

VINNAPAS® 192 (CGN)



Polymer Dispersions

VINNAPAS® 192 (CGN) is a self-crosslinking, aqueous polymer dispersion produced from the monomers vinyl acetate and ethylene for the Nonwovens market. The dispersion is produced without the use of plasticizers.

Properties

- VINNAPAS® 192 (CGN) offers a unique balance of high dry and wet strength, excellent absorbent properties, and imparts good handfeel.
- The dispersion has a low formaldehyde content of less than 100 ppm.
- Especially suited for use in feminine

hygiene and related absorbent products, and pre-moistened wipes

Technical data

Specification

Property	Condition	Value	Method
Solids content	-	51 - 53 %	DIN EN ISO 3251
Viscosity, dynamic	23 °C	50 - 400 mPa·s	DIN EN ISO 2555
pH	-	4.5 - 6.0	DIN/ISO 976

General Characteristics

Property	Condition	Value	Method
Density	23 °C	approx. 1.07 g/cm ³	DIN EN ISO 2811-3
Minimum film forming temperature	-	approx. 0 °C	DIN ISO 2115
Frost resistance	-	protect from freezing	specific method
Protective colloid / emulsifier system	-	anionic surfactants	-
Appearance of the dispersion film	-	clear, glossy	Visual
Surface of the dispersion film	-	tack free	-
Elongation at break ⁽¹⁾	-	approx. 1300 %	DIN EN ISO 527, part 1 - 3
Glass transition temperature	-	approx. 10 °C	DSC, specific method
Predominant particle size	-	approx. 0.1 - 3.0 µm	specific method
Tensile strength ⁽²⁾	-	approx. 9.0 N/mm ²	DIN EN ISO 527, part 1 - 3

¹(crosslinked)

²(crosslinked)

These figures are only intended as a guide and should not be used in preparing specifications.

All the information provided is in accordance with the present state of our knowledge. Nonetheless, we disclaim any warranty or liability whatsoever and reserve the right, at any time, to effect technical alterations. The information provided, as well as the product's fitness for an intended application, should be checked by the buyer in preliminary trials. Contractual terms and conditions always take precedence. This disclaimer of warranty and liability also applies particularly in foreign countries with respect to third parties' rights.

Applications

- Absorbent Hygiene Products
- Dimensional Stability
- Dry Wipes & Industrial Wipes
- Tabletop Nonwovens
- Textile Printing
- Wet Wipes

Application details

General

VINNAPAS® 192 (CGN) can be applied by a number of different application methods including saturation, spraying, foaming and print bonding.

It performs well on various fiber types including cellulose, rayon, glass and polyester. Temperatures above 150°C are necessary to achieve proper crosslinking.

Processing

Formulating recommendations include the addition of catalyst and a wetting surfactant. Catalysts should be added to the dispersion as a 10% solution under good agitation. Typical catalysts include ammonium chloride, citric acid and sodium bisulfate. A 1% catalyst level (solids on solids dispersion) is sufficient to achieve complete crosslinking of the polymer. Surfactants can also be added to VINNAPAS® 192 (CGN) to improve penetration of the binder into the substrate and improve absorbency of the finished product. Effective surfactant levels are 0.5 to 1.0% on dispersion solids. The compatibility and efficacy has to be checked undertaking a storage test.

Polymer Dispersions

VINNAPAS® 192 (CGN) can be mixed with most VINNAPAS®- and VINNOL®-dispersions as well as with most anionic and/or nonionic aqueous polymer dispersions. However the compatibility of the mixture should be tested by undertaking a storage test.

Defoaming Agents

Suitable defoaming agents include ¹⁾SILFOAM® SE1662, ²⁾FOAMASTER® WO 2310, ³⁾AGITAN® 352 or ⁴⁾Surfynol® DF58. The compatibility and efficiency should be tested in any case.

¹⁾ SILFOAM® is a trademark of Wacker Chemie AG

²⁾ FOAMASTER® is a trademark of BASF SE

³⁾ AGITAN® is a trademark of Münzing Chemie GmbH

⁴⁾ SURFYNOL® is a trademark of Evonik Resource Efficiency GmbH

Thickening Agents

We recommend, in particular, products with neutral pH, e.g. those based on cellulose derivatives, polyvinyl alcohol or polyurethane. Should alkali-swellable polyacrylic acid derivatives be used those need to be chosen that are effective with ammonia, in order not to interfere with the acid catalyzed cross-linking of VINNAPAS® 192 (CGN), like e.g. ⁵⁾Rheovis® AS 1125, ⁶⁾Viscalex® HV30, ⁷⁾ROHAGIT® SD15. Their compatibility and efficacy has to be checked.

⁵⁾ RHEOVIS® is a trademark of BASF SE

⁶⁾ VISCALEX® is a trademark of BASF SE

⁷⁾ ROHAGIT® is a trademark of Synthomer PLC

Additional information

If the product is used in applications other than those mentioned, the choice, processing and use of the product is the sole responsibility of the purchaser. All legal and other regulations must be complied with.

For questions concerning food contact status according to chapter 21 CFR (US FDA) and German BfR, please feel free to contact us.

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Packaging and storage

Storage

When the dispersion is stored in tanks, proper storage conditions must be maintained. The product has a shelf life of 6 months starting from the date of receipt if stored in the original, unopened containers at temperatures between 5 and 30 °C. Any longer periods for the maximum storage period that may be described in the Certificate of Analysis which accompanies each shipment of the product, take preference over this suggestion in which case the time period stated in the Certificate of Analysis shall be solely authoritative. Iron or galvanized iron containers and equipment are not recommended. Corrosion could result in discoloration of the dispersion or blends made from it in further processing. We therefore recommend the use of containers and equipment made of ceramic, rubberized or enameled materials, appropriately finished stainless steel, or plastic (rigid PVC, polyethylene or polyester resin). As polymer dispersions may tend to superficial film formation, skins or lumps may be formed during storage or transportation. A filtration process is thus recommended prior to utilization of the product.

Preservation for Transport, Storage and further Processing

The product is adequately preserved during transportation and storage if kept in the original, unopened containers. However, if it is transferred to storage tanks, the dispersion should be protected against microbial attack by adding a suitable preservative package.

Measures should also be taken to ensure cleanliness of the tanks and pipes. In unstirred tanks, a layer of preservative-containing water should be sprayed onto the surface of the dispersion to prevent the formation of unwanted skin and possible attack by microorganisms. The thickness of this water layer should be < 5 mm for low viscosity dispersions and up to 10–20 mm for high viscosity products. Proper procedures – periodic tank cleaning and sanitization – must be set up in order to prevent microbial attack. Contact your biocide representative/supplier for further plant hygiene recommendations. Measures should be taken to ensure that only clean air enters the tank when the dispersion is removed. Finished products manufactured from polymer dispersions usually also require preservation. The type and scope of preservation will depend on the raw materials used and the anticipated sources of contamination. The compatibility with other components and the efficacy of the preservative should always be tested in the respective formulation. Preservative manufacturers will be able to advise you about the type and dosage of preservative required.

Safety notes

Comprehensive instructions are given in the corresponding Material Safety Data Sheets. These are available on request from WACKER sales offices or may be downloaded from the WACKER Web site www.wacker.com/vinnapas.

QR Code VINNAPAS® 192 (CGN)



For technical, quality or product safety questions, please contact:

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The data presented in this medium are in accordance with the present state of our knowledge but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this medium should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. The information provided by us does not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the product for a particular purpose.