ADDAPT Chemicals BV

Technical Data Sheet

PolySurf™ HP
Functional Monomers

Article number: PO86401
Verification date: 01/08/2024
Version: 2

Product description
Solvent-free, UV-curable mixture of acrylated mono- and di-phosphate esters. It enables excellent mechanical stability, flame retardant properties and excellent polyvalent cation tolerance. It shows improved wet-scrub resistance, improved adhesion to metals and high yellowing resistance. It offers good compatibility with acrylic and methacrylic esters and very good corrosion-inhibiting properties after polymerisation.

Typical chemical and physical properties

Chemical nature	Proprietary mixture of acrylated mono-and di-phosphate esters, where the reactive acrylate group is methacrylate.	
Appearance	Liquid	
Active content	> 99,5%	
Phosphorus content	~ 12%	
Odour	Characteristic	
Density at 25°C	1,25 - 1,35	g/ml
Viscosity at 25°C	1,250 - 3,500	mPa.s
Acid number AV1	175 - 225	mg/KOH
Acid number AV2	250 - 360	mg/KOH
Colour	<300	APHA
Colour	<3	Gardner

This information is intended as a guideline only. For specifications please consult the Certificate of Analysis.

Application and treat level

Markets	Emulsion polymerisation industry UV-coatings industry Ink industry
Applications	Radiation-curable metal primers and finishes Adhesives & bonding agents Pigment dispersants
Recommended dosage/usage	Emulsions for paints, lacquers, printing inks and adhesives 0,5 - 2,5 % wt. based on monomers Flame retardant for unsaturated polyesters and polyacrylates ~4 % wt. for flame retardant Adhesion promoter for metal (polyacrylates, polyesters) ~3 % wt. based on monomers Flame retardant and adhesion promoter for UV-curable systems 1,0 – 2,5 % wt. based on monomers

Key benefits

- Readily biodegradable -

• Excellent mechanical stability – non-migratory (EP).
• Emulsion co-polymerisable anionic surfactant.
• Promotes adhesion to metal, metal oxides, glass and concrete.
• Flame retardant booster, which does not contain halogens.
• Addition of approximately 4%, results in a final P content of the flame-retardant polyester or polyacrylate of approx. 0.5 %.
• It improves both the storage and mechanical stability of an emulsion system, whereas grit building and foam formation is minimised.
• No migration of the surfactant occurs after film formation.
• Paints and lacquers based on emulsions containing this “build-in” anionic surfactant show improved wet-scrub resistance, improved adhesion to metal and high yellowing resistance even after enamel application.
• The mono-phosphate ester can be reacted with emulsions containing polymers with 2 or more epoxy groups or with emulsions containing, for example, Glycidyl(Meth)acrylate.

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Safety and Handling	Please read Safety Data Sheet (SDS) before handling.
Product Specification	This information is available on request through our local representative.
Packaging	This information is available on request through our local representative.
Storage	The product should be stored at a temperature of no less than 10 °C and no more than 25 °C and away from light. For more safety details read the Safety Data Sheet (SDS)

Quality Policy

The objective of our quality policy is the continuous fulfillment of the internal and external requirements agreed upon with our partners with regards to everybody's performance.

The Quality System of ADDAPT® Chemicals BV is based on the principles of the NEN - EN - ISO - Standard 9001:2015.

Liabilities

All recommendations for the use of our products, whether given by us in writing, orally, or to be implied from the results of tests carried out by us, are based on the current state of our knowledge. Notwithstanding any such recommendations, buyer or user remains responsible for satisfying himself that the products as supplied by us are suitable for his intended process or purpose. Since we cannot control the application, use or processing of the products, we cannot accept responsibility thereof. Buyer has to ensure that the intended use of the products will not infringe any third party's intellectual property rights. We warrant that our products are free from defects in accordance with, and subject to, our general conditions of sale and supply.

ADDAPT Chemicals BV
Speltdijk 1
5704 RJ Helmond
The Netherlands
Tel: + 31 (0)492 597575
E-mail: info@addapt-chem.com
Home page: http://www.addapt-chem.com