

# SABIC® HDPE M80064S

High Density Polyethylene

Saudi Basic Industries Corporation (SABIC)

Message:

SABIC® HDPE M80064S is an UV stabilized, high density polyethylene injection moulding grade with a narrow molecular weight distribution. It is typically used for injection moulding applications where rigidity, toughness and warp resistance are required.

Typical applications.

SABIC® HDPE M80064S is typically used for the manufacture of injection moulded cases, crates, trays, industrial pails and other similar items.

This product is not intended for and must not be used in any pharmaceutical/medical applications.

| General Information  |                                      |                   |                  |
|--|--------------------------------------|-------------------|------------------|
| Additive   | UV Stabilizer                        |                   |                  |
| Features   | Good Toughness                       |                   |                  |
|  | Good UV Resistance                   |                   |                  |
|  | High Density                         |                   |                  |
|  | Medium Rigidity                      |                   |                  |
|  | Narrow Molecular Weight Distribution |                   |                  |
|  | Warp Resistant                       |                   |                  |
| Uses   | Crates                               |                   |                  |
|  | Industrial Applications              |                   |                  |
|  | Pails                                |                   |                  |
| Processing Method  | Injection Molding                    |                   |                  |
| Physical   | Nominal Value                        | Unit              | Test Method      |
| Density  | 0.964                                | g/cm <sup>3</sup> | ISO 1183         |
| Melt Mass-Flow Rate (MFR)  |                                      |                   | ISO 1133         |
| 190°C/2.16 kg  | 8.0                                  | g/10 min          |                  |
| 190°C/5.0 kg   | 22                                   | g/10 min          |                  |
| Environmental Stress-Cracking Resistance <sup>1</sup> (60°C, 3.00 mm, Rhodacal-DS10, Compression Molded) | 40.0                                 | hr                | Internal Method  |
| Hardness   | Nominal Value                        | Unit              | Test Method      |
| Shore Hardness (Shore D, Compression Molded)   | 65                                   |                   | ISO 868          |
| Mechanical   | Nominal Value                        | Unit              | Test Method      |
| Tensile Modulus (2.00 mm, Compression Molded)  | 1450                                 | MPa               | ISO 527-2/1BA/50 |
| Tensile Stress   |                                      |                   | ISO 527-2/1BA/50 |
| Yield, 2.00 mm, Compression Molded   | 32.0                                 | MPa               |                  |
| Break, 2.00 mm, Compression Molded   | 15.0                                 | MPa               |                  |
| Tensile Strain (Break, 2.00 mm, Compression Molded)  | > 200                                | %                 | ISO 527-2/1BA/50 |

|   |               |                   |             |
|---|---------------|-------------------|-------------|
| Flexural Modulus (2.00 mm, Compression Molded)          | 1700          | MPa               | ISO 178     |
| Flexural Stress (2.00 mm, Compression Molded)           | 32.0          | MPa               | ISO 178     |
| Impact  | Nominal Value | Unit              | Test Method |
| Notched Izod Impact Strength (23°C, Compression Molded) | 4.0           | kJ/m <sup>2</sup> | ISO 180/A   |
| Thermal   | Nominal Value | Unit              | Test Method |
| Heat Deflection Temperature (0.45 MPa, Unannealed)      | 95.0          | °C                | ISO 75-2/B  |
| Vicat Softening Temperature                             | 129           | °C                | ISO 306/A   |
| Melting Temperature (DSC)                               | 135           | °C                | ISO 11357-3 |
| Enthalpy Change   | 229           | J/g               | ISO 11357-3 |
| Injection   | Nominal Value | Unit              |             |
| Processing (Melt) Temp                                  | 230 to 275    | °C                |             |
| Mold Temperature  | 32.0 to 38.0  | °C                |             |
| Injection Pressure                                      | 69.0 to 89.0  | MPa               |             |
| NOTE  |               |                   |             |
| 1.  | 2 MPa         |                   |             |

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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



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