# INEOS PP H53N-00

### Polypropylene Homopolymer

### **INEOS Olefins & Polymers USA**

#### Message:

H53N-00 is a high flow rate nucleated and lightly lubricated homopolymer polypropylene designed for high-speed injection molding of thin-walled parts requiring good stiffness and fast cycle times. Typical applications are: media packaging, consumer products, housewares, and thin-wall rigid packaging and food service items. This grade meets the requirements of the U.S. Food and Drug Administration as specified in 21 CFR 177.1520.

| General Information                   |                           |          |             |  |
|---------------------------------------|---------------------------|----------|-------------|--|
| Additive                              | Lubricant                 |          |             |  |
|                                       | Nucleating Agent          |          |             |  |
|                                       |                           |          |             |  |
| Features                              | Fast Molding Cycle        |          |             |  |
|                                       | Food Contact Acceptable   |          |             |  |
|                                       | Good Stiffness            |          |             |  |
|                                       | High Flow                 |          |             |  |
|                                       | Homopolymer               |          |             |  |
|                                       | Lubricated                |          |             |  |
|                                       | Nucleated                 |          |             |  |
|                                       |                           |          |             |  |
| Uses                                  | Consumer Applications     |          |             |  |
|                                       | Food Service Applications |          |             |  |
|                                       | Household Goods           |          |             |  |
|                                       | Media Packaging           |          |             |  |
|                                       | Rigid Packaging           |          |             |  |
|                                       | Thin-walled Packaging     |          |             |  |
|                                       | Thin-walled Parts         |          |             |  |
| Agency Ratings                        | EC 1907/2006 (REACH)      |          |             |  |
|                                       | FDA 21 CFR 177.1520       |          |             |  |
|                                       |                           |          |             |  |
| Forms                                 | Pellets                   |          |             |  |
| Processing Method                     | Injection Molding         |          |             |  |
| Physical                              | Nominal Value             | Unit     | Test Method |  |
| Specific Gravity                      | 0.914                     | g/cm³    | ASTM D792   |  |
| Melt Mass-Flow Rate (MFR) (230°C/2.16 |                           |          |             |  |
| kg)                                   | 53                        | g/10 min | ASTM D1238  |  |
| Hardness                              | Nominal Value             | Unit     | Test Method |  |
| Rockwell Hardness (R-Scale)           | 107                       |          | ASTM D785   |  |
| Mechanical                            | Nominal Value             | Unit     | Test Method |  |
| Tensile Strength <sup>1</sup>         |                           |          | ASTM D638   |  |

| Yield                                  | 38.0          | MPa   |             |
|--|---------------|-------|-------------|
| Break                                  | 27.5          | MPa   |             |
| Tensile Elongation <sup>2</sup>        |               |       | ASTM D638   |
| Yield                                  | 8.5           | %     |             |
| Break                                  | 19            | %     |             |
| Flexural Modulus - 1% Secant           | 1790          | MPa   | ASTM D790A  |
| Impact                                 | Nominal Value | Unit  | Test Method |
| Notched Izod Impact (23°C)             | 27            | J/m   | ASTM D256   |
| Notched Izod Impact (Area) (23°C)      | 2.61          | kJ/m² | ASTM D256   |
| Thermal                                | Nominal Value | Unit  | Test Method |
| Deflection Temperature Under Load (0.4 | 5             |       |             |
| MPa, Unannealed)                       | 114           | °C    | ASTM D648   |
| Optical                                | Nominal Value | Unit  | Test Method |
| Gloss (60°)                            | 92            |       | ASTM D2457  |
| Haze <sup>3</sup> (1270 µm)            | 54            | %     | ASTM D1003  |
| NOTE                                   |               |       |             |
| 1.                                     | 51 mm/min     |       |             |
| 2.                                     | 51 mm/min     |       |             |
| 3.                                     | 23°C          |       |             |
|  |               |       |             |

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