

General adhesive information Sylomer®/Sylodyn®/Sylodamp®



This document is designed to provide assistance regarding the bonding of **Sylomer®**, **Sylodyn®** and **Sylodamp®** PU materials from Getzner Werkstoffe.

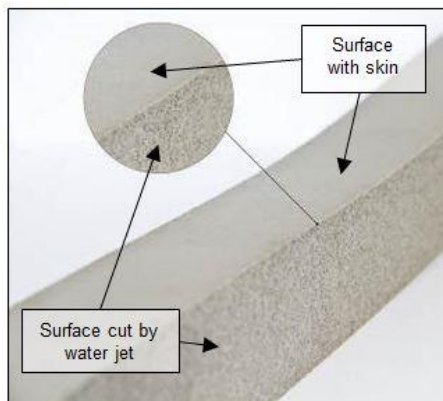
1 General Information:

Cellular and compact polyurethanes of the Sylomer®, Sylodyn® and Sylodamp® brands can be bonded in accordance with the information below. In order to obtain sufficient adhesion, it is recommended to use a suitable adhesive for each bonding operation and for the surfaces being bonded.

1.1 Bonding PU elastomers

1.1.1 Preparation

Preparation of the contact surfaces to be bonded is of vital importance for the strength of the adhesive bond. The substrates must suit one another and be available as bare material. In order to enable adhesion, the surfaces to be bonded must be free from *adhesive residue, oil, grease, release agents (e.g. silicon) and, in particular, dirt, dust, scale, protective layers, sizing agents, coats of paint and any kind of moisture*. These can be removed mechanically through *stripping, brushing, scraping, grinding or sandblasting*. Likewise, they can be removed chemically through *degreasing, acid cleaning or priming*, to name just a few methods.



In general, Sylomer®, Sylodyn® and Sylodamp® can be bonded to one another very successfully as flat products, even without pretreatment. In the case of moulded parts with or without distinct skin, the adhesive release agent must be removed. If necessary, the surface must be processed by grinding. If they are bonded to other materials, such as plastic, wood, metal or concrete, the surface to be bonded can be pre-treated with a primer prior to the bonding operation for cleaning and for improved adhesion. Application of the primer and preparation for bonding must be carried out in accordance with the manufacturer's recommendations. The manufacturer's instructions relating to horizontal/vertical bonding, curing time, etc. should be followed to the letter, so that the required adhesion is in fact achieved. The adhesive film must be applied carefully, according to these instructions, using appropriate equipment (brush, spatula, palette knife, spray pistol [airless], etc.).

Note that strips of the Sylomer®, Sylodyn® and Sylodamp® materials are supplied with two different surfaces. Due to the manufacturing process, two sides have a skin, and they exhibit an almost sealed surface as a result of the integral structure. Better adhesion can be achieved with the open-celled structure on the sides that have been cut (saw, water jet, etc. - see figure). However, these surfaces soak up adhesive due to the open structure. This must be taken into consideration and tested in advance with regard to the amount of adhesive to be applied.

1.1.2 Bonding

If bonding is carried out correctly in accordance with the instructions, it can be assumed that the bond is chemically stronger than the material structure. This means that the material will tear away from the bonded joint if subjected to tensile force. The tensile strength specified in the data sheet may be used as a parameter here.

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We make a general distinction between two types of adhesive:

Contact adhesives:

Non-gap-filling adhesive film, which is applied as thinly as possible to both surfaces to be bonded. The adhesive should be pressed with a maximum pressure of 0.5N/mm². After the first contact between the bonding surfaces, it is no longer possible to correct the position (contact effect). Resulting creases, waves and bubbles cannot be corrected. Bonds that have been separated must be built up again from scratch. The flash-off time specified by the manufacturer must be observed. Particularly with systems that use conventional solvents such as water, the adhesive film must be dry enough such that the adhesive surface no longer forms threads when tested with a finger.

Hardening adhesives:

These are gap-filling 1 and 2 component reactive adhesives, which are applied evenly and, if necessary, can compensate for uneven areas with the layer thickness. The parts must be joined together immediately after applying the adhesive. It is possible to make adjustments for a limited amount of curing time once the adhesive parts have made contact. Depending on the bonding process, pressing the surfaces to be bonded together after the bonding operation may create better adhesion.

Note:

All information provided in this document is based on our current level of knowledge. The actual properties that can be achieved depend on the various conditions. Therefore, tests should be carried out at the place of use prior to using the product, so that the results can be checked with the aid of an adhesive expert. It is the responsibility of the user to check the results in regard to usability and suitability.

2 Recommended adhesives

Due to the variety of possible materials to be bonded and suitable adhesives, the following list can only provide information for certain combinations. This is based on the current level of knowledge of Getzner Werkstoffe. We accept no liability for these recommendations and any damage that may result. Each adhesive bond must be prepared in line with the manufacturer's recommendations and must be tested in advance.

2.1 Bonding Sylomer®/Sylodyn®/Sylodamp® to one another and to wood

To increase the adhesion on the surfaces to be bonded, it is advisable to also clean and treat the surfaces with a primer.

Primer	Manufacturer	Website
Marine Primer 5400A	3M	www.3m.com
OTTO Primer 1225	Otto Chemie	www.otto-chemie.de
Primer 83 for adhesive tape	3M	www.3m.com
Primer Loctite 7239	Henkel	www.henkel.com
Sika Primer 3N	Sika	www.sika.at

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Adhesive	Type	Manufacturer	Website
3M Scotch Weld 7240 B/A FR	H 2-C	3M	www.3m.com
3M Scotch Weld 78 HT	C	3M	www.3m.com
3M Scotch Weld 90	C	3M	www.3m.com
3M Scotch Weld 9372W/9375W	Tape	3M	www.3m.com
3M Scotch Weld 9377	Tape	3M	www.3m.com
3M Scotch Weld 94 CA	C	3M	www.3m.com
3M Scotch Weld DP110	H 2-C	3M	www.3m.com
3M Scotch Weld VHB 5958	Tape	3M	www.3m.com
Araldite® 2014-1	H 2-C	Huntsman	www.huntsman.com
ASTORbond 12361	Tape	ASTORplast	www.astorplast.at
ASTORtack 11347	Tape	ASTORplast	www.astorplast.at
ASTORtack 11356	Tape	ASTORplast	www.astorplast.at
Elastan	H 1-C/H 2-C	BASF	www.basf.com
Icema R 101 P	H 2-C	H.B. Fuller	www.hbfuller.com
Icema R 145/44	H 1-C	H.B. Fuller	www.hbfuller.com
Körapur 666 + Köracur	H 2-C	Kömmerling	www.koe-chemie.de
Körapur 672 + Köracur	H 2-C	Kömmerling	www.koe-chemie.de
Loctite (Macroplast) 406	H 1-C	Henkel	www.henkel.com
Loctite (Macroplast) 480	H 1-C	Henkel	www.henkel.com
Loctite (Macroplast) UK 5400	H 1-C	Henkel	www.henkel.com
Loctite (Macroplast) UK 8101 B3	H 2-C	Henkel	www.henkel.com
Loctite (Macroplast) UK 8202	H 2-C	Henkel	www.henkel.com
Loctite (Macroplast) UK 8303 B60	H 2-C	Henkel	www.henkel.com
Loctite (Macroplast) UR 7225	H 1-C	Henkel	www.henkel.com
Monterings LIM 5100	C	Würth	www.wuerth.de
Ottocoll P83	H 1-C	Otto Chemie	www.otto-chemie.de
Sikaflex -254 Booster	H 1-C	Sika	www.sika.at
Sikaflex -265 Booster	H 1-C	Sika	www.sika.at
Technicoll 8044	C	Technicoll	www.technicoll.de
Technicoll 8344	H 1-C	Technicoll	www.technicoll.de
Teroson (Terokal) SB 2444	C	Henkel	www.henkel.com
Tesafix 4962	Tape	Tesa	www.tesa.de
Thixon 422	H 1-C	DOW	www.dow.com
Ultraflex 56	C	H.B. Fuller	www.hbfuller.com
VaryBond VB92	H 1-C	ITW	www.itwcp.de

C = Contact adhesive, H 1-C = One-component adhesive, H 2-C = Two-component adhesive; Tape = Self-adhesive tape

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2.2 Bonding Sylomer®/Sylodyn®/Sylodamp® to metallic substrates

When bonding metallic surfaces, it is advisable to clean the metal surface to be bonded in advance with a primer.

Primer	Metal	Manufacturer	Website
3M Primer 83 for adhesive tape	Steel, aluminium	3M	www.3m.com
3M Scotch Brite 7447	Steel, aluminium, copper, brass	3M	www.3m.com
OTTO Primer 1225	Al, steel, Zn	Henkel	www.otto-chemie.de
Primer Loctite 7239	Steel, aluminium	Henkel	www.henkel.com
Primer Loctite/Macroplast UK 5400	Steel, Zn, brass	Sika	www.henkel.com
Sika Primer 3N	Steel, Al, Fe, amongst others	Sika	www.sika.at
Sikalastic Metal Primer	Al, Pb, Fe, Cu steel, brass	Otto Chemie	www.sika.at

The usual bare metals are steel, stainless steel, iron, aluminium, copper, brass and lead.

Adhesive	Type	Manufacturer	Website
3M Scotch Weld 7240 B/A FR	H 2-C	3M	www.3m.com
3M Scotch Weld 90	C	3M	www.3m.com
3M Scotch Weld 9372W/9375W	Tape	3M	www.3m.com
3M Scotch Weld 9377	Tape	3M	www.3m.com
3M Scotch Weld 94 CA	C	3M	www.3m.com
3M Scotch Weld DP110	H 2-C	3M	www.3m.com
3M Scotch Weld VHB 5958	Tape	3M	www.3m.com
Araldite® 2014-1	H 2-C	Huntsman	www.huntsman.com
ASTORbond 12361	Tape	ASTORplast	www.astorplast.at
ASTORtack 11347	Tape	ASTORplast	www.astorplast.at
ASTORtack 11356	Tape	ASTORplast	www.astorplast.at
Elastan	H 1-C/H 2-C	BASF	www.basf.com
Icema R 101 P	H 2-C	H.B. Fuller	www.hbfuller.com
Icema R 145/44	H 1-C	H.B. Fuller	www.hbfuller.com
Körapur 666 + Köracur	H 2-C	Kömmerling	www.koe-chemie.de
Körapur 672 + Köracur	H 2-C	Kömmerling	www.koe-chemie.de
Loctite (Macroplast) 480	H 1-C	Henkel	www.henkel.com
Loctite (Macroplast) UK 8101 B3	H 2-C	Henkel	www.henkel.com
Loctite (Macroplast) UK 8202	H 2-C	Henkel	www.henkel.com
Loctite (Macroplast) UK 8303 B60	H 2-C	Henkel	www.henkel.com
Loctite (Macroplast) UR 7225	H 1-C	Henkel	www.henkel.com

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Adhesive	Type	Manufacturer	Website
Ottocoll P83	H 1-C	Otto Chemie	www.otto-chemie.de
Sikaflex -254 Booster	H 1-C	Sika	www.sika.at
Sikaflex -265 Booster	H 1-C	Sika	www.sika.at
Technicoll 8344	H 1-C	Technicoll	www.technicoll.de
Teroson (Terokal) SB 2444	C	Henkel	www.henkel.com
Thixon 422	H 1-C	DOW	www.dow.com
Ultraflex 56	C	H.B. Fuller	www.hbfuller.com

C = Contact adhesive, H 1-C = One-component adhesive, H 2-C = Two-component adhesive; Tape = Self-adhesive tape

2.3 Bonding Sylomer®/Sylodyn®/Sylodamp® to carbon/glass-fibre reinforced plastic (CFRP/GFRP)

Adhesive	Type	Manufacturer	Website
3M Scotch Weld 7240 B/A FR	H 2-C	3M	www.3m.com
3M Scotch Weld 90	C	3M	www.3m.com
3M Scotch Weld 9372W/9375W	Tape	3M	www.3m.com
3M Scotch Weld 9377	Tape	3M	www.3m.com
3M Scotch Weld 94 CA	C	3M	www.3m.com
3M Scotch Weld DP110	H 2-C	3M	www.3m.com
3M Scotch Weld VHB 5958	Tape	3M	www.3m.com
Araldite® 2014-1	H 2-C	Huntsman	www.huntsman.com
ASTORbond 12361	Tape	ASTORplast	www.astorplast.at
ASTORtack 11347	Tape	ASTORplast	www.astorplast.at
ASTORtack 11356	Tape	ASTORplast	www.astorplast.at
Icema R 101 P	H 2-C	H.B. Fuller	www.hbfuller.com
Icema R 145/44	H 1-C	H.B. Fuller	www.hbfuller.com
Körapur 666 + Köracur	H 2-C	Kömmerling	www.koe-chemie.de
Körapur 672 + Köracur	H 2-C	Kömmerling	www.koe-chemie.de
Sikaflex -254 Booster	H 1-C	Sika	www.sika.at
Sikaflex -265 Booster	H 1-C	Sika	www.sika.at
Technicoll 8044	C	Technicoll	www.technicoll.de
Technicoll 8344	H 1-C	Technicoll	www.technicoll.de

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2.4 Bonding Sylomer®/Sylodyn®/Sylodamp® with plastics

Due to the wide range of plastics, it is not possible to provide a general adhesive recommendation. However, reactive adhesive systems (e.g. cyanoacrylate adhesives) have proved successful in many cases. When choosing an adhesive, ensure that it has a suitably high viscosity to prevent thermal damage, above all on split surfaces. Polyolefins (e.g. polyethylene) can also be bonded to Sylomer®, Sylodyn® and/or Sylodamp® if chemically pretreated with primers.

Primer	Plastic	Manufacturer	Website
Marine Primer 5400A	PU, PMMA, PE amongst others.	3M	www.3m.com
OTTO Primer 1225	Plastics	Otto Chemie	www.otto-chemie.de
Primer 83 for adhesive tape	PVC	3M	www.3m.com
Primer Loctite 7239	PP, PE, Teflon, PMMA, ABS, PC	Henkel	www.henkel.com
Sika Primer 3N	PU, PVC, EP	Sika	www.sika.at

Adhesive	Type	Manufacturer	Website
3M Scotch Weld 7240 B/A FR	H 2-C	3M	www.3m.com
3M Scotch Weld 78 HT	C	3M	www.3m.com
3M Scotch Weld 90	C	3M	www.3m.com
3M Scotch Weld 9372W/9375W	Tape	3M	www.3m.com
3M Scotch Weld 9377	Tape	3M	www.3m.com
3M Scotch Weld 94 CA	C	3M	www.3m.com
3M Scotch Weld DP110	H 2-C	3M	www.3m.com
3M Scotch Weld VHB 5958	Tape	3M	www.3m.com
Araldite® 2014-1	H 2-C	Huntsman	www.huntsman.com
ASTORbond 12361	Tape	ASTORplast	www.astorplast.at
ASTORtack 11347	Tape	ASTORplast	www.astorplast.at
ASTORtack 11356	Tape	ASTORplast	www.astorplast.at
Elastan	H 1-C/H 2-C	BASF	www.basf.com
Icema R 101 P	H 2-C	H.B. Fuller	www.hbfuller.com
Icema R 145/44	H 1-C	H.B. Fuller	www.hbfuller.com
Körapur 666 + Köracur	H 2-C	Kömmerling	www.koe-chemie.de
Körapur 672 + Köracur	H 2-C	Kömmerling	www.koe-chemie.de
Loctite (Macroplast) 406	H 1-C	Henkel	www.henkel.com
Loctite (Macroplast) 480	H 1-C	Henkel	www.henkel.com
Loctite (Macroplast) UK 8101 B3	H 2-C	Henkel	www.henkel.com
Loctite (Macroplast) UK 8202	H 2-C	Henkel	www.henkel.com
Loctite (Macroplast) UK 8303 B60	H 2-C	Henkel	www.henkel.com
Loctite (Macroplast) UR 7225	H 1-C	Henkel	www.henkel.com

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Adhesive	Type	Manufacturer	Website
Sikaflex -254 Booster	H 1-C	Sika	www.sika.at
Sikaflex -265 Booster	H 1-C	Sika	www.sika.at
Technicoll 8044	C	Technicoll	www.technicoll.de
Technicoll 8344	H 1-C	Technicoll	www.technicoll.de
Teroson (Terokal) SB 2444	C	Henkel	www.henkel.com
Thixon 422	H 1-C	DOW	www.dow.com
Ultraflex 56	C	H.B. Fuller	www.hbfuller.com

C = Contact adhesive, H 1-C = One-component adhesive, H 2-C = Two-component adhesive; Tape = Self-adhesive tape

2.5 Bonding Sylomer®/Sylodyn®/Sylodamp® to concrete and other mineral substrates

Primer	Suitable for	Manufacturer	Website
3M Primer 83 for adhesive tape	Concrete, oil, etc.	3M	www.3m.com
OTTO Primer 1225	Concrete, oil, etc.	Otto Chemie	www.otto-chemie.de
Sika Primer 3N	Concrete, oil, etc.	Sika	www.sika.at

Adhesive	Suitable for	Type	Manufacturer	Website
3M Scotch Weld 9372W/9375W	Concrete	Tape	3M	www.3m.com
3M Scotch Weld 9377	Concrete	Tape	3M	www.3m.com
3M Scotch Weld Spray 90	Concrete	C	3M	www.3m.com
3M Scotch Weld VHB 5958	Concrete	Tape	3M	www.3m.com
Icema R 101 P	Concrete	H 2-C	H.B.Fuller	www.hbfuller.com
Icema R 145/44	Concrete	H 1-C	H.B.Fuller	www.hbfuller.com
Loctite (Macroplast) UK 8101 B3	Concrete, asphalt	H 2-C	Henkel	www.henkel.com
Loctite (Macroplast) UK 8303	Concrete, asphalt	H 2-C	Henkel	www.henkel.com
Ottocoll P83	Concrete	H 1-C	Otto Chemie	www.otto-chemie.de
Technicoll 8344	Concrete, asphalt	H 1-C	Technicoll	www.technicoll.de
Teroson (Terokal) SB 2444	Concrete	C	Henkel	www.henkel.com
Weber.tec 920 (Montaplast K1/2)	Concrete, asphalt	H 1-C H 2-C	Saint Gobain	www.sg-weber.de
Weber.tec 922 (Plastikol UDM 2S)	Concrete, asphalt	H 2-C	Saint Gobain	www.sg-weber.de

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2.6 Flammability and fire-resistant adhesives

Please note that the adhesives listed above may affect the flammability of the materials to be bonded. These adhesives do not have any flame-retardant properties. When using self-adhesive tapes (single and double-sided), it should be noted that these self-adhesive items may have a negative impact on flammability. Special flame-retardant and/or fire-resistant adhesives and adhesive tapes are commercially available upon request. A selection is listed below:

Adhesive	Suitable for	Type	Manufacturer	Website
3M – 9372W/9375W	Metal, wood, plastics	Tape	3M	www.3m.com
3M – 9377	Metal, wood, plastics	Tape	3M	www.3m.com
Scotch Weld 7240 B/A	Metal, wood, plastics	H 2-C	3M	www.3m.com
VHB self-adhesive tape 5958	Metal, wood, plastics	Tape	3M	www.3m.com

C = Contact adhesive, H 1-C = One-component adhesive, H 2-C = Two-component adhesive; Tape = Self-adhesive tape

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