

### Summary

Weicon VA 8312 Industrial Strength Super Glue is a fast curing, high quality grade of cyanoacrylate contact adhesive. This grade creates high strength bonds, has a low viscosity and is compatible with a variety of materials including plastics, rubbers, metals, balsa wood, leather and other relatively dense fabrics.

VA 8312 Industrial Strength Super Glue is able to withstand temperatures up to 80°C and is a clear, colourless liquid. It has been approved by ISEGA as an adhesive suitable for use in food technology.



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### Applications

- Bonding and fixing rubber seals and gaskets
- Making rubber O rings
- Fixing rubber or plastic bumpers
- Fixing plastic components and parts
- Bonding in and around food preparation areas
- Securing and fixing components in electronics
- Model making, home repairs, craft and DIY

### Technical Details

#### General Surface Compatibility

|                 |    |
|-----------------|----|
| Metal           | +  |
| Plastic*        | ++ |
| Rubber          | ++ |
| EPDM Elastomers | +  |
| Wood            | -  |
| Balsa-Wood      | +  |
| Glass / Ceramic | -  |
| Leather         | +  |

++ = Highly Compatible + = Compatible - = Not Compatible

\*Performance will vary depending on the exact type of plastic being bonded. Generally, low surface energy plastics will be much harder to bond to than high surface energy (such as rigid PVC).

### Properties

|  |   |  |
|--|---|--|
| Ester Type   | Ethyl   |  |
| Condition / Nature   | Colourless, Clear Liquid  |  |
| Viscosity at 20°C Brookfield   | 20-40 MPa   |  |
| Maximum Gap Covering Power**   | 0.1mm   |  |
| Specific Gravity at 20°C   | 1.05 g/cm <sup>3</sup>  |  |
| Flash Point According To Abel-Pensky DIN 55213                                 | 87°C  |  |
| Initial Adhesion on Aluminium*   | 30-60 Seconds   |  |
| Initial Adhesion on Nora Test Rubber*  | 2-10 Seconds  |  |
| Initial Adhesion on Rigid PVC*   | 5-30 Seconds  |  |
| Final Strength After   | 24 Hours  |  |
| Shear Strength<br>Acc. To DIN<br>53283   | Sand-Blasted Steel  | 20 N/mm <sup>2</sup>   |
|  | Sand-Blasted Aluminium  | 14 N/mm <sup>2</sup>   |
|  | Rigid PVC   | 13 N/mm <sup>2</sup>   |
|  | ABS   | 12 N/mm <sup>2</sup>   |
|  | PC  | 13 N/mm <sup>2</sup>   |
|  | NBR   | >8 N/mm <sup>2</sup> (bonding exceeds strength of substrate) |
| Temperature Resistance   | -50°C to +80°C  |  |
| Short-Term Temperature Resistance  | +100°C  |  |
| Squatting Temperature  | +150°C  |  |
| Refractive Index   | 1.49 n <sup>D20</sup> (Similar to Glass)                          |  |
| Linear Thermal Expansion Coefficient ISO 11359 / ASTM D 696 (K <sup>-1</sup> ) | 80 x 10 <sup>-6</sup>   |  |
| Specific Forward Resistance DIN 53482* / ASTM D 257                            | >10 <sup>15</sup> Ω mm  |  |
| Dielectric Strength DIN 53481* / ASTM D 149                                    | 25 kV/mm  |  |
| Thermal Conductivity ISO 8894-2 / ASTM C 177                                   | 0.1 W/m·K   |  |
| Approvals & Recognitions   | ISEGA Certificate of Conformity as an Adhesive in Food Technology |  |

### Solubility

Dimethyl Formamide, Dimethyl Sulfoxide, Acetonitrile, Alkali.  
Swelling is possible after long-term storage in ethyl acetate, acetone and methylene chloride.

\*Achieved in normal climate (DIN 50014) +23°C and 50% relative humidity. Within the given time period, handling strength can be reached.

\*\*These details are dependent on the type of material to be bonded and its properties.

#### Important

The values listed here and the information presented should not be treated as a substitute for specific technical advice. We cannot warrant the products performance or suitability for particular applications.

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### **Preparation of the Surface**

To achieve the best possible results, the surfaces being bonded must be clean and dry. Smooth surfaces should be roughened whenever possible (e.g. by sanding) as this increases the available surface area for the adhesive to bond with.

### **Application**

Apply Weicon VA 8312 Industrial Strength Super Glue to one of the surfaces being joined. The bond line (or gap between the parts being bonded) should be between 0.05mm and 0.1mm. Outside of this, complete curing may not be achieved.

If bonding larger surface areas, Weicon Super Glues should be applied drop by drop to minimise the risk of inner tension of the adhesive. All of these glues are very economical as a single drop is sufficient for covering about 3-5cm<sup>2</sup> of surface area.

VA 8406 should be used in an environment with 40-80% relative humidity if at all possible. In conditions below 40%, the cure will be substantially slowed or even inhibited. With a relative humidity greater than 80%, or when bonding basic substrates such as glass, shock-curing can occur. In such situations, some materials exhibit a drop in bond strength of approximately 10-15% due to inner tensions created in the bonding line.

Basic reacting surfaces (with pH values >7) will cure faster while acidic reacting surfaces will slow, and under certain conditions, completely inhibit polymerisation.

### *Physiological properties / health and safety*

Physiologically, all Weicon Cyanoacrylate Adhesives may be considered essentially harmless. However, it is prudent to ensure that there is sufficient ventilation of work areas to cope with vapours released by the adhesive. Vapours released from contact adhesives may cause irritation to mucus membranes and the eyes. Avoid contact with skin and eyes (wear gloves and protective goggles). The use of Weicon Hand Protective Foam will also assist with preventing skin irritation and hand cleaning problems. For more information on this topic, please refer to the appropriate SDS.

### **Storage**

Weicon VA 8312 Industrial Strength Super Glue should always be stored in a cool, dry and dark area. The shelf life is at least 9 months if stored at room temperature. If stored at 5°C (in a refrigerator) the shelf life can be extended to over 12 months.

### **Availability**

Weicon VA 8312 Industrial Strength Super Glue is available from Swift Supplies in 12gm, 30gm and 60gm Pens.

These pens are a unique feature of our Weicon Adhesive range that allows for natural, accurate and easy application of the adhesive.

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