## Task® 9 Colormatch

## Polyurethane

Smooth-On, Inc

## Message:

TASK® 9 Colormatch is a high performance urethane casting resin that features very high compressive strength and tensile strength. TASK® 9 is clear amber, which makes this plastic very easy to color using SO-Strong® or IGNITE® colorants. With a mix ratio of 1A:1B by volume, TASK® 9 is easy to use and a low mixed viscosity (300 cps) ensures minimal bubble entrapment. Pot life is 7 minutes and cure time is about 60 minutes (depending on mass). TASK® 9 is ideal for making impact resistant tooling, color accurate prototypes / models as well as durable reproductions.

| General Information                                        |                           |       |             |  |
|------------------------------------------------------------|---------------------------|-------|-------------|--|
| Features                                                   | Good Colorability         |       |             |  |
|                                                            | Good Compressive Strength |       |             |  |
|                                                            | High Tensile Strength     |       |             |  |
|                                                            | Low Viscosity             |       |             |  |
|                                                            |                           |       |             |  |
| Uses                                                       | Modeling Material         |       |             |  |
|                                                            | Prototyping               |       |             |  |
|                                                            | Tooling                   |       |             |  |
|                                                            |                           |       |             |  |
| Appearance                                                 | Clear Amber               |       |             |  |
| Processing Method                                          | Casting                   |       |             |  |
| Physical                                                   | Nominal Value             | Unit  | Test Method |  |
| Specific Gravity                                           | 1.14                      | g/cm³ | ASTM D1475  |  |
| Specific Volume                                            | 0.878                     | cm³/g | ASTM D1475  |  |
| Mixing Ratio                                               | 1A:1B by volume           |       |             |  |
| Molding Shrinkage - Flow (23°C, 7 days)                    | 0.90                      | %     | ASTM D2566  |  |
| Hardness                                                   | Nominal Value             | Unit  | Test Method |  |
| Durometer Hardness (Shore D)                               | 85                        |       | ASTM D2240  |  |
| Mechanical                                                 | Nominal Value             | Unit  | Test Method |  |
| Tensile Modulus                                            | 2550                      | MPa   | ASTM D638   |  |
| Tensile Strength (Break)                                   | 53.8                      | MPa   | ASTM D638   |  |
| Tensile Elongation (Break)                                 | 6.0                       | %     | ASTM D638   |  |
| Flexural Modulus                                           | 2410                      | MPa   | ASTM D790   |  |
| Flexural Strength                                          | 81.7                      | MPa   | ASTM D790   |  |
| Compressive Modulus                                        | 676                       | MPa   | ASTM D695   |  |
| Compressive Strength                                       | 75.8                      | MPa   | ASTM D695   |  |
| Thermal                                                    | Nominal Value             | Unit  | Test Method |  |
| Deflection Temperature Under Load (1.8<br>MPa, Unannealed) | 55.0                      | °C    | ASTM D648   |  |
| Thermoset                                                  | Nominal Value             | Unit  | Test Method |  |
| Pot Life (23°C)                                            | 7.0                       | min   | ASTM D2471  |  |

| Thermoset Mix Viscosity         | 300       | сР  | ASTM D2393 |
|---------------------------------|-----------|-----|------------|
| Demold Time <sup>1</sup> (23°C) | 60        | min |            |
| NOTE                            |           |     |            |
| 1.                              | Cure Time |     |            |

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

