

SICOMET®

Sicomet® 8300

March 2016

PRODUCT DESCRIPTION

Sicomet® 8300 provides the following product characteristics:

Technology	Cyanoacrylate
Chemical Type	Ethyl cyanoacrylate
Appearance	Transparent, colorless liquid
Components	One part - requires no mixing
Viscosity	Low
Cure	Humidity
Application	Bonding
Key Substrates	Plastics, Rubbers and Metals

Sicomet® 8300 is a low viscous, very fast curing cyanoacrylate instant adhesive. The product is designed for very fast fixturing and fast bonding of rubber and plastics with high strength. The good flowing behaviour allows an optimal wetting of the surface. By the low viscosity a very thin layer thickness can be achieved during the joining. Both solid and foam rubber sections are joinable with an extensive resistance to aging. The product can be used up to +80 °C operation temperature and at short-term load up to +100 °C.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Density, ISO 12185, g/cm³	1.05 to 1.1
Viscosity, Cone & Plate rheometer, , mPa·s (cP):	
Temperature: 25 °C, Shear Rate: 3,000 s ⁻¹	9 to 30
Viscosity, Brookfield, 25 °C, mPa·s (cP):	
Spindle 3, speed 100 rpm	25 to 40
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Under normal conditions, the atmospheric moisture initiates the curing process. Although full functional strength is developed in a relatively short time, curing continues for at least 24 hours before full chemical/solvent resistance is developed.

Cure Speed vs. Substrate

The rate of cure will depend on the substrate used. The table below shows the fixture time achieved on different materials at 22 °C / 50 % relative humidity. This is defined as the time to develop a shear strength of 0.1 N/mm².

Fixture Time, seconds:

Aluminum	20 to 35
EPDM	<5
Rubber, nitrile	<15
ABS	2 to 10
Polycarbonate	10 to 20

TYPICAL PERFORMANCE OF CURED MATERIAL

After 72 hours @ 22 °C

Lap Shear Strength, ISO 4587:

Steel (grit blasted)	N/mm² 16 to 26 (psi) (2,320 to 3,770)
----------------------	--

Aluminum (grit blasted)	N/mm² 16 to 20 (psi) (2,320 to 2,900)
Zinc dichromate	N/mm² 3 to 8 (psi) (430 to 1,160)
ABS	N/mm² 4.5 to 7 (psi) (650 to 1,010)
Polycarbonate	N/mm² 8 to 15 (psi) (1,160 to 2,170)
Polyamide (6.6)	N/mm² 4 to 7 (psi) (580 to 1,010)

Tensile Strength, ISO 6922:

Nitrile	N/mm² >5 (psi) (720)
---------	-------------------------

After 24 hours @ 22 °C

Tensile Strength, ISO 6922:

EPDM	N/mm² 2.1 to 2.5 (psi) (305 to 360)
------	--

After 7 days @ 70 °C

Tensile Strength, ISO 6922:

EPDM	N/mm² 2.1 to 2.5 (psi) (305 to 360)
------	--

After 10 seconds @ 22 °C

Tensile Strength, ISO 6922:

Nitrile	N/mm² ≥4 (psi) (580)
---------	-------------------------

GENERAL INFORMATION

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

For safe handling information on this product, consult the Safety Data Sheet (SDS).



Directions for use:

1. Bond areas should be clean and free from grease. Clean all surfaces with a Loctite® cleaning solvent and allow to dry.
2. To improve bonding on low energy plastic surfaces, Sicomet Power Primer may be applied to the bond area. Avoid applying excess Primer. Allow the Primer to dry.
3. Sicomet Activator HI Speed may be used if necessary. Apply it to one bond surface (do not apply activator to the primed surface where Primer is also used). Allow the Activator to dry.
4. Apply adhesive to one of the bond surfaces (do not apply the adhesive to the activated surface). Do not use items like tissue or a brush to spread the adhesive. Assemble the parts within a few seconds. The parts should be accurately located, as the short fixture time leaves little opportunity for adjustment.
5. Sicomet Activator HI Speed can be used to cure fillets of product outside the bond area. Spray or drop the activator on the excess product.
6. Bonds should be held fixed or clamped until adhesive has fixtured.
7. Product should be allowed to develop full strength before subjecting to any service loads (typically 24 to 72 hours after assembly, depending on bond gap, materials and ambient conditions).

Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local quality department for assistance and recommendations on specifications for this product.

Storage

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

Optimal Storage: 2 °C to 8 °C. Storage below 2 °C or greater than 8 °C can adversely affect product properties.

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel Corporation cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your local Technical Service Center or Customer Service Representative.

Conversions

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$
 $\text{kV/mm} \times 25.4 = \text{V/mil}$
 $\text{mm} / 25.4 = \text{inches}$
 $\mu\text{m} / 25.4 = \text{mil}$
 $\text{N} \times 0.225 = \text{lb}$
 $\text{N/mm} \times 5.71 = \text{lb/in}$
 $\text{N/mm}^2 \times 145 = \text{psi}$
 $\text{MPa} \times 145 = \text{psi}$
 $\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$
 $\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$
 $\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$
 $\text{mPa}\cdot\text{s} = \text{cP}$

Note:

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and

working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.

Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Belgium NV, Henkel Electronic Materials NV, Henkel Nederland BV, Henkel Technologies France SAS and Henkel France SA please additionally note the following:

In case Henkel would be nevertheless held liable, on whatever legal ground, Henkel's liability will in no event exceed the amount of the concerned delivery.

In case products are delivered by Henkel Colombiana, S.A.S. the following disclaimer is applicable:

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.

Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Corporation, Resin Technology Group, Inc., or Henkel Canada Corporation, the following disclaimer is applicable:

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Henkel Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

Trademark usage

Except as otherwise noted, all trademarks in this document are trademarks of Henkel Corporation in the U.S. and elsewhere. ® denotes a trademark registered in the U.S. Patent and Trademark Office.

Reference 0.3