

Alcotex WD100 is an aqueous solution of a 43% hydrolysed polyvinyl alcohol. It has been specifically developed by Synthomer Ltd as a secondary suspending agent for vinyl chloride polymerisation. Infinitely dilutable in water, and with an extremely low methanol content, Alcotex WD100 offers increased PVC resin porosity and reduced levels of gels or 'fish eyes' when compared to traditional products. In optimised recipes, improvements can be obtained in the porosity/bulk density relationship. Better porosity facilitates both monomer removal and plasticiser uptake. These criteria are further enhanced when Alcotex WD100 is used with the Alcotex range of primary suspending agents.

Alcotex WD100 is also compatible with other conventional primary suspending agents.

NMR measurements have shown that Alcotex WD100 has a random distribution of acetate groups.

The data below represents typical values obtained with different batches of Alcotex WD100.

Property	Typical Value	Unit	Method <sup>1</sup>
Appearance	Aqueous solution		
Total Solids	24.0-26.0	%	ATP1
Degree of Hydrolysis	42.0 - 45.0	mole%	ATP16
Viscosity @ 23°C, Brookfield RVT 3/20	1000-5000	mPa.s	ATP17
Cloud Point	>50	°C	ATP18
Methanol Content	< 2	% w/w	ATP59

<sup>1</sup> internal method based upon the specified norm

## Application Advice

For detailed information, please contact the Alcotex Technical Service Team at [alcotex@synthomer.com](mailto:alcotex@synthomer.com)

For conventional secondary suspending agents, it is standard practice to add part of the primary suspending agent to the polymerisation vessel first. However, Alcotex WD100 may also be added initially, or as a stable primary/secondary co-solution with other polyvinyl alcohols. Whichever method is used, it is recommended that Alcotex WD100 is added via the water charge line.

PVC porosity may be enhanced by Alcotex WD100 at a given conversion level; alternatively a higher degree of conversion may be obtained for the same porosity.

Increased porosity obtained by using Alcotex WD100 allows less severe stripping conditions to be used to achieve the required residual monomer levels. This can reduce stripping time, steam consumption and stripping temperature with attendant advantages in increased output, reduced costs and improved product colour and heat stability.

## Shipping and Storage

Alcotex WD100 is stable under normal storage conditions, but extremes of temperature should be avoided. The material exhibits a separation temperature of 40°C, above which two layers are formed. If separation occurs the material can be reconstituted by stirring at a temperature below 40°C. Alcotex WD100 is freeze/thaw stable, however at low temperatures the viscosity of the product increases

significantly.

Alcotex WD100 should be stored in sealed containers as received. In this condition, the product should remain fit for use for 24 months from the date of production. Beyond that date, the material may still be fit for use, but we would advise that it is good practice to test the material.

With normal standards of plant housekeeping there is no need to add bactericides. If circumstances dictate the use of bactericides then any of those which are compatible with PVC polymerisation or application may be used. If equipment becomes infected, dilute hypochlorite should be used for sterilisation. Alcotex WD100 can be supplied in 220kg plastic drums, 1000kg cage type intermediate bulk containers or as full bulk deliveries.

## **Product Safety**

Before handling, please read the Safety Data Sheet of this product for advice on safety, use and disposal.