



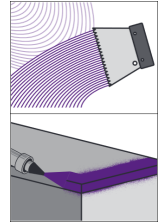
RAMSAUER®

647

LASTING BONDS.

Spray Hybrid

1-component hybrid adhesive



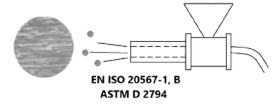
Technical data sheet

Version: 03-2024

Tests:

- Emission EC1^{PLUS} very low emissions"
- Determination of slip resistance as per Austrian standards ÖNORM Z 1261 & ÖNORM EN 16165
- Multi-impact stone chip resistance as per EN ISO 20567-1, Method B
- Ball drop test as per ASTM D 2794

Rutschhemmend nach
ÖNORM Z 1261 &
ÖNORM EN 16165



EN ISO 20567-1, B
ASTM D 2794



1. Mechanical Properties

Basis	Hybrid adhesive - MS polymer
Skin formation time	~ 12 Min. (23°C/50% relative humidity)
Full curing time	~ 2.0 mm/24 hours (at +23°C/50% relative humidity)
Density	~ 1.4 (EN ISO 1183-1)
Shore A hardness	~ 41 (DIN EN ISO 868)
Volume shrinkage	~ 4% (EN ISO 10563)
Tear propagation resistance	~ 8.5 N/mm (ISO 34-1)
Tensile strength/100%	~ 1.00 N/mm ² (DIN 53504-S2)
Tensile strength/breakage	~ 1.27 N/mm ² (DIN 53504-S2)
Elongation at break	~ 250% (DIN 53504-S2)
Building material class as per DIN EN 13501-1 / DIN 4102	E / B2
Resistance to high and low temperatures	-30°C to +90°C (long-term exposure)
Application temperature (substrate, environment)	Lower +5°C, upper +35°C
Coefficient of sliding friction [μ] as per Austrian standard ÖNORM EN 16165	Dry mix: 0.51 / dry rubber: 0.49 / wet rubber: 0.52
Slip resistance classification as per Austrian standard ÖNORM Z 1261	Classification: I
Stone chip resistance value as per EN ISO 20567-1	0 = surface without damage
Ball drop test direct/indirect	No cracking / no cracking
Colours	Black
Packaging	290 ml cartridges
Shelf life of cartridges and foil bags	12 months in original packaging in cool and dry storage conditions

2. Properties

647 Spray Hybrid shows excellent adhesion to various substrates. After curing, the material remains permanently elastic and is both wind and rain-proof and resistant to UV. Ideally suited for bonding overlaps on diffusion-open facade membranes or vapour retarders. Sound-absorbing properties. Can be used for sound insulation enclosures, ventilation ducts, in caravan and camper construction and sealing seams. The adhesive is silicone-free, coatable and also adheres to moist surfaces.



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Key

+	Good adhesion without priming
-	No adhesion
Primer	Recommended primer

3. Priming table

Glass	+
Tiles	+
Pine wood	+
Wet ground concrete	+
Concrete, formwork smoothness	+
Steel DC 04	+
Hot-dip galvanised steel	+
Stainless steel	+
Zinc	+
Aluminium	+
Aluminium AlMg1	+
Aluminium AlCuMg1	+
Aluminium 6016	Primer 140 / Primer 145
Anodised aluminium	+
Brass MS 63 Hardness F 37	+
PVC Kömadur ES	Primer 100 / Primer 105
PVC soft	+
PC Makrolon Makroform 099	Primer 100 / Primer 105
Polyacrylic PMMA XT 20070 Röhm*1	Primer 40
Polystyrene PS Iroplast	Primer 100 / Primer 105
ABS Metzoplast ABS 7 H	Primer 100 / Primer 105
PET	+
PU waste quality	+
Copper	+
GRP	+
PMMA Röhm sanitary quality	Primer 100 / Primer 105
Mirrors*2	-
Natural stone	-

This table is based on adhesion tests with Rocholl test specimens under laboratory conditions. In practice, the adhesive properties depend on a large number of external influences (weathering, contamination, loads, etc.). Therefore, this table is for guidance only and does not constitute a binding statement. For further information please contact our application engineering department. The tests carried out above only refer to the adhesive properties and have no significance in terms of compatibility with the stated substrates.

*1: Different PLEXIGLAS® types exhibit certain differences in their chemical resistance. Stresses must be expected in some applications. The resulting stresses, in combination with certain agents, can lead to "stress cracking". The duration, temperature and concentration of the acting substance have a fundamental influence on any "stress cracks". When using our products in combination with PLEXIGLAS®, the suitability must therefore be checked in advance.

*2: The compatibility with various mirror coatings by different manufacturers is regularly tested in our laboratory. Advance testing is recommended due to production processes of the various manufacturers, into which we have no insights, and as a function of the existing substrate and bonding variants.

4. Application

For manufacturing wind-tight or driving rain-proof joints in combination with perimeter foils in window and door installation work. Overlapping bonding of roofing membranes. Sound-absorbing properties. Reduces raindrop noise when applied to the underside of aluminium window sills. Joint seals in metalworking for a wide variety of metals, e.g., aluminium, stainless steel, brass, copper. Perimeter seal for transitions in wood, concrete, brick and plasterboard or construction panels.



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5. Meets the requirements of IVD instruction sheet

No. 16	Perimeter joints in dry construction work - supports the use of sprayable sealants
No. 19-1	Sealing of joints and perimeters in the roof area - supports the use of sprayable sealants, assembly adhesives, butyl sealing tapes and profiles – Part 1 Exterior
No. 19-2	Sealing of joints and perimeters in the roof area - supports the use of sprayable sealants, assembly adhesives, butyl sealing tapes and profiles – Part 2 Airtight layer
No. 30	Assembly adhesive for bonding and sealing

6. Processing

General instructions: The expiry date of the material must be observed, otherwise the stated mechanical properties of the product can no longer be guaranteed. Observe the ambient temperature and substrate temperature. **Pretreatment of the bonding surfaces:** The materials to be sealed must be load-bearing, and free of dust, grease, and oil. Bonding and compatibility with the substrates and/or coatings used, such as paints, varnishes, plastics, etc., must be checked prior to application, or must be ensured for 647 Spray Hybrid. A manual or pneumatic applicator is used for processing. The product can be sprayed, brushed, applied using a smoothing tool and rolled. The best processing properties can be achieved by using our **Jetflow compressed air presses**; can be applied as a bead or to the surface depending on the nozzle setting. We recommend priming for optimum adhesion on absorbent/porous substrates. The parts to be joined must be bonded within the skin formation time. Adding moisture and higher temperatures can help to accelerate the curing speed.

7. Application restrictions

Bonding tests must be carried out in advance for use in conjunction with roofing membranes and/or roofing foils. Avoid contact with materials containing bitumen and plasticisers, e.g. butyl, EPDM, neoprene, insulating paints or bituminous coating. When using the product on low energy plastics, appropriate substrate pretreatment must be carried out. Before using the product, it is always advisable to carry out bonding tests on the original components and under the prevailing ambient conditions.

8. Safety instructions

Please refer to the current EC safety data sheets. Data sheets are available at any time from our website at www.ramsauer.eu. **Occupational health and safety:** Avoid swallowing, prolonged or repeated contact with the skin. Keep out of the reach of children. Request a safety data sheet!

9. Application notes

Good ventilation must be ensured during processing and curing. Due to the large number of possible influences during processing and application, the processor must always carry out a test processing before use. Note the expiry date of the material. If the products are stored and/or transported over a longer period of time (several weeks) at higher temperatures/humidity, the shelf life may be reduced or the material properties may change. Prior to processing, the user must ensure that the components (gaseous, liquid or solid) coming into contact with the sealant/adhesive are compatible and that no damage or impairments can be caused. For full-surface bonding of vapour-tight substrates, one bonding side must be moistened (caution: avoid accumulations of water!).



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10. Liability for defects

The information, in particular the suggestions for the processing and use of our products, is based on our knowledge and experience in normal use cases at the time of printing. Depending on the specific circumstances, with regard to the substrate, processing and environmental conditions, the results may differ from our information. No warranty or liability claim for any reason whatsoever arises from these instructions or from any instructions issued verbally. Ramsauer guarantees that its products comply with the technical properties specified in the technical data sheets until the expiry date. Product users must consult the latest technical data sheet, which can be requested from us. Our current General Terms and Conditions apply; you can download these at any time from our homepage at www.ramsauer.eu. On publication of a new version/revision of the technical data sheet, all previous versions of the respective product lose their validity.