

## Cohedur® VP KA 9197

Specialty and Standard Chemicals

### Function

Cohedur® VP KA 9197 is a valuable addition to the range of Cohedur® bonding agents. It serves as the resorcinol component of the three-component system, but direct bonding compounds containing it have better scorch resistance than those made with resorcinol itself. Cohedur® VP KA 9197 must be used in conjunction with Cohedur® A grades and reinforcing silica, e.g. Vulkasil® S. It is intended mainly for use with chloroprene rubber, e.g. Baypren®.

### Product description

Composition: resorcinol diacetat

Appearance: light yellow to brown liquid

Density (at 20 °C): approximately 1.18 g/cm<sup>3</sup>

<u>Property</u>	<u>Nominal value</u>	<u>Unit</u>	<u>Test method</u>
Assay	≥ 95.0	%	Gas chromatography (RDA)
Refractive index (at 20 °C)	1.505 ± 0.002	---	DIN 51 423

### Use

Mode of action: Cohedur® VP KA 9197, in conjunction with Cohedur® A grades and reinforcing silica, e.g. Vulkasil S, gives vulcanizates based on chloroprene rubber (e. g. Baypren®) good adhesion to all the normal reinforcing materials (rayon, polyamide, polyester with special spin finish, glass fibers, and bare, galvanized and brasscoated steel cord) without their first having to be treated with a bonding agent. The bonds are highly resistant to dynamic and thermal stresses.

The bonding is further improved to a small extent by preliminary dipping of the reinforcing materials in resorcinol formaldehyde solution. Cohedur® VP KA 9197 and Cohedur® A grades can also be used in rubber solutions for the dough spreading process. Direct bonding compounds are, however, the main field of application because they enable dipping of the fabric or other reinforcing material to be dispensed with.

Cohedur® VP KA 9197 is a special product intended mainly for chloroprene rubber compounds but it can also be used for direct bonding compounds based on NR, SBR, BR and their blends. Experience gained so far indicates that Cohedur® VP KA 9197 is not suitable for NBR.

Processing:

Cohedur® VP KA 9197 can be added at practically any stage of the compounding operation. However, the required methylene donor, i.e. Cohedur® A grades, should be added at the end of the compounding cycle because the bonding system is sensitive to heat. Nevertheless, combinations of Cohedur® VP KA 9197 with Cohedur® A grades are less sensitive to heat than are combinations of Cohedur® RS with Cohedur® A grades or Cohedur® RDL.

Cohedur® VP KA 9197 is absorbed by the compound immediately. It disperses quickly and well.

Unlike resorcinol, Cohedur® VP KA 9197 has no tendency to bloom. In addition, since it forms no rubber-insoluble adducts with methylene donors, the direct bonding compounds are entirely free from blooming.

Direct bonding compounds containing Cohedur® VP KA 9197 in conjunction with Cohedur® A grades have good scorch resistance, though their scorch times are slightly shorter than those of compounds without bonding agents. Hexamethylene tetramine (e.g. Cohedur® H 30 or Rhenogran® Hexa-80) can be used, but the scorch resistance advantage is then lost.

Vulcanizate Properties:

Combinations of Cohedur® VP KA 9197 with Cohedur® A grades improve the physical properties of the vulcanizates, such as the tensile strength, modulus, tear resistance and Shore A hardness values. They somewhat reduce the elongation at break and elasticity.

Like all bonding agents containing resorcinol, combinations of Cohedur® A grades with Cohedur® VP KA 9197 give light-colored vulcanizates the reddish-brown color that is typical of resorcinol formaldehyde resins. The discoloration does not extend to adjacent rubber that contains no Cohedur®. Moreover, as resorcinol formaldehyde resins are highly polymeric, the reddish-brown color is not washed out by water or organic solvents.

The intensity of the discoloration can be reduced by adding titanium dioxide to the compound.

Dosage:

Typical levels of addition based on 100 parts by weight of elastomer are:

Cohedur® VP KA 9197	3.5 - 4.5	phr
Cohedur® A *)	2 - 2.5	phr
Vulkasil® S	10 - 30	phr

\*) Cohedur® A 200; for Cohedur® A 250 the quantity must be doubled.

## Packaging

1 m<sup>3</sup> container (1000 kg).

## Storage stability

In original closed containers under cool (between 0 °C and +40 °C) and dry conditions 365 days from date of production.

## Handling

For additional handling information on Cohedur® VP KA 9197 please consult current safety data sheet.

These raw material properties are typical and, unless specifically indicated otherwise, are not to be considered as delivery specification.

Baypren® is a Registered Trademark of Bayer AG, Germany.  
Cohedur® and Vulkasil® are Registered Trademarks of LANXESS Deutschland GmbH.  
Rhenogran® is a Registered Trademark of Rhein Chemie Rheinau GmbH, Germany.

This is a trial product. Further information, including amended or supplementary data on hazards associated with its use, may be compiled in the future. For this reason no assurances are given as to type conformity, processability, long-term performance characteristics or other production or application parameters. Therefore, the purchaser/user uses the product entirely at his own risk without having been given any warranty or guarantee and agrees that the supplier shall not be liable for any damages, of whatever nature, arising out of such use. Commercialization and continued supply of this material are not assured. Its supply may be discontinued at any time. In other respects, the trial product is subject to our current version of the General Conditions of Sale and Delivery.

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