

Technical Datasheet

DESCRIPTION

NAS® 36 is a styrene acrylic copolymer that can be used in a variety of applications demanding a strong, stiff water-clear plastic resin with excellent thermal and indoor UV light stability.

FEATURES

- Sparkling clarity
- Indoor UV light stability
- Low density
- Ease of processing
- Enhanced mold release

APPLICATIONS

- Point of purchase displays
- Office accessories
- Appliances
- Toys
- Appliances

| Property, Test Condition | Standard | Unit | Values |
|--|-------------|-------------------------|--------|
| Rheological Properties | | | |
| Melt Volume Rate 220 °C/10 kg | ISO 1133 | cm ³ /10 min | 30 |
| Mechanical Properties | | | |
| Izod Notched Impact Strength, 23 °C | ISO 180/A | kJ/m ² | 2.5 |
| Izod Unnotched Impact Strength | ISO 180 | kJ/m ² | 12 |
| Charpy Notched Impact Strength, 23° C | ISO 179 | kJ/m ² | 1.5 |
| Charpy Unnotched, 23° C | ISO 179 | kJ/m ² | 12 |
| Tensile Stress at Yield, 23° C | ISO 527 | MPa | 60 |
| Tensile Strain at Break, 23° C | ISO 527 | % | 2.5 |
| Tensile Modulus | ISO 527 | MPa | 3300 |
| Flexural Strength | ISO 178 | MPa | 100 |
| Flexural Modulus | ISO 178 | MPa | 3400 |
| Hardness, Rockwell | | M scale | 75 |
| Hardness, Ball Indentation | ISO 2039-1 | MPa | 169 |
| Thermal Properties | | | |
| Vicat Softening Temperature VST/B/50 (50°C/h, 50N) | ISO 306 | °C | 98 |
| Vicat Softening Temperature, B/1 (120°C/h, 10N) | ASTM D 1525 | °C | 102 |
| Heat Distortion Temperature, B (0.45 MPa) | ISO 75 | °C | 90 |

| Property, Test Condition | Standard | Unit | Values |
|--|-------------|-------------------|------------------|
| Heat Deflection Temperature A; (annealed, 1.8 MPa) | ISO 75 | °C | 80 |
| Optical Properties | | | |
| Refractive Index, Sodium D Line | ISO 489 | - | 1.56 |
| Light Transmission at 550 nm | ASTM D 1003 | % | 91.4 |
| Haze | ASTM D 1003 | % | 0.3 |
| Other Properties | | | |
| Density | ISO 1183 | kg/m ³ | 1090 |
| Moisture Absorption, Equilibrium 23°C/50% RH | ISO 62 | % | 0.15 |
| Processing | | | |
| Linear Mold Shrinkage | ISO 294-4 | % | 0.2 to 0.6 |
| Melt Temperature Range | ISO 294 | °C | 200 - 240 |
| Mold Temperature Range | ISO 294 | °C | 30 - 60 |
| Rear Temperature Range | | °C | 180 - 210 |
| Middle Temperature Range | | °C | 200 - 230 |
| Front Temperature Range | | °C | 210 - 240 |
| Injection Velocity | ISO 294 | mm/s | Slow to Moderate |
| Drying Temperature | | °C | 80 |
| Drying Time | | h | 2 |
| Max Service Temperature | | °C | 260 |

Typical values for uncolored products

SUPPLY FORM

Styrolution NAS resins are available in bulk , 25kg bags or octabin cartons.

PROCESSING

NAS is a low moisture absorption copolymer and in many instances processes readily without pre-drying. There are combinations of conditions that require the product to be dried, such as high humidity and heavy section molding. Two hours at 82 °C (180 °F

PRODUCT SAFETY

During processing of NAS small quantities of styrene monomer may be released into the atmosphere. At styrene vapor concentrations below 20ppm no negative effects on health are expected. In our experience, the concentration of styrene does not exceed 1 ppm in well ventilated workplaces - that is where five to eight air changes per hour are made.

DISCLAIMER

The above information is provided in good faith. Styrolution is not responsible for any processing or compounding which may occur to product finished articles, packaging materials or their components. Further, Styrolution MAKES NO WARRANTY OR REPRESENTATION OF ANY KIND, REGARDING THE INFORMATION GIVEN OR THE PRODUCTS DESCRIBED, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES, REPRESENTATIONS AND CONDITIONS, INCLUDING WITHOUT LIMITATION ALL WARRANTIES AND CONDITIONS OF QUALITY, MERCHANTABILITY AND SUITABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Responsibility for use, storage, handling and disposal of the products described herein is that of the purchaser or end user.
