

# KLEIBERIT 576.1 (MG)

## 2C-PUR-Adhesive

### Field of application

Bonding of:

- Metal end caps to filter papers of different qualities for the manufacture of filter inserts for diesel fuel, motor oil and air filters

### Advantages

- Short setting time
- Economising of adhesive by means of foam
- Very good flow properties

### Properties of the adhesive foam

Two component system, solvent free

**Base:** polyurethane  
**Component A:** KLEIBERIT 576.1 (MG)  
**Component B:** KLEIBERIT 578.0

### Mixing ratio:

comp. A : comp. B = 100 : 28 parts by volume  
 (corresponds to comp. A : comp. B = 100 : 34 parts by weight)

### Density (at 20°C):

Comp. A 1.51 ± 0.02 g/cm<sup>3</sup>,  
 when charged with air: approx. 1.47 g/cm<sup>3</sup>  
 Comp. B 1.24 g/cm<sup>3</sup> ± 0.02 g/cm<sup>3</sup>

### Viscosity at 20°C

#### Brookfield RVT,

#### sp. 4 (20 °C):

comp. A, at 2.5 rpm 8,000 ± 1,800 mPa s  
 comp. A, at 20.0 rpm 4,000 ± 800 mPa s

#### Brookfield RVT, sp. 2:

comp. B, at 20°C/20.0 rpm 300 ± 100 mPa s  
 comp. B, at 25°C/20.0 rpm 200 ± 40 mPa s

**Reaction period:** 50 g mixture in cup is rigid after 95 ± 10 sec.

### Apparent density (free foamed):

50 g in a cup 570 ± 30 kg/m<sup>3</sup>

In order to determine reaction time and apparent density, the mixture is prepared with a lab stirrer at approx. 2,000 rpm.

### Identification:

component B: is subject to identification according to the EU regulations, contains 4,4'-diphenyl methane diisocyanate (see our safety data sheet)

### Properties of the bond

#### Frontal peel strength depending on apparent density

Tested in accordance with the recommendations of the Daimler Benz delivery specifications

Apparent Density in the end cap	kg/m <sup>3</sup>	700
Frontal peel strengths	MPa	0.85
Frontal peel strengths after 100 hrs of storage in Shell Helix-oil at 135 °C	MPa	0.46

These values resulted from a dosage of 6.5 g of adhesive per end cap with a 70 mm diameter. Metal quality and pre-treatment influence the results. The above test data is given without obligation.

### Application techniques

#### Homogenise Comp. A in the packaging before use.

The moulding compound is processed by means of a two-component mixing and dosing device equipped with a dynamic mixing head and a stirring device, installed in the storage tank of component A. Alternatively, a two-component plant fitted with an aeration unit and a facility for the recirculation of components A + B can also be used. We would be pleased to supply you with information regarding manufacturers of such plants upon request.

In order to obtain a fine-pored and uniform structure it is necessary to aerate component A with 3 % to 5% maximum atomised air. Filling with atomised air is required with each refill of Component A to storage tank and after prolonged interruption. The degree of aeration will determine the specific density measurable with a Pyknometer

**Dry air only may be used for aeration, and for the compressed air supply for cleaning and transferral purposes to and from the storage tank. In this case, 'dry air' is understood to be air which has been dried by means of a refrigeration dryer or an absorption dryer.**

**Maximum water content of the compressed air: 5 g/m<sup>3</sup> at 6 bar pressure.**

**If the water content (fluid or gaseous) is too high, it will alter the product!**

## KLEIBERIT 576.1 (MG)

The most favourable working temperature range is between 20-25 °C. Higher temperatures will accelerate curing and lower temperatures will slow it down.

The filter pleats to be bonded must be dry or the adhesive will foam excessively resulting in low strength. Phenolic resin impregnated filter paper absorbs moisture after longer contact with ambient air. Therefore, bonding should take place immediately after the curing process, or the filter paper should be packaged air-tight, or the filter paper should be dried at least 30 minutes at 80°-100°C before bonding.

The end caps must be cleaned of dirt, oil and release agents. For applying the adhesive, it is recommended to place the end cap onto a rotating disc and the moulding compound injected near to the inner edge of the end cap. Due to its very good flow properties, the moulding compound spreads by means of centrifugal force. Immediately thereafter, the pleated filter paper is inserted.

The adhesive foam's characteristics make overhead processing possible after approx. 5 minutes.

### Cleaning

Tools can be cleaned and rinsed with KLEIBERIT 820.0 or acetone.

### Packaging

#### **KLEIBERIT 576.1 (MG), comp. A:**

steel drum, 250 kg net

plastic container (IBC), 900 kg net

plastic container (IBC), 1,400 kg net

#### **KLEIBERIT 578.0, comp. B:**

steel drum, 250 kg net

plastic container (IBC), 1,250 kg net

#### **KLEIBERIT 820.0**

metal can, 22 kg net

### Storage

KLEIBERIT 576.1 (MG), Comp. A and KLEIBERIT 578.0, Comp. B, may be stored for approx. 12 months in factory sealed containers at 15-25 °C.

Storage temperatures over +30°C reduce the shelf life of Comp. B.

Storage temperatures over +50°C must be avoided because this can damage Comp. B.

The adhesive foam is not sensitive to frost up to temperatures of -20°C. After cold storage, bring carefully up to room temperature before use. Protect from humidity!

Before removal from the container, component A needs to be homogenised. A fast rotating agitator with a dissolver disk is best suited for this.

Version 04.11.2020 ga; replaces previous versions

#### Adhesive and Waste Disposal

**Waste Code 080410 Comp. A**

**Waste Code 080501 Comp. B**

Our containers are made of recyclable material. Well drained containers can be recycled.

#### Service

Our application department may be consulted at any time without obligation. The statements made herein are based on our experience gained to date. They are to be considered as information without obligation. Please test and establish for yourself the suitability of our products for your particular purposes. No liability exceeding the value of our product can be derived from the foregoing statements. This also applies to the technical consultancy service which is rendered free of charge and without obligation.