

**ASHAPERSE 9050**

**ASHAPERSE 9050 S**

**POLY - MALEIC DISPERSANTS**

## Chemical Nature

Ashaperse 9050 & Ashaperse 9050 S are low molecular weight polymers of maleic acid. Ashaperse 9050 consist of the free acid and Ashaperse 9050 S is its sodium salt. Both products are supplied in the form of an aqueous solution.

## Properties

Ashaperse 9050 & 9050 S are both yellowish or brownish liquids.

	9050	9050 S
Physical form	Liquid	Liquid
Concentration (dried at 150°C until weight remain constant) %	40	50
pH	2	7
Density gm/ml	1.2	1.36
Calcium Carbonate dispersing capacity at pH - 11		
at 23°C mg CaCO <sub>3</sub> /g polymer	200	140
at 60°C mg CaCO <sub>3</sub> /g polymer	180	120
Residual monomer Content (max.)	1%	1%

## Solubility

Ashaperse 9050 & 9050 S are miscible with water in all proportions. They are also soluble in mixtures of water and water soluble solvents, but they can precipitate in the presence of cationic substances.

## Applications

Ashaperse 9050 & 9050 S are high performance dispersing agents for suspended

Solids in aqueous media. They are particularly effective in the presence of insoluble inorganic salts such as calcium phosphate; very little Ashaperse 9050 & 9050 S is required to obtain transparent suspensions. They also enable finely divided suspensions of calcium salts of organic acids to be prepared.

Ashaperse 9050 and salts prepared from it such as Ashaperse 9050 S disperse calcium carbonate, calcium sulfate, magnesium hydroxide, calcium phosphate and other sparingly soluble inorganic salts and provide a high level of protection against precipitation. They are also effective in process in which evaporation play a part.

## Cooling Water

There is a very low threshold concentration at which Ashaperse 9050 & 9050 S are able to prevent much larger quantities of calcium carbonate from precipitating and forming scale. They prevent calcium phosphate forming deposits in heat exchangers, pipelines, pumps and other equipment in systems in which poly phosphates are used as corrosion inhibitors. Ashaperse 9050 & 9050 S are employed as a concentration of 3-20 ppm active substance, depending on water hardness. They can also be combined with other scale inhibitors such as poly acrylates. e.g. Ashaperse 9070 and phosphonates which enable formulation with an optimum price performance ratio to be devised.

## Boiler Feed Water

Ashaperse 9050 & 9050 S are also effective at elevated temperatures. Their thermal stability is superior to that of poly acrylates, which enables them to be used for conditioning boiler feed water. They remain effective as a dispersing agents and scale inhibitors at temperature of up to 150°C.

## Desalination

Precipitated magnesium hydroxide and calcium sulfate are the main causes of scaling problems in multiple stage flash distillation and other processes for desalinating sea water. Ashaperse 9050 & 9050 S inhibits precipitation and they have the advantage over poly acrylates in that their performance is adequate at low concentration.

Ashaperse 9050 & 9050 S are effective at elevated temperatures and thus can be used in situations in which inorganic phosphates decompose hydrolytically.

Ashaperse 9050 & 9050 S enable distillation plants to be operated at a pH of 7.5-9, which helps to minimize problems with corrosion. Sulfuric acid has to be employed at concentration of 100 ppm and more in this type of application, but Ashaperse 9050 & 9050 S are effective at much lower concentration.

## Sugar Industry

Ashaperse 9050 & 9050 S can be added to the thin juice obtained from the carbonation process to prevent scale forming when it is made into syrup by evaporation. Only a very low threshold concentration is required for it to prevent calcium carbonate, calcium sulfate and calcium oxalate from forming scale and their effectiveness against mixed calcium carbonate and calcium silicate scale has been shown to be superior to that of most products available in the market.

Ashaperse 9050 & 9050 S are employed as a concentration of 5-15 ppm active substance. They may need to be added in several increments.

## Other Applications

Ashaperse 9050 & 9050 S can be added to technical cleaners, dishwasher detergents and industrial cleaning formulations to prevent

Scale and to disperse a varied range of solids. Surfactants are no longer subject to the disruptive effects of water hardness and thus perform better.

Similarly, the performance of surfactants and chelating agents in laundry detergents, especially these with a reduced phosphate content can be improved by adding Ashaperse 9050 & 9050 S to disperse sparingly soluble calcium salts of organic acids.

### **Dosage**

Proper dosage depends on various factors and conditions encountered in specific systems. For best results continuous feeding of Ashaperse 9050 & 9050 S is recommended. Normally a level of 2-20 ppm should be sufficient for most aqueous systems.

### **Feeding**

Ashaperse 9050 & 9050 S can be fed directly from the container or added as an aqueous diluted solution to the feed water or can be used directly in the formulation of water treatment chemicals.

### **Handling Precaution**

Contact with eyes and skin should be avoided. In case of contact, wash with plenty of water. Gloves and goggles should be used where appropriate.

### **Packing**

Ashaperse 9050 & 9050 S are available in 50 kg HDPE carboys.

Note: In view of our constant endeavour to improve the quality of our products, we reserve the right to alter or change specifications without prior notice.

The data included herein is based on test information obtained by Asha Resins Pvt. Ltd. This data is believed to be reliable but does not imply any warranty or performance guarantee. We recommend that the user determine performance by testing on his own processing equipment. We assume no liability or responsibility for patent infringement resulting from the use of this product.



## **Asha Resins Pvt. Ltd.**

REGD. OFFICE : 1232, BHAWANI PETH, PALKHI VITHOBA CHOWK,  
PUNE - 411 042. TEL. : 652401. FAX : 474708.

FACTORY ADD. : GAT NO. 227/2, VILLAGE, DHANORE,  
ALANDI - MARKAL ROAD, TAL. : KHED, DIST. : PUNE. TEL. : 885034.