# Aspira<sup>™</sup> One polymer

## Polyethylene Terephthalate

### Eastman Chemical Company

#### Message:

Eastman Aspira<sup>™</sup> One polymer is a resin specifically tailored for producing extrusion blow molded (EBM) containers that are compatible in the PET recycle stream (Resin ID code 1). Aspira One integrates four key material requirements, 1) recyclability, 2) processing efficiency, 3) design flexibility, and 4) bottle performance into a single product. Additional features such as high clarity and gloss improve product shelf appeal. Aspira One runs on most standard processing equipment. Minimal IV degradation during processing enables efficient use of regrind.

Eastman Aspira<sup>™</sup> One is cleared for various food contact applications (including contact with most alcoholic beverages) by FCN No. 1234 as described in the Food and Drug Administration (FDA) Inventory of Effective Food Contact Substance Notifications and may be used in full compliance with the United States Federal Food and Drug, and Cosmetic Act, provided that it is used within the limitations set forth for FCN 1234.

| General Information               |                           |       |             |  |  |
|-----------------------------------|---------------------------|-------|-------------|--|--|
| Features                          | Antimony Free             |       |             |  |  |
|                                   | Barrier Resin             |       |             |  |  |
|                                   | BPA Free                  |       |             |  |  |
|                                   | Excellent Printability    |       |             |  |  |
|                                   | Food Contact Acceptable   |       |             |  |  |
|                                   | Good Chemical Resistance  |       |             |  |  |
|                                   | Good Colorability         |       |             |  |  |
|                                   | Good Toughness            |       |             |  |  |
|                                   | Halogen Free              |       |             |  |  |
|                                   | High Clarity              |       |             |  |  |
|                                   | High Gloss                |       |             |  |  |
|                                   | Recyclable Material       |       |             |  |  |
|                                   |                           |       |             |  |  |
| Uses                              | Blow Molding Applications |       |             |  |  |
|                                   | Bottles                   |       |             |  |  |
|                                   | Containers                |       |             |  |  |
|                                   | Food Containers           |       |             |  |  |
|                                   | Packaging                 |       |             |  |  |
| Agency Ratings                    | FDA FCN 1237              |       |             |  |  |
| Appearance                        | Clear/Transparent         |       |             |  |  |
| Processing Method                 | Extrusion Blow Molding    |       |             |  |  |
| Physical                          | Nominal Value             | Unit  | Test Method |  |  |
| Specific Gravity                  | 1.32                      | g/cm³ | ASTM D792   |  |  |
| Molding Shrinkage - Flow          | 0.30                      | %     | ASTM D955   |  |  |
| Hardness                          | Nominal Value             | Unit  | Test Method |  |  |
| Rockwell Hardness (R-Scale, 23°C) | 104                       |       | ASTM D785   |  |  |
| Mechanical                        | Nominal Value             | Unit  | Test Method |  |  |
| Tensile Strength                  |                           |       | ASTM D638   |  |  |
| -                                 |                           |       |             |  |  |

| Yield, 23°C                       | 55.0          | MPa  |             |
|-----------------------------------|---------------|------|-------------|
| Break, 23°C                       | 27.0          | MPa  |             |
| Tensile Elongation                |               |      | ASTM D638   |
| Yield, 23°C                       | 4.0           | %    |             |
| Break, 23°C                       | 57            | %    |             |
| Flexural Modulus (23°C)           | 2230          | MPa  | ASTM D790   |
| Impact                            | Nominal Value | Unit | Test Method |
| Notched Izod Impact               |               |      | ASTM D256   |
| -40°C                             | 43            | J/m  |             |
| 23°C                              | 58            | J/m  |             |
| Unnotched Izod Impact             |               |      | ASTM D4812  |
| -40°C                             | 2800          | J/m  |             |
| 23°C                              | No Break      |      |             |
| Instrumented Dart Impact          |               |      | ASTM D3763  |
| -40°C, Energy at Peak Load        | 4.00          | J    |             |
| 23°C, Energy at Peak Load         | 33.0          | J    |             |
| Thermal                           | Nominal Value | Unit | Test Method |
| Deflection Temperature Under Load |               |      | ASTM D648   |
| 0.45 MPa, Unannealed              | 68.0          | °C   |             |
| 1.8 MPa, Unannealed               | 62.0          | °C   |             |
|                                   |               |      |             |

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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

