



"Your Trustworthy Partner"

**BHAVI**

**International  
Private Limited**



## **TECHNICAL DATA SHEET**

### **BILTREAT 400A (Surface Sizing Agent for Writing and Printing)**

#### **Description:**

- BILTREAT 400A is designed specifically to meet the requirement in sizing promotion for medium & liner paper. Although, Starch is widely used in surface sizing and it does not improve surface strength & ring crush, but it has nothing to do with sizing performance. So an additional sizing agent must be added to the starch system either to get a higher sizing affect or to further reduce sizing agent in the wet end.

#### **Physical Properties:**

Chemical description	Styrene Acrylic Copolymer
Appearance	Creamish white milky emulsion
Ionic Character	Amphoteric
Total Solids %	30 $\pm$ 1
pH at 25°C	3.0 - 6.0
Viscosity at 25°C - cps	<100

#### **Advantages:**

- No need to adjust pH of the size press solution
- Effective on acid and neutral base paper
- Can be combined with anionic, weakly cationic and non-ionic auxiliaries
- Sizing is stable to alkaline liquids
- Low viscosity, easy to handle
- No unpleasant odor
- Does not impact wet strength to the paper
- Low foaming of the size press solution

#### **Surface Sizing with BILTREAT 400A offers the following advantages over Internal Sizing:**

- Improves the toner adhesion
- Improvement in ink jet printability
- Reduces dusting and picking
- Produces stronger paper e.g. higher bursting strength and tensile strength
- Level of sizing can be corrected faster
- No deposit on paper machine felts, screens and white water

Government Recognized ★ Export House

**Corporate Office:** 209, Mewad, Patanwala Industrial Complex, L.B.S. Marg, Opp. Shreyas Cinema, Ghatkopar (West), Mumbai - 400 086, India.  
**Tel.:** +91-22-2500 0429/ +91-22-6796 9600 | **Fax:** +91-22-2500 5008 | **Email:** info@bhaviindia.com | **Web:** www.bhaviindia.com  
**Site Address:** Unit No - 14, Samarth Industrial Estate, Near 100 Shed Area, Shivaji Nagar, Dunga, Vapi GIDC, Gujarat - 396195 INDIA.



"Your Trustworthy Partner"

**BHAVI**

**International  
Private Limited**



### **Applications:**

- Surface sizing in the size press, film press or similar units
- It can be added in batches or continuously, the latter method being more versatile in that, it enables levels of addition to be adjusted more quickly as circumstances demand

### **Technical Notes on Application:**

#### **Mode of action**

- Application of BILTREAT 400A in the size press changes the wet ability of the paper and reduces its water absorption. The presence of aluminium ions in the base paper is not necessary for obtaining optimum results.
- Since BILTREAT 400A is amphoteric, it can be applied in the size press with fluorescent whiteners, direct dyes or basic dyes.
- The normal drying temperatures on the paper machine are sufficient to develop full sizing. No additional curing period is required.
- BILTREAT 400A has good stability in the presence of large quantities of electrolytes.

#### **Pre-Sizing of Base Paper:**

- Normally the more absorbent the base paper in the size press, the better the results achieved with BILTREAT 400A.
- Excessive pre-sizing in the stock can impair the performance of BILTREAT 400A by inhibiting penetration into the sheet.
- The normal fillers can be added to the base paper. Very good results are obtained with calcium carbonate fillers.

#### **Amount Required:**

- The amount of BILTREAT 400A required depends on a number of factor such as the composition of the furnish absorbency of the base paper and the degree of sizing required. Experience has shown that 0.5 – 2.0 kg/ton of paper is generally sufficient.

#### **Other Additives:**

- Since BILTREAT 400A is amphoteric, it can be used in combination with weakly cationic auxiliaries.

#### **Temperature:**

- BILTREAT 400A remains stable in the size press solution up to approx. 70°C (160°F).
- The size press solution should be below 70°C (160°F) before adding BILTREAT 400A.

#### **Type of Starch:**

- BILTREAT 400A is generally applied at the size press with a starch solution. A medium to low-viscosity non-ionic, anionic or cationic starch is normally used. Since the type of starch can affect sizing to some extent, the efficiency of BILTREAT 400 A in combination with the starch should be tested before use. Such tests can be performed in our technical service laboratories at any time.
- BILTREAT 400 A can also be applied without starch. i.e. simply diluted with water

#### **Recommended Dosage:**

- BILTREAT 400A can be added batch wise to the starch solution storage tank as well as continuously in the operating tank or the feeding pipe to the size press.

Government Recognized ★ Export House



"Your Trustworthy Partner"

**BHAVI**

**International  
Private Limited**



- BILTREAT 400A is low foaming, so defoamers are normally not required.

**Packing:**

- BILTREAT 400A is supplied in 200 litre/ 1000 litre drums.

**Shelf Life:**

- For further information, Please consult the Material safety data sheet (MSDS).

**Disclaimer:** The suggestion & data in this publication is currently believed to be accurate. We do not guarantee its accuracy as the conditions & methods of the use of our products are beyond our control. Purchasers should always make their own determination of its suitability and completeness for a particular use, for the protection of the environment & for the health and safety of employees

**Government Recognized ★ Export House**

**Corporate Office:** 209, Mewad, Patanwala Industrial Complex, L.B.S. Marg, Opp. Shreyas Cinema, Ghatkopar (West), Mumbai - 400 086, India.  
**Tel.:** +91-22-2500 0429/ +91-22-6796 9600 | **Fax:** +91-22-2500 5008 | **Email:** info@bhaviindia.com | **Web:** www.bhaviindia.com  
**Site Address:** Unit No - 14, Samarth Industrial Estate, Near 100 Shed Area, Shivaji Nagar, Dunga, Vapi GIDC, Gujarat - 396195 INDIA.