

# NTSTRENGTH 150 Series

## Dry Strength Agents

**NTSTRENGTH 150-Series** are water soluble Acryl-amide polymers which improve the dry strength of paper and paperboard without creating a broke recovery problem. Unlike the dry strength derived from refining, these dry strength resins can dramatically increase the dry strength test without changing the bulk (density) or porosity. This is particularly advantageous for the manufacture of printing papers and low-density paperboard.

**NTSTRENGTH 150-Series** can be used in the wet end as a slush stock additive, or they can be added at the size press to the dry sheet.

### 1. Typical Properties

| Name                 | 150AN                   | 150AP         |
|----------------------|-------------------------|---------------|
| Chemical Description | Modified Polyacrylamide |               |
| Appearance           | Clear to haze Liquid    |               |
| Active Content       | 15.0 ± 1.0              | 15.0 ± 1.0    |
| pH                   | 6.0 ± 1.0               | 3.5 ± 1.0     |
| Viscosity            | 4,000 ± 1,000           | 3,500 ± 1,000 |
| Ionic Character      | Anion                   | Amphoteric    |
| Stability            | 6 Month                 | 6 Month       |
| Solubility           | Easily soluble in water |               |

## 2. Advantage

**NTSTRENGTH 150-Series** help:

- A. Cut furnish costs by allowing substitution of weaker, cheaper pulps; e.g. secondary fiber and substitution of fillers for fiber.
- B. Reduce energy costs through reduced refining and dryer steam requirements.
- C. Increase machine output where refining, drainage or drying limitations exist.
- D. Improve paper quality to meet higher specifications.
- E. Reduce other chemical additive levels e.g. rosin size or wet strength resin.
- F. Reduce waste treatment costs.

## 3. Application

**NTSTRENGTH 150-Series** are usually added to the slush stock but can also be applied to the surface of paper. For slush stock (wet end) additions, dosages between 0.15% and 0.5% resins solids, based on dry fiber, are recommended. As much as 1% resin can be used with good effect. At least 1.5% -2.0% Alum, based on dry fiber, should be used. Optimum performance will be realized in the pH range from 4.3 to 5.0.

Actually NTSTRENGTH Series' dosage is depended on user's condition.

## 4. Storage

Under some storage conditions, a separation of the emulsifier may occur. Storage above 5 °C will normally prevent this.

Should separation occur, moderate stirring or mixing, with no resultant loss of efficiency can return the product to their normal state. Generally, rolling of the drums around the floor will be sufficient to assure remixing of the component