sealant / multi-functional sealant and other sprayable sealants from 150/310 ml nozzle cartridges.

- Excessive supply pressures will be automatically reduced by means of a built-in reducing valve.
- Telescopic piston does not wander, ensures smooth action, prevents trapped air bubbles.
- Compact, short size: Slim and handy.

Accessories included:

2 screw collars, connector, piercing tool for aluminium cartridge seals.

2-Component MS Pistol

Pneumatic alu pistol with piston and stamp.

- For 2-component sealant.
- Ratio 10 : 1.
- 2-component plastic cartridge.

Telescopic Power Line Gun

For dispensing car body sealants, adhesive sealants and direct glazing sealants.

Engineering details:

- Telescopic piston does not wander, ensures smooth action, prevents trapped air bubbles.
- No run-on.
- Dented cartridges will not cause any problems.
- Cartridges are emptied 100 %.

Accessories included:

Piercing tool for aluminium cartridge seals.

Staku Hand Cartridge Gun

Handles all 150 ml and 310 ml cartridges.

- Steel/plastic design with enclosed-type cartridge skeleton frame.
- Smooth action.
- Long life.
- No run-on.
- Easy to maintain and to clean.

Note: ***Pump dispensing equipment on request.***

Training & Approvals

Henkel Teroson technology and training centre

State-of-the-art chemical products require state-of-the-art methods for training and education. That's why Henkel Teroson has built an innovative Technology and Training Centre with excellent facilities on about 2000 square meters of floor space. The Centre offers competent and professional support based on the most recent, future-oriented technologies to create added value, increase the customers' process efficiency and optimise the quality of service. Professional trainers with a rich practical background and a profound understanding of the business effectively pass on their knowledge. There are five seminar rooms for up to 150 participants. The training programmes mix theory with a lot of hands-on exercises; that's why training facilities include car lifts, spray booths, and assembly lines to let users test their skills in a true to life environment – to develop skills rather than just knowledge, and "to do", rather than just "to know".

Customised On-Site Training

The activities offered in the Henkel Teroson Technology and Training Centre are complemented by application-oriented advice and counselling provided on site in repair shops, and by training and seminars held in the distributors' facilities.

Quality put to the test

Quality and manufacturing of Teroson and Loctite products are constantly monitored by eminent customers and independent certification bodies such as German TÜV or DQS.

These audits and certifications regularly give Henkel Teroson best ratings for continued compliance with high quality standards for processes and products.

Users are reaping the benefits from the head start in quality and processing know-how acquired on this basis.

Henkel Teroson Technology and Training Centre in Heidelberg, Germany

Index
by Product Family

Product	Product Family	Pack	Content	Colour	Note	Page
Sealing						
Terostat Alu Fixband	Butyl Sealant	Roll	100 x 1.2 mm; 25 m 150 x 1.2 mm; 25 m 50 x 1.0 mm; 28 m	Black	*	17
Terostat-81	Butyl Sealant	Roll	10 x 2.0 mm; 50 m 15 x 1.5 mm; 40 m 15 x 2.0 mm; 30 m 20 x 2.0 mm; 30 m 60 x 2.0 mm; 20 m Diam. 6 mm; 78 m	Black	*	17
Terostat-9120	MS Sealant	Cartridge	310 ml	Grey, Black, White		19
Terostat-MS 930	MS Sealant	Cartridge Sausage	310 ml 310 ml, 570 ml	Grey, Black, White	*	18
Terostat-MS 9302	MS Sealant	Cartridge	310 ml	Grey, White		18
Terostat-MS 931	MS Sealant	Cartridge	310 ml	White		19
Terostat-9320	MS Sealant	Cartridge	310 ml	Black, Ochre, Grey		19
Terostat-92	PUR Sealant	Cartridge	310 ml	Grey, Black, White		20
Elastic Bonding						
Terostat-8596	PUR Elastic Bonding	Cartridge	310 ml	Black	*	16
Terostat-9220	MS Elastic Bonding	Cartridge	310 ml	Black		15
Terostat-MS 2K Power Set	MS Elastic Bonding	Dual Cartridge	330 ml	White	Other 2K MS product combinations are available on request.	15
Terostat-MS 937	MS Elastic Bonding	Cartridge Sausage	310 ml 570 ml	Grey, Black, White White	*	14
Terostat-MS 9380	MS Elastic Bonding	Cartridge	310 ml	White		15
Terostat-MS 939	MS Elastic Bonding	Cartridge Sausage	310 ml 570 ml	Grey, Black, White	*	14
Bonding						
Technomelt Q 9268 H	Hot Melt Adhesive	Box	10 kg (5 Boxes of 2 kg) Stick: 11.3 x 200 mm	Transparent, White		10
Macroplast UR 7221	1-Component PUR Adhesive	Can	30 kg	Dark Brown		11
Macroplast UR 7228	1-Component PUR Adhesive	Can	30 kg	Dark Brown		11
Macroplast UK 8160 Combi	2-Component PUR Adhesive	Pail	9 kg Combi	Beige	*	12
Macroplast UK 8210 Terokal-4310	2-Component PUR Adhesive	Pail	3.5 kg	Beige	Use with hardener Terokal-700.	13
Macroplast UK 8222 Terokal-722	2-Component PUR Adhesive	Pail	5 kg	Beige	Use with hardener Terokal-700.	13
Teromix-6700	2-Component PUR Adhesive	Dual Cartridge	50 g	Dark Grey	*	13
Macroplast UK 5480 (Terokal-700 Hardener)	2-Component PUR Adhesive	Tin	1 kg	Brown	Hardener for Macroplast UK 8210 and Macroplast UK 8222.	13
Terokal-2444	Solvent Based Adhesive	Tin	340 g, 670 g	Beige	*	9
Soundproofing						
Terophon-112 DB	Sprayable Acoustic Product	Pail	40 kg	Beige		21
Terophon-123 WF	Sprayable Acoustic Product	Pail	35 kg	Beige		21
Others						
Cleaners and Diluents	Cleaners and Diluents	Various	Various		See Terokal-2444 and General Technical Bonding Table.	9, 23
Equipment	Equipment					25
Primers	Primers	Various	Various		See Primer Selection Table.	24

***** Other packaging available on request.

The data contained herein are intended as reference only. Please contact your local Henkel Loctite Technical Support Group for assistance and recommendation on specifications for these products.

Henkel Loctite Adhesives Ltd

Technologies House
Wood Lane End · Hemel Hempstead · Hertfordshire HP2 4RQ
Tel. 01442 418305 · Fax 01442 418228

www.loctite.co.uk