

Brand	KGS
Article	KGS PU 2011
Description	Polyurethane construction adhesive
KGS article number	27231
Date	November 2019



Note: This image is for illustration purposes only

Advantages

- Construction adhesive
- Compatible with natural stone
- Fast functional strength
- Fast further processing possible
- High adhesion forces
- Usable on stone, ceramics, metal, wood and other surfaces
- Hard, grindable adhesive joint
- Solvent-free
- 2-component system
- Easy handling due to tandem cartridge
- Swiss Diamond Technology
- Made in a modern ISO 9001 certified factory in Germany

Possible applications

- Stone
- Natural stone
- Porcelain
- Ceramics
- Tiles
- Metal
- Wood
- Reinforcements
- (Sub-)constructions

Area of application

KGS PU 2011 is used by specialist companies as a special adhesive for the structural bonding of stiffening profiles made of GFRP rods, aluminium or metal(s) to natural/artificial stone, e.g. for the manufacture of kitchen worktops. KGS PU 2011 is thixotropically adjusted and can be painted over in the cured condition. KGS PU 2011 can also be used to bond stone to stone.

Technical data

Basis	2-component PU reaction adhesive, solvent-free (free from volatile organic compounds; boiling point < +170 °C)																						
Colour	Black																						
Mixing ratio	Volume ratio A:B = 1:1																						
Viscosity	at +20 °C, pasty																						
Density according to EN 542	1.47 g/cm ³																						
Pot life (of a 100 g batch at +20 °C)	approx. 3 minutes																						
Processing time (cartridge with static mixer at +20 °C)	approx. 1.5 minutes At a processing temperature of +30 °C the times are halved, at a processing temperature of +10 °C the times are doubled																						
Time to reach functional strength at +20 °C	12-15 minutes with an adhesive joint width of 0.2 mm (if the parts to be joined also have a temp. of approx. +20 °C). The use of extremely cold or warm materials can lead to stress in the bonded construction, which can have a negative effect on the adhesive properties. Wider adhesive joints retard the reaching of functional strength																						
	<p style="text-align: center;">Ermittlung des Festigkeitsanstiegs Zugscherfestigkeit Alu/Alu 0,2mm-Fugen bei +20°C</p> <table border="1"> <caption>Data points for Zugscherfestigkeit Alu/Alu 0,2mm-Fugen bei +20°C</caption> <thead> <tr> <th>Zeit [min]</th> <th>ZSF [N/mm²]</th> </tr> </thead> <tbody> <tr><td>0</td><td>0.0</td></tr> <tr><td>5</td><td>0.2</td></tr> <tr><td>10</td><td>0.8</td></tr> <tr><td>15</td><td>3.5</td></tr> <tr><td>20</td><td>5.5</td></tr> <tr><td>25</td><td>7.0</td></tr> <tr><td>30</td><td>10.0</td></tr> <tr><td>35</td><td>10.5</td></tr> <tr><td>40</td><td>10.8</td></tr> <tr><td>45</td><td>11.0</td></tr> </tbody> </table>	Zeit [min]	ZSF [N/mm²]	0	0.0	5	0.2	10	0.8	15	3.5	20	5.5	25	7.0	30	10.0	35	10.5	40	10.8	45	11.0
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Curing time (at +20 °C, 50% rel. humidity)	approx. 3 hours; 24 hours to reach final strength.																						
Minimum working temperature	+7 °C																						
Tensile shear strength at +20 °C according to EN 1465 with a 0.2 mm joint	24.0 N/mm ²																						
Tensile strength	18.0 Mpa																						
Impact strength (pendulum)	0.72 kJ/m ²																						
Shore hardness	In the cured condition = 85 D, according to DIN 53505 Shore-D																						
Shrinkage	< 0.5 mm/m																						
Modulus of elasticity	1523 Mpa																						
Temperature-resistant up to	+120 °C																						
Water absorption	+2.5%																						
Weather resistance	The black KGS PU 2011 adhesive may change its colour slightly after long exposure to sunlight; however, it will not lose its strength.																						
Aging process with hot steam	approx. 15% lower tensile strength																						

Preparations

Acclimatise the adhesive before use. The parts to be bonded must be dry and free from dust and grease. Prior cleaning must be adapted to the material to be used. Prior grinding of the surfaces can increase the adhesive strengths. It is possible to fix the aligned parts until the functional strength is reached. When doing so, the elements should be fixed firmly, but not with force. If necessary, a joint width should be defined beforehand.

Notes on processing

Cut the cartridge tip open at the specified point using a knife.

The static mixing tube is screwed onto the open adhesive cartridge. Through the use of the KGS compressed air gun or hand gun, the adhesive is mixed homogeneously in the mixer. The first filling of the static mixer – approx. 20 g – may not be used for bonding (2 x 310 ml). Press the adhesive bead out evenly.

The processing time is about 3 min. at room temperature. If new adhesive is withdrawn during this time, the static mixer can continue to be used. If this timespan is exceeded, the curing process may already have started inside the mixer. New adhesive can mostly still be expressed, but its homogeneity is then no longer guaranteed. This inhomogeneous mix will lead to undesirable side effects. Therefore, if the processing time is exceeded, always use a new mixing tube and do not use the first 20 g.

After work is finished, the used static mixing tube remains on the cartridge and is replaced by a new one when work resumes.

An opened cartridge must be used up within 2 weeks.

A permanently aging-resistant bond cannot be achieved with bare aluminium. Aluminium surfaces must be chemically and/or mechanically pre-treated.

The bonding of materials with different longitudinal expansions must be evaluated with regard to their long-term behaviour, in particular in areas of application with changing temperatures.

You must carry out your own tests to check POT LIFE, PROCESSING TIME and FIXING TIME. The local conditions may vary considerably and influence the bond.

Cleaning

Uncured adhesive is cleaned off with KGS LF cleaner. Cured KGS PU 2011 can only be removed mechanically.

Storage

Original containers must be stored in a dry place, without direct sunlight, at a temperature between +15 °C and +25 °C.

Shelf life if unopened: 12 months.

Container sizes

2 x 310 ml, sales unit 10 pcs

Accessories

- KGS static mixing tube for 2 x 310 ml - 19282
- KGS DLP 1000 compressed air gun for 2 x 310 ml - 19269
- KGS HDP 1000 manual gun for 2 x 310 ml - 19268
- KGS LF cleaner - 19258

Labelling

The binder is not subject to compulsory labelling within the meaning of the Hazardous Goods Regulations.

The hardener is subject to compulsory labelling within the meaning of the Hazardous Goods Regulations.

Please refer to the safety data sheet for further information.

Contact information

KGS DIAMOND INTERNATIONAL
Industriestraat 2, 8081 HG Elburg
The Netherlands
Tel.: +31 (0) 525 683 300
Fax.: +31 (0) 525 683 530
sales@kgs.swiss

KGS Stone Northern Europe
Industriestraat 2, 8081 HG Elburg
The Netherlands
Tel.: +31 (0) 525 685 500
Fax.: +31 (0) 525 683 530
salesnl@kgs.swiss

KGS Winter GmbH
Alter Hellweg 96
44379 Dortmund
Germany
Tel.: +49 231 967 879 00
Fax.: +49 231 967 879 09
kgswinter@kgs.swiss

Personal protective equipment



Eye and face protection, protective gloves; see safety data sheet for details

Important note

Our usage instructions, processing guidelines as well as product or performance data and other technical statements are only general guidelines; they merely describe the character of our products (specification/determination of values at the time of production) and services and do not constitute a guarantee within the meaning of Article 443 BGB (German Civil Code). Due to the wide variety of uses of the individual product and the respective special conditions (e.g. processing parameters, material properties, etc.), it is up to the user to carry out trials himself; our free application advice, whether verbal or written or with regard to tests, is of a non-binding nature. This document replaces earlier editions

Disposal

Completely empty bottles can be disposed of via a waste processing company (in Germany INTERSEROH).

Product dimensions

2-component cartridge	220 x 96 x 48 mm
2-component cartridge including the dosing tip	240 x 96 x 48 mm (± 1.0)
Filling weight	890 g

Warning notes



Danger

Packaging and label



WEI_0103662_V05_1
0-19_19-11606 - 201



WEI_0103663_V04_1
0-19_19-11606 - 201

Packaging unit for 2 x 310 ml	10 bottles in a carton
Sales unit per pallet for 2 x 310 ml	450 pcs
Packaging material	Carton
External dimensions of carton (L x W x H) for 2 x 310 ml	250 x 205 x 280 mm
Shipping information	Not hazardous goods (refer also to safety data sheet)

Revision history

Number	Date	By	Comments
0	November 8, 2019	OS	Initial version
1	November 21, 2019	HvD	Changed to new layout