Construction Chemicals

Technical Data Sheet

ACRYSOL™ DR-72

Associative Thickener

Product Description

ACRYSOL™ DR-72 is an associative thickener is a synthetic, liquid, anionic rheology modifier

Application

ACRYSOL™ DR-72 is part of the Designed Rheology™ product line which provides a liquid alternative to HEC with customized rheology and end-point application performance.
This associative thickener provides application and "in-can feel" properties that are very similar to those of higher molecular weight cellulosic thickeners. It offers outstanding resistance to roller spattering, improved levelling, and better response to dilution in most formulations.
ACRYSOL™ DR-72 associative thickener is easy to handle and incorporate during the manufacturing process and is highly resistant to microbial attack. It is supplied as a low-viscosity liquid that is easy to pour and pump. It is especially attractive to use when bulk handling and automatic metering equipment are used.
ACRYSOL™ DR-72 is recommended to use in organic renders as a substitute for high molecular weight HEC.

Typical Properties[1)]

Appearance	Milky white liquid
Solids content	29.5 … 30.5 %
pH	3.5 … 4.6
Density	1.05 g/cm^3
Viscosity (Brookfield LV, spindle 1 @ 60 rpm, 25°C)	1 … 20 mPa·s

[1)] Please note that the values shown are typical values for your guidance. They are not to be taken as specifications and are subject to certain variability. Please consult the sales specifications for details.

Formulation Guidelines

Neutralization: Before adding ACRYSOL™ DR-72 to a coating formulation first sufficient base must be added. A minimum of approximately 0.1 kg of 28% aqueous ammonia or 0.15 kg of AMP-90 or 0,3 kg of NaOH at 20% is required to completely neutralize all of the acid groups in one kg wet ACRYSOL™ DR-72 (as delivered). Additional base may be required to achieve the required final pH. Thickening begins at about pH 6, the final pH of the coating should be adjusted to a range of 8.0 to 10.0. If the pH drops below 7.5 gelation could take place and the viscosity of the coating will decrease.
Order of addition: ACRYSOL™ DR-72 associative thickeners can be incorporated at different stages of formulation. The thickeners can be added (1) in the letdown to control final viscosity or (2) a portion of thickener can be added into the mill-base to control mill-base viscosity and aid incorporation.
(1) Adding the thickener as one of the final ingredients in the letdown requires good mixing in the vessel. Less than ideal mixing can be compensated for by adding the thickener more slowly or pre-diluting the thickener with 50% water prior to addition.

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(2) To ensure optimum pigment dispersion, a portion of the thickener (typically a quarter to a third of the total) can be added to the mill-base in order to control the viscosity of the pigment slurry.
Dispersant: For use together with ACRYSOL™ DR-72 polyacid type dispersants like OROTAN™ N-4045 or OROTAN™ 850 ER are recommended. Other type of dispersants may cause colorant compatibility problems, viscosity instability and syneresis.

Health and Safety Considerations

Safety Data Sheets (SDS) are available from The Dow Chemical Company. SDS are provided to help customers satisfy their own handling, safety and disposal needs and those that may be required by locally applicable health and safety regulations. SDS are updated regularly, therefore, please request and review the most current SDS before handling or using any product. For further questions consult your Dow contact person.

Storage and Handling

ACRYSOL™ DR-72 should be stored at temperatures between 5°C and 40°C in tightly sealed containers. Avoid freezing of the material! Local legislation on storage must be followed.

We recommend using the product under safety precautions as described in the SDS. Avoid contact with eyes and skin. Large quantities should be handled in a correctly ventilated area. Material can create slippery conditions

As the product contains water corrosion-resistance equipment should be used for processing. Low shear pumps like diaphragm pumps should be used.

Additional Information

For more information you may call the following numbers:

Europe*)	**+800-3-694-6367 (toll free)**
Italy	**800-783-825 (toll free, national)**
Europe, Middle East, Africa	**+31-11567-2626 (toll call)**
South Africa	**+800-99-5078 (toll free, national)**

*) International toll free from Austria, Belgium, Denmark, Finland (prefix 990), France, Germany, Hungary, Ireland, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

Date of issue: January 2011

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840-45201-022011

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