

# TECHNICAL DATA SHEET



## ACRYLATE ADHESIVE Two-component



## WELDYX Premium WELDYX MASTER 5 & 15 black

WELDYX MASTER enables high-strength, structural and at the same time flexible, durable adhesive joints.

WELDYX MASTER is an industrial adhesive used to join metals, plastics and composites. Due to its high quality, it is specially tailored to the requirements of a wide range of industrial applications. Use of primers is not necessary for bonding aluminum and stainless steel. Due to its flexibility also materials with different coefficients of thermal expansion can be structurally bonded. Compared to conventional MMA adhesives, WELDYX MASTER scores with extremely low shrinkage as well as thermal, chemical and climatic stability. By testing in accordance with DIN EN 4545-2 / R1 and the fulfillment of the fire protection level HAZARD LEVEL HL 3, WELDYX MASTER 5 meets the specifications for rail vehicles with a high hazard class.

With three container sizes, integrated into an optimal system of cartridge, dispensing gun and mixer, we offer a comprehensive, individual solution.

### Sizes / article number

	WELDYX MASTER 5 black	WELDYX MASTER 15 black
50ml cartridge	WXM5.K50	WXM15.K50
490 ml cartridge	WXM5.K490	WXM15.K490

### Storage & Durability

The shelf life is, at the optimum storage temperature of +2 °C to +15 °C in the closed original container, a maximum of 9 months. A higher storage temperature leads to a significantly lower durability and can lead to damage of the cartridge. The storage temperature must not be lower than +2 °C.

### Properties (single components)

	Resin A	Hardener B
Colour:	beige	black
Viscosity <sup>1)</sup> [mPas]:	100.000-140.000	80.000-120.000
Mixing ratio A:B (volume):		10 : 1
Mixing ratio A:B (weight):		9 : 1
Density <sup>2)</sup> [g/ml]:	0,96-1,02	1,05-1,15
Flashpoint <sup>3)</sup> [°C]:		+12
Gap filling [mm]:		0,25-15

1) At 25 °C, Brookfield viscometer

2) Measured according to DIN 53217, part 2 density sphere model 475 / III

3) Measured according to DIN 51755

### Properties (cured adhesive)

	WELDYX MASTER 5 black	WELDYX MASTER 15 black
Colour:	black	black
Processing time [min]:	3 - 6	14-20
Fixing time [min]:	8 -15	35-45
Final strength after [h]:		24
Density <sup>1)</sup> [g/ml]:		0,97
Temperature resistance [°C]:		-40 to +100
Elongation at break <sup>2)</sup> [%]:		ca. 100

1) Theoretical calculation from the densities of the individual components

2) Measured according to ASTM D638 / DIN ISO 6892

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## Tensile shear strengths<sup>1)</sup>

Substrates	Tensile shear strengths [N/mm <sup>2</sup> ]
Fiberglass reinforced plastic	7-9 (substrate fracture)
PVC	11-13 (substrate fracture)
ABS	7-9
Cold rolled steel	ca. 17
Aluminum	14 -18
Stainless steel	14 -18
Acrylate	ca. 19

1) Tested to GLUETEC AA-029

## Adhesion spectrum

Metals		Plastics		Composite materials	
Aluminum	✓	Acrylates	✓	Vinyl	✓
Stainless steel	✓	Styrenics	✓	Carbon fibre	✓
Structural steel	✓	ABS Plastic	✓	Polyester (DCPD mod.)	✓
Powder coated metals	✓	PVC/CPVC	✓	Urethanes	✓
Galvanized metals	✗	Polyethylenes	✗		
		Polypropylenes	✗		
		Polytetrafluorethylenes (PTFE)	✗		
		Polyacetals	✗		

## Instructions

### Application

The optimum processing temperature is between +18 °C and +25 °C. A higher or lower temperature affects the processing time. Before each use it must be ensured that the mixer to be used is correctly attached to the cartridge and that the cartridge is correctly placed in the dispensing gun. Furthermore, it must be ensured that the surfaces to be bonded are not contaminated with oils, dust, paint, oxidation layers and all other contaminants. Before applying to the surfaces to be bonded, it is essential to squeeze a small amount of the adhesive to ensure complete mixing of both components, otherwise the adhesion properties will be reduced. The subsequent joining of the materials must take place within the processing time. After the end of the processing time, no strong mechanical stress on the adhesive should be achieved until complete curing, otherwise the adhesion properties will be affected. If you have further questions about the product or its application, please contact our application engineering.

### Surface preparation

In order to guarantee the optimum properties of WELDYX MASTER, it is imperative to clean the surfaces. The cleaning measures are to be individually adjusted to the materials and surfaces to be bonded:

#### Metals:

1. Use a clean cloth and pure acetone or isopropanol to remove dust and dirt from the surface.
2. Lightly roughen the surface by sanding or blasting.
3. Repeat step 1.

#### Plastics / Composites:

1. Clean the surface with a clean cloth and isopropyl alcohol to remove dust and dirt.
2. Lightly roughen the surface by grinding.
3. Repeat step 1.

CAUTION: Do not use gasoline or low quality alcohol for pretreatment.

#### Note:

Please note the information and notes in our respective safety data sheets. The data contained herein are for informational purposes only and are believed to be accurate to the best of our knowledge. We assume no liability for the results. For optimum functionality of the adhesive system, please only use the cartridge and mixer systems tested and released by GLUETEC. The product is only suitable for professional and experienced users. It is the user's own responsibility to take precautions to protect property and people from the hazards that may be encountered in handling and using these products. Accordingly, GLUETEC

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