

## Technical Data Sheet

---

### Terokal 5055



Solvent-free, impact-resistant  
2-component adhesive

Base: Epoxy resin / amine

Issue: 19.11.2010

#### Product Description

Terokal 5055 is a solvent-free, impact-resistant 2-component adhesive based on epoxy resin, which has high initial strength. Curing can be obtained with both low and high temperature. The cured adhesive film is hard, but not brittle.

#### Application Areas

Terokal 5055 is mainly used in car repair for structural bonding of metals (for example, car body steel with or without e-coat, galvanized steel and aluminium), when requirements in terms of crash behaviour are high. Coated surfaces are protected against corrosion.

Curing can take place at low temperatures or be accelerated using an IR radiator. The assembly bonded shall be designed such as the bonded surface or seam is only subjected to tensile or shear forces, but not to peel forces. It is recommended to carry out bonding with single overlaps. Uncured adhesive can be spot-welded.

#### Technical Data

	<b>Component A</b>	<b>Component B</b>
Base:	Epoxy resin	Amine
Colour:	Black	Grey - Green
Density:	Approx. 1.00 g/cm <sup>3</sup>	Approx. 1.10 g/cm <sup>3</sup>
Viscosity	Approx. 145 Pa·s	Approx. 75 Pa·s
Measuring equipment:	Physica UDS 200	
Measuring system:	Plate/plate 20 mm Ø	
Cross head peel speed:	10 s <sup>-1</sup>	
Temperature:	23°C	
Mixing ratio in terms of volume:	1	: 1
<b><u>Mixture (Components A + B)</u></b>		
Colour:	Dark grey	
Odour:	Almost without odour after having cured	
Density:	Approx. 1.00 g/cm <sup>3</sup>	
Processing time:	Approx. 80 mins	
Temperature:	23°C	
Solids content:	100 %	
Curing times		
Initial strength:	4 h at 23°C	
Final strength:	2 d at 23°C or 30 mins at 100°C object temperature	
Tensile shear strength after 7 d (23°C, 50 % rel. humidity), layer thickness 0.2 mm (in acc. with DIN 1465)		

After curing at low temperature:	18 to 22 MPa
After curing at high temperature:	> 20 MPa
Glass transition temperature:	82°C
Peel test (DIN EN ISO 11339)	
Steel, 0.2 mm thick layer:	> 1 N/mm
(6 h at 23°C, 50 % rel. humidity)	
Steel, 0.2 mm thick layer:	> 4 N/mm
(7 d at 23°C, 50 % rel. humidity)	
Impact peel test (ISO 11343)	
Steel, 0.2 mm thick layer, 23°C:	> 15 N/mm
E-modulus in acc. with DIN 53457:	1500 MPa

### Preliminary statement

Prior to application it is necessary to read the **Material Safety Data Sheet** for information about precautionary measures and safety recommendations. Also, for chemical products exempt from compulsory labelling, the relevant precautions should always be observed.

### Pretreatment of the substrates

The parts to be bonded must be free from oil, grease, humidity and coarse dirt. Teroson FL+ can be used for the pretreatment. Grinding surface may improve adhesion, dependent on substrate.

### Processing

Terokal 5055 is processed from a universal cartridge. Prior to screwing the static mixer, a small amount of the material should be pressed out so as to ensure that both components are passed on simultaneously. Now, the static mixer is screwed onto it. The first 10 cm approximately of the adhesive pass should be rejected, owing to the fact they may not have been mixed correctly. If mixing is correct, a **dark-grey colour of the mixed product** must appear. **Only use cartridge pistols that are equipped with a piston rod.** For easier processing the material can be warmed up to 40°C during 1 to 2 hours immediately prior to use.

After mixing, the adhesive is ready for use and must be processed within 1 hour, since viscosity increases when curing starts. The processing time depends on the temperature.

In order to avoid the bonded parts being displaced, it is recommended that they should always be fixed. The type of fixing depends on the form and size of the parts to be bonded.

### Curing

The bonded parts, which have been fixed by means of a slight pressure applied to them, can be cured at room temperature or higher. They can be painted over after having reached their initial strength. If suitable equipment for curing at higher temperature (infrared radiator, paint cabin that can be heated to 40 – 60°C or other equipment) is available, this should always be given preference over curing at room temperature for the following reasons:

- Shorter curing time; further processing or treatment is possible after only 2 hours approx.
- Higher strength is achieved
- Higher resistance of the adhesive bond against chemical loads.

### Cleaning

Teroson FL+ or Teroson D is suitable for removing fresh, uncured material from application equipment or substrates. Cured adhesive can only be removed by mechanical means.

## Storage

Danger from frost:	Under certain conditions (may crystallize; reversible at 40°C)
Recommended storage temperature	15°C to 25°C
Shelf life	12 months in its original packaging

## Packaging

Universal cartridge:	250 ml
----------------------	--------

<b>Hazard Indications/ Safety Recommendations/ Transport Regulations</b>	see Safety Data Sheet
--	-----------------------

## Important

The data above, particularly the recommendations for application and use of our products is based on our knowledge and experience. Due to different materials and conditions of application which are beyond our knowledge and control we strongly recommend carrying out sufficient tests in order to ensure that our products are suitable for the intended process and applications. Except for wilful acts any liability based on such recommendations or any oral advice is hereby expressly excluded.

**This Technical Data Sheet supersedes all previous editions.**

### Germany:

Henkel AG & Co. KGaA  
D-40191 Düsseldorf, Germany  
Phone: +49-211-797-0  
Fax: +49-211-798-4008  
www.loctite.com

### UK:

Henkel Ltd.  
Wood Lane End  
Hemel Hempstead  
Hertfordshire HP2 4 RQ  
Telephone (01442) 278000