

### Product Features

PAT-ADD SU 4S is featured in a series of unique non-ionic surface additives to provide both wetting and defoaming in the same product.

Due to its multi-functionality, PAT-ADD SU 4S provides performance benefits in many applications; in paints, inks, adhesives and other chemical formulations.

The PAT-ADD SU 4S series consists of the same active material in various solvent compositions. The active material is designed as PAT-ADD SU 4S.

#### **Main benefits are:**

- ✓ Defoaming agent and wetting agent in one product
- ✓ Strong reduction of aqueous system surface tension
- ✓ Dynamic surface tension reduction
- ✓ Low use levels
- ✓ Reduces pigment grind time
- ✓ Aids flow and leveling
- ✓ Minimizes viscosity of concentrated aqueous polymer solutions, emulsions and dispersions
- ✓ Low impact on film water sensitivity

### Physical Characteristics:

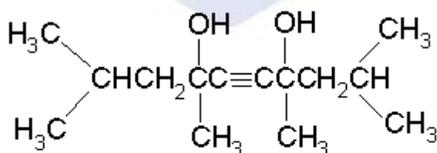
<b>Appearance</b>	:	waxy like, white solids
<b>Melting range, °C, approx.</b>	:	52- 56 °C
<b>Specific gravity @ 25°C, kg/ m3</b>	:	Approx 0. 900
<b>Purity</b>	:	>99%
<b>Colour Gardner</b>	:	max 1
<b>Composition</b>	:	2,4,7,9-Tetramethyl-5-decyne-4,7-diol

“Physical parameters indicated here in product data sheet are typical properties and not specification limits or range.”

### Properties:

Compared to traditional surface active agents (including APE polyglycol ethers), PAT-ADD SU 4S exhibits exceptionally fast and strong surface activity; additionally, antifoaming and defoaming behavior as opposed to foam stabilization.

#### **Acetylenic Diol Structure:**



### Application:

Main applications for the PAT-ADD SU 4S series generally involve water/oil or water/solid interfaces, where interfacial tension equalization or modification is necessary.

Application are in inks, paints, heat sensitive adhesives, fountain solutions, compounded materials for leather, emulsion polymerization, pigment grinding aids, cleaners, agricultural chemicals, shampoo, metalworking fluids, adhesive, paper coatings, pigment dispersions, colorants, latex dipping, drilling needs, coatings and other similar processes.

### **Application in Coatings and Inks:**

PAT-ADD SU 4S (notably SU 4E, H and PA solutions) is widely used as a multipurpose problem solver. The strong effect of lowering dynamic surface tension indicates that PAT-ADD SU 4S exhibits exceptional wetting properties, as in the case of rapidly created new interfaces, exemplified by coil, air or airless spray, turbo bell, printing and other high speed application processes. Additionally, it offers defoaming properties.

PAT-ADD SU 4S is also used for water-borne industrial paint to minimize foam formation and enhance flow and levelling.

Another application is in aqueous wood coatings, where foam, levelling or adhesion issues are all addressed. Moreover, as an alternative to classic surfactants, water resistance is superior.

### **Printing ink:**

PAT-ADD SU 4S (notably SU 4E, H, PA) is highly recommended for all printing methods with aqueous ink formulations; low dynamic surface tension.

### **Various applications:**

PAT-ADD SU 4S shows excellent wetting of hot melt pressure sensitive adhesives applied on plastics. Leather chemicals: water borne leather chemicals must exhibit good wetting properties, especially dynamic wetting. PAT-ADD SU 4S is successfully used for this; leather finishes, shoe polishes etc.

### **Following solutions of PAT-ADD SU4S are commercially available:**

<b>PAT-ADD</b>	<b>Concentration</b>	<b>Solvent composition</b>	<b>Appearance</b>
PAT-ADD SU 4E	50	Ethylene glycol	Clear Yellow Liquid
PAT-ADD SU 4H	75	Ethylene glycol	Clear Yellow Liquid
PAT-ADD SU 4PA	50	2-Propanol	Clear Yellow Liquid
PAT-ADD SU 4PG	50	Propylene glycol	Clear Yellow Liquid
PAT-ADD SU 4DPM	50	2-Methoxymethylethoxypropanol	Clear Yellow Liquid
PAT-ADD SU 4BC	50	2-butoxy ethanol	Clear Yellow Liquid
PAT-ADD SU 4A	50	2-ethylhexanol	Clear Yellow Liquid

# PAT-ADD SU 4S

## Product Data Sheet

Rev 02

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### Dosage & Addition

The optimal amount of PAT-ADD SU 4S is system and application related, but typically in the range between 0.1% - 2% active material on weight of the total formula.

The optimum concentration used depends on the individual formulation and conditions and advised to be determined experimentally.

### End Use Application

PAT-ADD SU 4S is recommended for the following applications; aqueous coatings, printing inks, wood coatings, Industrial maintenance coatings, Overprint varnishes and paper coatings, Pressure sensitive adhesives, and Concrete and dry mix mortars.

### Shelf life

The product has shelf life of 24 months from the date of manufacturing; packed in unopened original containers as shipped by Patcham when stored in frost free warehouse.

### Storage, transportation, safety and Handling

For information on handling, storage and safety please refer to the information from the Material Safety Data Sheet (SDS).

### Packing size

PAT-ADD SU 4E	-	MS Can/Drum: - 20.0 kgs, 185.0 kgs, IBCs: - 950.0 kgs.
PAT-ADD SU 4H	-	MS Can/Drum: - 20.0 kgs, 185.0 kgs, IBCs: - 900.0 kgs.
PAT-ADD SU 4PA	-	MS Can/Drum: - 20.0 kgs, 170.0 kgs, IBCs: - 800.0 kgs.
PAT-ADD SU 4PG	-	MS Can/Drum: - 20.0 kgs, 200.0 kgs, IBCs: - 950.0 kgs.
PAT-ADD SU 4DPM	-	MS Can/Drum: - 20.0 kgs, 190.0 kgs, IBCs: - 900.0 kgs.
PAT-ADD SU 4BC	-	MS Can/Drum: - 20.0 kgs, 180.0 kgs, IBCs: - 850.0 kgs.
PAT-ADD SU 4A	-	MS Can/Drum: - 20.0 kgs, 180.0 kgs, IBCs: - 850.0 kgs.

**Disclaimer:**

*While every effort is made to provide accurate and complete test results for The PATCHAM ADDITIVES, various data may vary depending upon different raw materials, test procedures and test conditions. The accuracy, reliability, or totality of the results are not guaranteed or warranted in any way. PATCHAM FZC and its representatives disclaim liability of any kind whatsoever, including liability for quality, performance and fitness for a particular purpose arising out of the use, or inability to use the test results.*