

# Kumho SAN SAN 310CTR

Styrene Acrylonitrile

Korea Kumho Petrochemical Co., Ltd.

# PROSPECTOR®

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## Technical Data

### Product Description

Features: High transparency, Crystal  
Applications: Cosmetic container, Mixer, Transparent container

### General

|                           |  |
|---------------------------|--|
| Material Status           | • Commercial: Active                                   |
| Literature <sup>1</sup>   | • <a href="#">Technical Datasheet - ASTM (English)</a> |
| Search for UL Yellow Card | • <a href="#">Korea Kumho Petrochemical Co., Ltd.</a>  |
| Availability              | • Asia Pacific • Europe • North America                |
| Uses                      | • Containers • Cosmetics                               |
| Appearance                | • Clear/Transparent                                    |

| Physical                       | Nominal Value (English) | Nominal Value (SI)     | Test Method |
|--------------------------------|-------------------------|------------------------|-------------|
| Density / Specific Gravity     | 1.07                    | 1.07 g/cm <sup>3</sup> | ASTM D792   |
| Melt Mass-Flow Rate (MFR)      |                         |                        | ASTM D1238  |
| 200°C/5.0 kg                   | 5.5 g/10 min            | 5.5 g/10 min           |             |
| 230°C/3.8 kg                   | 20 g/10 min             | 20 g/10 min            |             |
| Molding Shrinkage - Flow       | 2.0E-3 to 6.0E-3 in/in  | 0.20 to 0.60 %         | ASTM D955   |
| Water Absorption (Equilibrium) | 0.30 %                  | 0.30 %                 | ASTM D570   |

| Mechanical                 | Nominal Value (English) | Nominal Value (SI) | Test Method |
|----------------------------|-------------------------|--------------------|-------------|
| Tensile Strength (Yield)   | 8820 psi                | 60.8 MPa           | ASTM D638   |
| Tensile Elongation (Yield) | 4.5 %                   | 4.5 %              | ASTM D638   |
| Flexural Modulus           | 478000 psi              | 3300 MPa           | ASTM D790   |
| Flexural Strength (Yield)  | 12800 psi               | 88.3 MPa           | ASTM D790   |

| Impact                          | Nominal Value (English) | Nominal Value (SI) | Test Method |
|---------------------------------|-------------------------|--------------------|-------------|
| Notched Izod Impact             |                         |                    | ASTM D256   |
| 73°F (23°C), 0.126 in (3.20 mm) | 0.28 ft·lb/in           | 15 J/m             |             |

| Hardness                    | Nominal Value (English) | Nominal Value (SI) | Test Method |
|-----------------------------|-------------------------|--------------------|-------------|
| Rockwell Hardness (M-Scale) | 82                      | 82                 | ASTM D785   |

| Thermal                           | Nominal Value (English) | Nominal Value (SI) | Test Method             |
|-----------------------------------|-------------------------|--------------------|-------------------------|
| Deflection Temperature Under Load |                         |                    | ASTM D648               |
| 264 psi (1.8 MPa), Unannealed     | 194 °F                  | 90.0 °C            |                         |
| Vicat Softening Temperature       | 225 °F                  | 107 °C             | ASTM D1525 <sup>3</sup> |

| Flammability                    | Nominal Value (English) | Nominal Value (SI) | Test Method |
|---------------------------------|-------------------------|--------------------|-------------|
| Flame Rating (0.06 in (1.6 mm)) | HB                      | HB                 | UL 94       |

| Injection          | Nominal Value (English) | Nominal Value (SI) |
|--------------------|-------------------------|--------------------|
| Drying Temperature | 167 to 185 °F           | 75 to 85 °C        |
| Drying Time        | 2.0 to 4.0 hr           | 2.0 to 4.0 hr      |
| Rear Temperature   | 338 to 374 °F           | 170 to 190 °C      |
| Middle Temperature | 356 to 392 °F           | 180 to 200 °C      |
| Front Temperature  | 374 to 410 °F           | 190 to 210 °C      |
| Nozzle Temperature | 374 to 428 °F           | 190 to 220 °C      |
| Mold Temperature   | 104 to 158 °F           | 40 to 70 °C        |

### Injection Notes

Injection Hopper Throat: 45 °C

### Notes

<sup>1</sup> These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

<sup>2</sup> Typical properties: these are not to be construed as specifications.

<sup>3</sup> Rate A (50°C/h), Loading 1 (10 N)



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### Where to Buy

#### Supplier

**Korea Kumho Petrochemical Co., Ltd.**

Seoul, South Korea

**Telephone:** +82-2-767-6114

**Web:** <http://www.kkpc.co.kr/>

#### Distributor

##### **GAZECHIM PLASTIQUES**

*GAZECHIM PLASTIQUES is a Pan European distribution company. Contact GAZECHIM PLASTIQUES for availability of individual products by country.*

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**Availability:** Central America, North America, South America

