

LOCTITE[®] UK 8202 / LOCTITE[®] UK 5400

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PRODUCT DESCRIPTION

LOCTITE[®] UK 8202 / LOCTITE[®] UK 5400 provides the following product characteristics:

Technology	Polyurethane
Product Type	PU Adhesive
Cure	Polyaddition
Condition	Solvent-free
Components	Two-components
Component A	Resin
Component B	Hardener
Application	Assembly
Color (Comp. A)	Cream
Color (Comp. B)	Brown
Mixing Ratio, by weight Comp. A : Comp. B	4 : 1
Mixing Ratio, by volume Comp. A : Comp. B	3.4 : 1

LOCTITE[®] UK 8202 / LOCTITE[®] UK 5400 is a solvent-free two-component adhesive, based on polyurethane. The resin part (component A) contains organic compounds with hydroxyl groups, the hardener (component B) is based on isocyanates.

By mixing both components in a mix ratio of 4 : 1 a hard elastic product is formed through chemical reaction. After curing the product exhibits no measurable change in volume.

As natural raw materials (from different cultivation areas) are used a variation in color between different batches is possible.

Application Areas:

LOCTITE[®] UK 8202 / LOCTITE[®] UK 5400 is used for the adhesion of pretreated metals, synthetic materials and rigid foams.

The main application is the production of sandwich elements, e.g. for the manufacture of vehicles, containers building industry, building of ships, tanks and tankers as well as technical isolations up to -190°C. Furthermore this product is used as a potting, filling and coating compound.

TECHNICAL DATA

Component A

Loctite UK 8202:

Consistency	liquid
Density, g/cm ³	1.5
Viscosity, Brookfield - RVT, 20°C, mPa·s (cP)	27,000

Component B

Loctite UK 5400:

Consistency	thin liquid
Density, g/cm ³	1.22
Viscosity, Brookfield - RVT, 20°C, mPa·s (cP)	300

Mixture (Component A + B):

Consistency	liquid
Viscosity, Brookfield - RVT, 23 °C, mPa·s (cP)	8,000
Pot life (125g, 20 °C), min	100
Final setting time (23°C), days	5 to 7
Tensile Shear Strength, MPa EN 1465	>12
Service Temperature, °C	-190 to 80

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 Material Safety Data Sheet (MSDS).

DIRECTIONS FOR USE

Pretreatment:

The substrate should be clean, dry, free of dust, oil, grease and other contaminants. The usage of suitable primers on metal surfaces can improve the adhesion and/or the long-term bond stability. The surface of plastic materials should be cleaned, so as to remove any kind of release agents present on the substrate surface. An improvement of the adhesion can be achieved by grinding or sandblasting the surface.

Application:

Adhesive components can be mixed manually by using an electrical hand mixer or by using a two-component dispensing system and inclusion of air must be prevented. After mixing no streaks must be visible. The adhesive is only to be used within a limited time (pot life). After this time the mixture gels up and is not suitable for use. Therefore only the amount that can be applied within the

time of pot life should be mixed. The pot life depends on the quantity and temperature of the mixed batch. With larger quantities and an increase in temperature, the pot life decreases. Lower temperatures extend the pot life. Adhesive components should not come into contact with moisture during storage or application. Contact with moisture generates foaming of the adhesive and weakens the bondline. Therefore all packaging should be sealed properly and protected against humidity during storage.

Curing:

LOCTITE® UK 8202 / LOCTITE® UK 5400 can be cured at room temperature above 15°C and elevated temperatures (up to 60°C). The curing time can be reduced by increasing the temperature or the addition of the accelerator Loctite UK 6100, with the simultaneous reduction of processing time (i.e. pot life, open time) to be observed. While curing there should be adequate contact pressure (load pile, presses, clamps) and fixture hold the joint in place. An adhesive squeeze out along the bond line is a good indication of sufficient adhesive in the joints.

Cleaning:

Fresh, uncured material (cleaning application equipment, substrate contamination etc.) can be removed with LOCTITE® SF 8040; cured adhesive can only be removed mechanically.

TYPICAL TEST RESULTS

Tensile Shear Strength (in MPa) as function of the curing time at 20 °C:

Time / Zeit	1d	2d	5d	7d
TSS	7	12	14	16

Tensile Shear Strength (in MPa) as function of the curing time at elevated temperatures (Measured at 20 °C):

Curing temp. / Aushärtetemperatur	0.5h	1h	2h	3h	7h
80°C	4.5	8.5	12	14	16.5
100°C	11.5	14.5	16.5	17	17.5

Tensile Shear Strength * (in MPa) at different temperatures (after 12 days at ambient temperature):

Temperature	-180°C	-40°C	-20°C	0°C	20°C	80°C	100°C
TSS	31.2	30.8	31	26	19.9	3.5	3

Product Specification

The technical data contained herein are intended as reference only and are not considered specifications for the product. Product specifications are located on the Certificate of Analysis or please contact Henkel representative.

Approval and Certificate

Please contact a Henkel representative for related approval or certificate of this product.

Data Ranges

The data contained herein may be reported as a typical value.

Temperature/Humidity Ranges: 23 °C / 50% RH = 23±2 °C / 50±5% RH

Storage:

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

Optimal Storage for LOCTITE® UK 8202: 15 to 30°C.

Optimal Storage for LOCTITE® UK 5400: 15 to 30°C.

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

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

ADDITIONAL INFORMATION**Disclaimer**

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Reference 0.2