

# Evolve<sup>®</sup>-H Product Data Sheet

| Properties            |                         | Unit              | Testing method <sup>1</sup> |                |       | Blow                       |                            |                            | Extruded Pipe         | High-Flow Powder |              | Film                           |                      |                      |                      |
|-----------------------|-------------------------|-------------------|-----------------------------|----------------|-------|----------------------------|----------------------------|----------------------------|-----------------------|------------------|--------------|--------------------------------|----------------------|----------------------|----------------------|
|                       |                         |                   | JIS K                       | ISO            | ASTM  | SP6505                     | SP65051B                   | SP7005                     | SP5505                | SP50800P         | SP50500P     | SP4505                         | SP4005               | SP3505               | SP3510               |
| General properties    | Melt Index              | g/10min           | 7210                        | 1133           |       | 0.45                       | 0.45                       | 0.26                       | 0.27                  | 135              | 50           | 0.4                            | 0.45                 | 0.5                  | 0.65                 |
|                       | Density                 | kg/m <sup>3</sup> | 7112                        | 1183           |       | 957                        | 957                        | 963                        | 951                   | 951              | 948          | 944                            | 940                  | 936                  | 934                  |
| Mechanical properties | Tensile Stress At Yield | MPa               | 7161<br>7162                | 527-1<br>527-2 |       | 27                         | 27                         | 30                         | 24                    | -                | -            | 20                             | 19                   | 17                   | 17                   |
|                       | Elongation At Break     | MPa               |                             |                |       | >17                        | >17                        | 18                         | > 33                  | -                | -            | >25                            | >25                  | >25                  | >25                  |
|                       | Tensile Modulus         | %                 |                             |                |       | >500                       | >500                       | 450                        | > 600                 | -                | -            | >600                           | >600                 | >600                 | >600                 |
|                       | Flexus Modulus          | MPa               | 7171                        | 178            |       | 1300                       | 1300                       | 1600                       | 950                   | -                | -            | 900                            | 750                  | 600                  | 600                  |
|                       | Charpy Impact Strength  | kJ/m <sup>2</sup> | 7111                        | 179-1          |       | NB                         | NB                         | NB                         | NB                    | -                | -            | NB                             | NB                   | NB                   | NB                   |
|                       | Shore D Hardness        | -                 | 7215                        | 868            | D2240 | 64                         | 64                         | 65                         | 63                    | -                | -            | 61                             | 60                   | 58                   | 58                   |
| Chemical properties   | E.S.C.R                 | hours             | -                           | -              | D1693 | >600                       | >600                       | 300                        | > 600                 | -                | -            | >600                           | >600                 | >600                 | >600                 |
| Thermal properties    | Vicat Softening Point   |                   | 7206                        | 306            | D1525 | 126                        | 126                        | 128                        | 127                   | -                | -            | 119                            | 117                  | 116                  | 116                  |
|                       | Melting Point           |                   | 7121                        | 11357-3        | D3418 | 133                        | 133                        | 135                        | 131                   | 124              | 123          | 128                            | 127                  | 126                  | 126                  |
|                       | Brittleness Temperature |                   | 7216                        | 974            | D746A | <-60                       | <-60                       | <-60                       | < -60                 | -                | -            | <-60                           | <-60                 | <-60                 | <-60                 |
| Advantages            |                         |                   |                             |                |       | Stress Cracking Resistance | Stress Cracking Resistance | Stress Cracking Resistance | PE100                 | Powder           | Powder       | High Stiffness                 | High Stiffness       | High Stiffness       | High Stiffness       |
|                       |                         |                   |                             |                |       | Anti-Static Agent          | Non Additive               | Anti-Static Agent          | Hight Impact Strength | Non Additive     | Non Additive | High Impact Strength           | High Impact Strength | High Impact Strength | High Impact Strength |
|                       |                         |                   |                             |                |       |                            |                            |                            |                       | Flowability      | Flowability  | High Melt Tension              | High Melt Tension    | High Melt Tension    |                      |
| Major Applications    |                         |                   |                             |                |       | Detergent Container        | Food Container             | Detergent Container        | Water Pipe            | Master Batch     | Master Batch | Multilayer Film (Middle Class) | Heavy Duty Bag       | Heavy Duty Bag       | Thin Film            |
|                       |                         |                   |                             |                |       | Shampoo Container          | Cosmetic Container         | Shampoo Container          | General Pipe          |                  |              | Stiffness Improvement          | Industrial Film      | Industrial Film      |                      |
|                       |                         |                   |                             |                |       | Food Container             |                            | Food Container             |                       |                  |              |                                |                      |                      |                      |

\*1) Specimen preparation according to JIS K7151 (ISO293) and 7152 (ISO294) (Load at 2.16kg)

Melt Index above 1g/10min: Injection molding specimen

Melt Index below 1g/10min: Pressed sheet specimen

Data described in this catalog are representative figures obtained by measurement under specific conditions.

Uses described in this catalog do not necessarily assure results of certain product applications.

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This product is to be used for packaging medicine, please consult with your primepolymer representative beforehand.

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