TECHNICAL DATA SHEET

KEOL

HYBRID ADHESIVE

K-HY 0132 SF

- ABSORBES SHOCK AND VIBRATION
- HIGH PEEL RESISTANCE

0132 SF adhesive from the K-HY range is a flexible, elastic, low-odor instant adhesive that provides exceptional adhesion to a very wide range of materials and surfaces. It has a cure time of only six minutes and becomes a polymer with over 200% elongation in 10 minutes. Its working time (in the mixer) can be up to six minutes. It can be used with large clearances, and provides instant adhesion to most plastics, woods and metals, as well as porous and irregular surfaces.

CHEMICAL BASIS	**Cyanoacrylate**
COLOR	**Transparent**
HARDNESS	**76A**
VISCOSITY	**12000**

PROPERTIES	COMPONENT A	COMPONENT B
Chemical basis	Cyanoacrylate	Plasticizer
Mix ratio	4: 1	
Color	Transparent	
Filling capacity	1cm (0.39in)	
Operating temperature	-40 ° C to 60 ° C	
Content - VOC	61 g / L (ISO 11890-2)	19g / L (ISO 11890-2)
Relative density	1.03	1.11
Viscosity at 50rpm	6,000 - 9,000	3,000 - 7,000
Density (ASTM D1875: 23 ° C)	1.12 g /mL	1.10 g /mL
Shore A hardness (ISO 868-2003)	76	
Tensile strength (ISO 527)	2Mpa	
Modulus of elasticity (ISO 527)	2Mpa	
Elongation at break (ISO 527)	259%	
Glass transition temperature (ISO 6721)	35 ° C	
Linear shrinkage (ISO 10563)	9.2%	
Water absorption (after 24 hours - ASTM D-542)	11.3%	
Impact resistance (after 24 hours - ISO 9653)	21.0KJ / m²	
Electrical properties of resistivity IEC 60093		
Surface resistivity DC 500 V (Ohm)	$3.7\text{-}10^{14}$	
Volume resistivity DC 1kV Ohm.m)	$3.2\text{-}10^{10}$	
DC breakdown voltage according to IEC 60243-2	45 kV / mm	

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SURFACE PREPARATION

The strength and durability of joints depend on proper pretreatment of the surfaces to be bonded. At a minimum, the bonded surfaces should be cleaned with a good degreaser to remove all traces of dust, dirt, oil or grease.
The pretreatment of thermoplastic materials such as PVC, polycarbonate, polypropylene, PMMA, etc., can be made using a light blend of ethers or isopropanol. Strong solvents are not recommended as they may damage plastic surfaces.
For any other surface, acetone or trichlorethylene can be used for pretreatment. Never use petroleum or any other solvent.
When possible, perform mechanical abrasion to remove paint from surfaces (if necessary) and to increase adhesive strength and retention. Allow the pretreated surface to dry before applying the adhesive.

APPLICATION OF THE PRODUCT

Typical applications of this product are leather repair, joint repair, elastic seam sealing, joint sealing, flexible bonding, draft proofing, bonding floors and panels , vibration damping, reinforcement of parts, glass-rubber bonding for bus and train windows, and luxury clothing.

1. Before applying **0132SF adhesive from the K-HY range**, make sure the surface is clean, dry and free from grease.
2. For use, parts A and B must be mixed. → The product can be applied directly from the syringe using the supplied plunger and dispensed through the recommended mixing nozzle.
3. Hold the syringe upright and insert the plunger. → While keeping the syringe upright, remove the cap, attach the mixing nozzle and start dispensing the adhesive upward until the bubbles in the smaller component have been removed.
4. Distribute and discard a bead as long as the mixing nozzle, to ensure sufficient mixing.
5. Apply the mixed adhesive to one of the surfaces to be joined. → The parts must be assembled immediately after applying the mixed adhesive. → The bonds must be maintained by fixing or tightening until the adhesive has hardened. Prevent assembled parts from moving during curing. → The bond should be allowed to develop to its full strength before subjecting it to a service load (usually 24 hours).

PERFORMANCE AND SETTING TIME

Résistance au cisaillement par recouvrement (ISO 4587) à 23°C (73,4°F) (MPa)		
après 24 heures de cure @ RT		
Acier doux sablé (GBMS)	10	+/- 2
Aluminium (A5754)	5	+/- 1
ABS	6	+/- 1 SF
PVC	2	+/- 1
Phénolique	4	+/- 1
Polycarbonate	5	+/- 1 SF
@ 100mm/min après 24h de séchage à RT		
Nitrile	0,02	+/- 0,05
Néoprène	0,02	+/- 0,05
@ 2 mm/min après 1 semaine de durcissement à température ambiante		
Acier doux sablé (GBMS)	11	+/- 1
Résistance au pelage en T (ISO 11339) à 23°C (73,4°F) (N/mm)		
@ 100mm/min après 24 h de durcissement @ RT		
Acier doux	1	+/- 0,3

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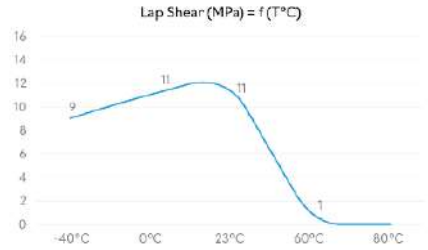
Temps de fixation* (0,1N/mm2)	
Acier inoxydable (A316)	60 - 90 secondes
Acier (acier doux)	30 - 50 secondes
Aluminium (A5754)	60 - 120 secondes
Néoprène	60 - 90 secondes
EPDM	45 - 75 secondes
Caoutchouc, nitrile	30 - 60 secondes
ABS	45 - 75 secondes
PVC	15 - 80 secondes
Polycarbonate	60 - 90 secondes
Phénolique	115 - 140 secondes
Bois (chêne)	150 - 210 secondes
Bois (pin)	130 - 180 secondes
Panneau de particules	45 - 60 secondes
Cuir	50 - 70 secondes
PC/ABS	60 - 90 secondes
Papier	60 - 90 secondes

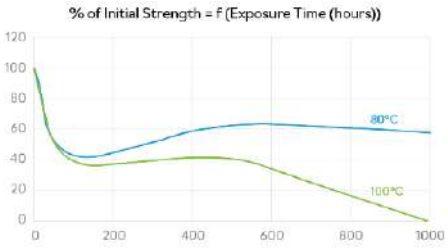
*si elles sont stockées dans de bonnes conditions

THERMAL AND CHEMICAL RESISTANCE

The adjacent graph shows the performance of the adhesive on shot peening, mild steel (GBMS) at different temperatures. The adhesive cured for one week at 22 ° C (71.6 ° F). Lap shear strength was tested according to ISO 4587. The strength test was carried out in a climatic chamber which was placed for 30 minutes before the temperature test..



The graph opposite shows the results of thermal aging. The adhesive was aged at the indicated temperature, tested at 22 ° C (71.6 ° F) and cured for one week. Lap shear strength has been tested in accordance with ISO 4587 on shot blasted mild steel (GBMS). Shear aged under conditions shown and tested on GMBS.



% of the initial force in relation to the exposure time (hours) and in relation to the type of contaminant

Tests on GMBS% of initial force

ENVIRONMENT TEMP 100 H 500 H 1000 H

Engine oil 40 ° C (104 ° F) 88 91 114
Ethanol 23 ° C (73.4 ° F) 74 52 2
Gasoline 23 ° C (73.4 ° F) 49 94 78
IPA 23 ° C (73.4 ° F) 48 68 72
Water 23 ° C (73.4 ° F) 58 17 0

% of initial force over exposure time (hours)

% of initial force

ENVIRONMENT - 95% rH & 40 ° C 100 H 500 H 1000 H
GBMS 10 0 0
Polycarbonate 58 59 55

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STORAGE OF THE PRODUCT

Optimal storage: 2 ° C to 8 ° C (35.6 ° F to 46.4 ° F). Storage at temperatures below 2 ° C or above 8 ° C may adversely affect the properties of the product. If stored correctly, this product has a shelf life of 9 months from the date of packaging.

LIMITS FOR HANDLING THE PRODUCT

This product is not recommended for use in pure oxygen and / or oxygen rich systems and should not be chosen as a sealant for chlorine or other strong oxidizing materials. Materials removed from containers may become contaminated during use. Do not return the product to its original container. KEOL assumes no responsibility for products that have been contaminated or stored under conditions other than those indicated above. If you need more information, please contact your local technical service center or customer service representative. The safety data sheet is available on the KEOL website and must be consulted for handling, appropriate clean-up and containment of spills before use. Keep containers covered to minimize contamination.

NOTE

The information, and particularly the recommendations regarding the application and the KEOL products, are given to you in good faith and are based on current knowledge and experience of the products having been properly stored, handled and applied under normal conditions.

KEOL cannot take responsibility for the results obtained by others since we have no control over their method.

It is up to the user to determine the suitability of the products for the specific application for any method. production costs mentioned in this document. Also, it is up to the user to adopt the necessary precautions as recommended for the protection of the establishment and the people against any kind of risks which could arise during the handling and the use of the products.

KEOL cannot assume all the guarantees mentioned or implied, including guarantees of market value. or compliance for a specific reason, arising from sales or use of KEOL products. KEOL cannot assume liability for incidental consequences or damages of any kind, including lost profits.

Users should always refer to the most recent edition of the technical data sheet for the product concerned. Copies of this document will be provided upon request.