

VULCAN[®] 81

TECHNICAL DATA SHEET

One-coat Adhesive

Product Explanation

· General

-VULCAN 81 is a high performance one- coat bonding agent.
 -VULCAN 81 is suitable for bonding of NR, SBR, NBR, HNBR, CR, AEM, ECO, IIR to metals and plastics.

· Environment-friendliness

- Non-detection of 6 hazardous substances (Pb, Cd, Hg, Cr (VI) PBB, PBDE).

· Usability

- Various types of solvents can be used.
 - Can be used from 120°C to 200°C.
 - Easy to apply by spray, dip and brush.

Properties Information

Appearance	Black liquid
Composition	Polymer and filler dispersion in Xylene and MIBK
Viscosity	60s (Zahn Cup No. 3 @25°C) 350-900 CPS(Brookfield LV, spindle 2, 30RPM @25°C)
Specific gravity	0.95 - 0.99
Flash point	18°C
Solids content	22 - 26%(drying oven 4hr @90°C)
Dilution solvent	Toluene, Xylene, MEK, MIBK,
Storage period	12 months from the date of production(0~28°C)

Application

- VULCAN 81 can be applied by spraying, dipping and brushing.
- Apply enough VULCAN 81 to metal surface to make concealed surface
- The recommended application thickness is of about 20~25 μ m, when necessary in severe environmental resistance, thicker application(25~30 μ m) may be required.

Recommended Dilution Ratio

Brush	None
Dipping	10~20 parts per hundred parts of adhesive by weight(MEK, MIBK, Toluene, Xylene) -> TOTAL 110~120
Spraying	40~60 parts per hundred parts of adhesive by weight(MEK, MIBK, Toluene, Xylene) -> TOTAL 140~160

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- Recommended viscosity after dilution for **dipping** (Xylene 15parts per 100parts of adhesive. Total 115)
 - 69-89s (Zahn Cup No. 2 @25°C)
 - 20-30s (Zahn Cup No. 3 @25°C)
 - 45-65s (Ford 4 Cup, DIN 4, Frikmars Cup @25°C)
- Recommended viscosity after dilution for **spraying** (Xylene 50parts per 100parts of adhesive. Total 150)
 - 20-30s (Zahn Cup No. 2 @25°C)
 - 8-15s (Zahn Cup No. 3 @25°C)
 - 16-24s (Ford 4 Cup, DIN 4, Frikmars Cup @25°C)

In most cases a fast drying solvent such as MEK is preferred.

* This recommendation was made by our test machine. So you can fit this based on your own way. Enough test is necessary before use.
Suitable dilution proportion for each type of application can be obtained through experience.

Important Details

- ① VULCAN 81 requires enough stirring before use
- ② When not stirred enough, the solvent and solid part get dispersed and defects can be caused. Please pay enough attention during dilution and stir properly.
- ③ Please apply after removing completely oil, humidity, dust, etc. from the metal to be applied
- ④ It is recommended to dry at room temperature(10~30°C) until the solvent is completely evaporated(60 minutes) when applying the adhesive. . Please dry at less than 80°C for 10 minutes when drying by heat.
- ⑤ The dried VULCAN 81 after applying on metals is black and prevents from corrosion. Additionally, the applied metal can be stored for a few months without change in an environment not contaminated.
- ⑥ The recommended molding temperature is of 130°C~190°C.

Precautions

- ① Please be careful with inflammables or ignition as it contains flammable agents, and avoid work in confined spaces.
- ② Wear suitable protection gear when handling the product as it contains organic solvents. Do not inhale mist, etc. dispersed in the air.
- ③ Be careful to do not throw or cause strong impact on the product during transportation and storage.
- ④ Please refer to the MSDS data for more detailed information.

All the property information was recorded by production lot, and the value specified on the TDS indicates the general average property values. Additionally, each proposal was based from experiments and does not guarantee results on the real site. Please utilize after testing in advance.

U-ONE R2M Co., Ltd. is not only working hard in adhesives for rubber and metals but it is also conducting researches for the development of all types of adhesives for different materials. Please contact us by telephone or e-mail for further inquiries and suggestions about the product.

U-ONE R2M Co., Ltd.

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