Acronal® S 760 na

**Chemical Nature**

**Properties**

**Product specification**
- Solids content, weight %: 49.0 – 51.0
- pH: 8.5 – 10.0
- Viscosity at 23 °C mPa s: 100 – 550 (Brookfield RV, Spindle #4, at 50 rpm)

**Other properties of the dispersion**
- Apparent viscosity at 23 °C mPa s: ca. 1000 (Brookfield RVT, Spindle #2, at 20 rpm)
- Density lbs/gal: ca. 8.76
- g/cm³: ca. 1.05
- Film-forming temperature °F: ca. 72 min.
- °C: ca. 22
- Dispersion type: anionic
- Plasticizer content: free from plasticizer
- Sensitivity to frost °F below: 32
- °C below: 0

**Properties of the film**
- Density g/cm³: ca. 1.05
- Mechanical strength*
  - Tensile strength psi: ca. 1800
  - N/mm²: ca. 12.8
- Elongation at break %: ca. 300
- Appearance: transparent, colorless
- Surface: tack-free

*This figure should be taken for comparison purposes only. All that can be obtained from it is an idea of the order of magnitude concerned.

**Applications**

**Features**
Acronal® S 760 na is a styrene acrylic latex polymer that is self-crosslinking and offers flash rust resistance, reactive pigment compatibility, excellent long-term durability, and under-film corrosion protection. Acronal® S 760 na latex is ideal for use in direct to metal (DTM) primers, topcoats, and industrial maintenance paints.

**Fields of application**
The main application for Acronal® S 760 na is aqueous anticorrosion systems. The primers are formulated with chemically active anticorrosion pigments.

Paints can also be formulated for substrates that normally can cause difficulties (i.e., zinc and aluminum).
Pigmented coatings can be readily sanded if appropriate care has been devoted to the selection of the extenders. This property can be exploited in formulating primers.

**Processing**

Aqueous anticorrosion paints and primers can be made up with the aid of dissolvers and bead mills.

It is important to add the individual ingredients of the formulation in the right sequence, because this ensures optimum viscosity and minimum foam. Details are given in the typical formulations which we compile. The proper selection of dispersant is extremely important for long term stability when using anti-corrosive pigments.

The minimum film-forming temperature for Acronal® S 760 na is of the order of 72 °F (20 °C). If the paints are likely to be applied at lower temperatures, coalescents in proportions of 2-4% are usually required to ensure a homogeneous coating. Mixtures of Butyl Carbitol and Butyl Cellosolve can be blended at different ratios to give the desired application and cure rates.

The viscosity and flow can be regulated by thickeners. Particularly good results from the aspect of corrosion protection can be obtained with diurethane thickeners. Newtonian flow and good levelling can be achieved if water-miscible solvents (i.e., Butyl Carbitol and Butyl Cellosolve), are present. The proportion of thickeners in aqueous anticorrosion paints should not exceed 1%, expressed as solids in terms of the binder.

Acronal® S 760 na is readily compatible with most anticorrosion pigments, particularly those derived from zinc borate and zinc phosphate. The viscosity may increase slightly during making up as a result of a restricted reaction between the polymer dispersion and the pigment, but can be kept under control if the ingredients of the formulation are added in the recommended sequence. It does not have any adverse effect on the shelf life.

In the formulation of aqueous anticorrosion paints, preference should be given to chromatic pigments in powder form, because aqueous preparations entail that additional water-soluble auxiliaries are incorporated.

Finely dispersed extenders (i.e., crystalline calcium carbonate, barium sulfate and silanised wollastonite), give excellent performance in Acronal® S 760 na metal primers. Laminar fillers are not very suitable.

In any event, adequate amounts of dispersants (i.e., Pigment Disperser NL or A), must be added.

Defoamers and preservatives should be included in the formulations in the proportions recommended by the manufacturer. Their compatibility and efficiency is best checked by prior experiment.

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**Safety**

**General**

The usual safety precautions when handling chemicals must be observed. These include the measures described in Federal, State and Local health and safety regulations, thorough ventilation of the workplace, good skin care and wearing of protective goggles.

**Material Safety Data Sheet**

All safety information is provided in the Material Safety Data Sheet for Acronal® S 760 na.

**Industrial Hygiene**

Acronal® S 760 na does not exert any harmful effects provided it is used for the purpose for which it is intended and processed in accordance with current industrial practice. Acronal® S 760 na may contain technically unavoidable traces of volatile organic compounds. Observe appropriate workplace exposure limits when indicated in the Material Safety Data Sheet. Acronal® S 760 na may irritate the skin and mucous membranes on prolonged contact with the product.

**Labeling**

Acronal® S 760 na is not classified as a hazardous product under DOT or OSHA regulations or as a controlled product under WHMIS (Canada) regulations. It does not contain any hazardous components at levels which have implications for labeling under these regulations.
Storage

Acronal® S 760 na has a shelf life of six months from delivery date, provided it is stored in a cool place and is protected from freezing. Technical information regarding the storage of BASF polymer dispersion products is available on request.

In common with other dispersions, Acronal® S 760 na is sensitive to multivalent ions; for example, iron, copper, zinc, and aluminum. Contact of the product with these metal ions may affect the stability of the product. This applies not only to storage tanks, but also to pipelines, stirrers, product containers, etc.

Important

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