

# NORYL™ RESIN WM220A

REGION ASIA

## DESCRIPTION

NORYL WM220A resin is a 20% glass fiber reinforced blend of polyphenylene ether (PPE) + Polystyrene (PS). This injection moldable grades exhibits excellent long term hydrolytic stability, very low water absorption, heat / hot water resistance and is an excellent candidate for a various water management applications such as pump housings, impellers and valves. See NORYL FE1520PW resin for NSF /ANSI 61 and global potable water compliant version.

### GENERAL INFORMATION

|                       |                                                                                                                                                                                         |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Features              | Hydrolytic Stability, Low Warpage, Amorphous, Low Shrinkage, Low Moisture Absorption, Low Specific Gravity, Dimensional stability, High stiffness/Strength, No PFAS intentionally added |
| Fillers               | Glass Fiber                                                                                                                                                                             |
| Polymer Types         | Polyphenylene Ether + PS (PPE+PS)                                                                                                                                                       |
| Processing Techniques | Injection Molding                                                                                                                                                                       |

### INDUSTRY

Building and Construction

### SUB INDUSTRY

Water Management

## TYPICAL PROPERTY VALUES

Revision 20231109

| PROPERTIES                                  | TYPICAL VALUES      | UNITS    | TEST METHODS         |
|---------------------------------------------|---------------------|----------|----------------------|
| <b>MECHANICAL <sup>(1)</sup></b>            |                     |          |                      |
| Tensile Stress, yield                       | 98                  | MPa      | SABIC - Japan Method |
| Tensile Strain, break                       | 8 – 10              | %        | SABIC - Japan Method |
| Flexural Stress                             | 150.2               | MPa      | ASTM D790            |
| Flexural Modulus                            | 5640                | MPa      | ASTM D790            |
| Hardness, Rockwell R                        | 124                 | -        | ASTM D785            |
| <b>IMPACT <sup>(1)</sup></b>                |                     |          |                      |
| Izod Impact, notched, 23°C                  | 150                 | J/m      | ASTM D256            |
| <b>THERMAL <sup>(1)</sup></b>               |                     |          |                      |
| HDT, 1.82 MPa, 6.4 mm, unannealed           | 141                 | °C       | ASTM D648            |
| CTE, -30°C to 30°C                          | 0.000028 – 0.000045 | 1 /°C    | TMA                  |
| <b>PHYSICAL <sup>(1)</sup></b>              |                     |          |                      |
| Specific Gravity                            | 1.23                | -        | ASTM D792            |
| Water Absorption, (23°C/24hrs)              | 0.06                | %        | ASTM D570            |
| Mold Shrinkage, flow, 3.2 mm <sup>(2)</sup> | 0.2 – 0.4           | %        | SABIC method         |
| Melt Flow Rate, 300°C/5.0 kgf               | 9.4                 | g/10 min | ASTM D1238           |
| <b>ELECTRICAL <sup>(1)</sup></b>            |                     |          |                      |
| Surface Resistivity                         | 1.E+16              | Ω        | ASTM D257            |

(1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(2) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.



#### ADDITIONAL PRODUCT NOTES

No PFAS intentionally added: The grade listed in this document does not contain PFAS intentionally added during Seller's manufacturing process and is not expected to contain unintentional PFAS impurities. Each user is responsible for evaluating the presence of unintentional PFAS impurities.

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