# VESTAMID® NRG 1001 natural color

## Polyamide 12

### **Evonik Industries AG**

#### Message:

High viscosity, platicized, impact-modified, heat and light stabilized PA12 compound for extrusion.

VESTAMID®NRG 1001 is a plasticized PA 12 compound with heat and light stabilizers for the extrusion of flexible tubing and hoses especially for oil and petrochemical applications.

VESTAMID®NRG 1001 is characterized by easy processing and good dimensional control during pipe extrusion, especially when processing large pipe diameters.

Properties of compounds based on polyamide 12 vary little with changing humidity due to low moisture absorption

Parts made of the described semi-crystalline materialare characterized by exceptional impact strength, low coefficient of sliding friction and good chemical resistance.

VESTAMID®NRG 1001 is supplied ready for use in moisture-proof bags. The recommended process temperature for extrusion is 220°C to 250°C.

| General Information            |                            |       |             |  |  |
|--------------------------------|----------------------------|-------|-------------|--|--|
| Additive                       | Heat Stabilizer            |       |             |  |  |
|                                | Impact Modifier            |       |             |  |  |
|                                |                            |       |             |  |  |
| Features                       | Good Chemical Resistance   |       |             |  |  |
|                                | Good Dimensional Stability |       |             |  |  |
|                                | Good Impact Resistance     |       |             |  |  |
|                                | Good Processability        |       |             |  |  |
|                                | High Viscosity             |       |             |  |  |
|                                | Low Friction               |       |             |  |  |
|                                | Low Moisture Absorption    |       |             |  |  |
|                                | Semi Crystalline           |       |             |  |  |
|                                |                            |       |             |  |  |
| Appearance                     | Natural Color              |       |             |  |  |
| Processing Method              | Pipe Extrusion             |       |             |  |  |
| Physical                       | Nominal Value              | Unit  | Test Method |  |  |
| Density (23°C)                 | 1.02                       | g/cm³ | ISO 1183    |  |  |
| Mechanical                     | Nominal Value              | Unit  | Test Method |  |  |
| Tensile Modulus                | 380                        | MPa   | ISO 527-2   |  |  |
| Tensile Stress                 |                            |       | ISO 527-2   |  |  |
| Yield <sup>1</sup>             | 26.0                       | MPa   |             |  |  |
| Break                          | 38.0                       | MPa   |             |  |  |
| Tensile Strain                 |                            |       | ISO 527-2   |  |  |
| Yield <sup>2</sup>             | 35                         | %     |             |  |  |
| Break <sup>3</sup>             | > 200                      | %     |             |  |  |
| Break                          | > 150                      | %     |             |  |  |
| Impact                         | Nominal Value              | Unit  | Test Method |  |  |
| Charpy Notched Impact Strength |                            |       | ISO 179/1eA |  |  |

| -30°C, Complete Break            | 7.0                | kJ/m² |             |
|----------------------------------|--------------------|-------|-------------|
| 23°C, Partial Break              | 130                | kJ/m² |             |
| Charpy Unnotched Impact Strength | ISO 179/1eU        |       |             |
| -30°C                            | No Break           |       |             |
| 23°C                             | No Break           |       |             |
| Thermal                          | Nominal Value      | Unit  | Test Method |
| Melting Temperature <sup>4</sup> | 172                | °C    | ISO 11357-3 |
| Extrusion                        | Nominal Value      | Unit  |             |
| Melt Temperature                 | 220 to 250         | °C    |             |
| NOTE                             |                    |       |             |
| 1.                               | Pipe Test Specimen |       |             |
| 2.                               | Pipe Test Specimen |       |             |
| 3.                               | Pipe Test Specimen |       |             |
| 4.                               | 2nd Heating        |       |             |
|                                  |                    |       |             |

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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

