

Alcotex 55-002H is a colloidal dispersion of polyvinyl alcohol. It has been specifically developed by Synthomer Ltd as a secondary suspending agent for vinyl chloride suspension polymerisation. It may be used in conjunction with conventional primary suspending agents. 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 55-002H is used with the Alcotex range of primary suspending agents.

NMR measurements have shown that Alcotex 55- 002H has a random distribution of acetate groups.

Property	Typical Value	Unit	Method <sup>1</sup>
Appearance	Very pale yellow solution		
Total Solids	38.5-39.5	%	ATP1
Degree of Hydrolysis	54.0-57.0	mole %	ATP16
Viscosity @ 23°C Brookfield RVT 3/20	1000 - 1500	mPa.s	ATP17
Cloud Point	> 40	°C	ATP18
Methanol Content	3.8	% 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 [info@synthomer.com](mailto:info@synthomer.com)

It is preferable to add part of the primary suspending agent to the reactor before Alcotex 55-002H is added. This ensures good dispersion of the secondary agent.

It may be necessary to reduce the concentration of the primary agent slightly to maintain the grain size when using Alcotex 55-002H.

On no account should Alcotex 55-002H be added to the VCM charge line.

Increased porosity obtained by using Alcotex 55-002H allows less severe stripping conditions to be used to achieve the required residual monomer levels. Thus it is often possible to reduce stripping time, steam consumption or stripping temperature with attendant advantages in increased output, reduced costs and improved product heat stability.

PVC porosity may be enhanced at a given conversion level or a higher degree of conversion may be obtained for the same porosity.

An additional opportunity is provided to design the polymer by modifying the porosity/bulk density relationship. A more homogeneous distribution of porosity may be obtained. PVC grains made with Alcotex 55-002H tend to be more spherical which gives improvement in bulk density.

## Shipping and Storage

Alcotex 55-002H 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 55-002H is freeze/thaw stable, however at low temperatures the viscosity of the product increases significantly.

Alcotex 55-002H 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.

## **Product Safety**

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