# Shinko-Lac® ABS VL-1

### Acrylonitrile Butadiene Styrene

Mitsubishi Rayon America Inc.

#### Message:

Shinko-Lac ABS VL-1 is a flame retardant grade that offers excellent flame retardant characteristics to products along with good thermal stability. Good flow property offers easy processing especially for large and thin products.

Typical applications of VL-1 include electrical/electronic applications.

| General Information |                            |  |  |
|---------------------|----------------------------|--|--|
| Additive            | Flame retardancy           |  |  |
| Features            | Good dimensional stability |  |  |
|                     | Rigidity, high             |  |  |
|                     | Highlight                  |  |  |
|                     | High strength              |  |  |
|                     | Impact resistance, good    |  |  |
|                     | Weldable                   |  |  |
|                     | Workability, good          |  |  |
|                     | Sprayable                  |  |  |
|                     | Machinable                 |  |  |
|                     | Good chemical resistance   |  |  |
|                     | Thermal stability, good    |  |  |
|                     | Good toughness             |  |  |
|                     | Good appearance            |  |  |
|                     | Non-toxic                  |  |  |
|                     | High hardness              |  |  |
|                     | Flame retardancy           |  |  |
|                     |                            |  |  |
| UL File Number      | E54695                     |  |  |
| Appearance          | Available colors           |  |  |
|                     | Natural color              |  |  |
|                     |                            |  |  |
| Forms               | Particle                   |  |  |
| Processing Method   | Extrusion                  |  |  |
|                     | Calendering                |  |  |
|                     | Vacuum forming             |  |  |
|                     | Injection molding          |  |  |
|                     |                            |  |  |

| Physical                                 | Nominai value | Unit     | l est Method |
|--|---------------|----------|--------------|
| Specific Gravity                         | 1.17          | g/cm³    | ASTM D792    |
| Melt Mass-Flow Rate (MFR) (200°C/5.0 kg) | 10            | g/10 min | ASTM D1238   |
| Molding Shrinkage - Flow                 | 0.50          | %        | ASTM D955    |
|  |               |          |              |

| Water Absorption (24 hr)   | 0.22                   | %    | ASTM D570   |
|--|------------------------|------|-------------|
| Hardness   | Nominal Value          | Unit | Test Method |
| Rockwell Hardness (R-Scale)                                      | 108                    |      | ASTM D785   |
| Mechanical   | Nominal Value          | Unit | Test Method |
| Tensile Modulus (23°C)   | 2450                   | MPa  | ASTM D638   |
| Tensile Strength (Yield, 23°C)                                   | 39.2                   | MPa  | ASTM D638   |
| Flexural Modulus (23°C, 6.35 mm)                                 | 2500                   | MPa  | ASTM D790   |
| Flexural Strength (Yield, 23°C, 6.35 mm)                         | 63.7                   | MPa  | ASTM D790   |
| Impact   | Nominal Value          | Unit | Test Method |
| Notched Izod Impact (23°C, 6.35 mm)                              | 88                     | J/m  | ASTM D256   |
| Thermal  | Nominal Value          | Unit | Test Method |
| Deflection Temperature Under Load (1.8 MPa, Unannealed, 12.7 mm) | 79.0                   | °C   | ASTM D648   |
| Flammability   | Nominal Value          |      | Test Method |
| Flame Rating   |                        |      | UL 94       |
| 1.59 mm, NC  | V-2                    |      | UL 94       |
| 3.18 mm, NC  | V-2                    |      | UL 94       |
| Injection  | Nominal Value          | Unit |             |
| Drying Temperature   | 80.0 - 90.0            | °C   |             |
| Drying Time  | 2.0 - 4.0              | hr   |             |
| Suggested Max Moisture   | 0.10                   | %    |             |
| Rear Temperature   | 200 - 250              | °C   |             |
|  |                        |      |             |
| Middle Temperature   | 200 - 250              | °C   |             |
| Middle Temperature Front Temperature                             | 200 - 250<br>200 - 250 | °C   |             |
|  |                        |      |             |
| Front Temperature  | 200 - 250              | °C   |             |

Higher mold temperature provides a product with excellent surface finish and less residual stress.

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

#### Recommended distributors for this material

## 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

