

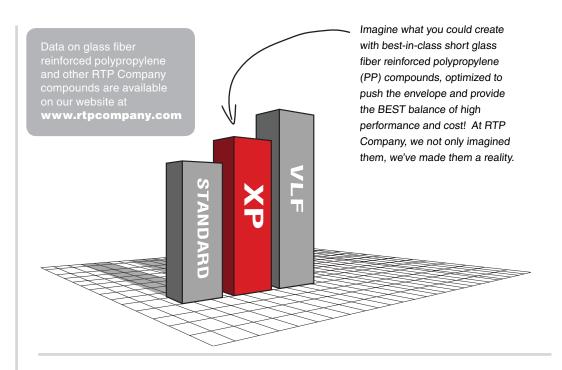
#### STRUCTURAL PRODUCT

#### **FEATURES**

- BEST-IN-CLASS performance compared to similar compounds
- · Exceptional balance of high modulus and impact resistance
- · Easily injection molded into complex geometries, large or small

#### **BENEFITS**

- Extra strength, modulus and impact compared to standard short glass fiber reinforced PP compounds
- Up to 20% increase in modulus at equivalent glass loading levels vs. standard compounds
- Properties not influenced by humidity/moisture
- Impressive cold temperature impact performance
- · Long term heat aging improvements
- Suitable for molding using common, general purpose equipment
- Customizable for easy flow; color; UV resistance; low emission, odor, and fogging



### RTP 100 EXTRA PERFORMANCE (XP)

Compounds are a series of polypropylene compounds formulated for higher strength, modulus, and impact properties than any previously existing standard glass reinforced polypropylene compounds — and by a wide margin. These compounds exhibit up to 20% higher modulus values and more than 50% improvement in impact compared to common glass fiber reinforced polypropylenes! By nature, polypropylene compounds are relatively lightweight; have excellent chemical resistance to a wide range of chemicals, fluids, and lubricants; and are non-hygroscopic. These facts make RTP 100 XP Compounds excellent alternatives to Nylon or other hygroscopic compounds where moisture can reduce the load bearing capability of these polymers.

RTP 100 XP Compounds are made using our optimized manufacturing process, advanced additive technologies, and formulation expertise. They are available worldwide as standard pellets in formulations containing glass fiber reinforcement ranging from 10-50 wt%. Additional additive technologies may be incorporated to create robust compounds that are engineered to meet extremely demanding requirements such as long term heat aging, cold weather impact resistance, flame retardance, ultra violet protection, or compliance with government agency approvals.

The perfect choice for large or small geometries, RTP 100 XP Compounds are easily injection molded with generous processing guidelines making them perfect for any industry application requiring lightweight performance. Possibilities include large structural tote bins, interior automotive trim, office furniture, construction panels, or even complex parts that can fit in the palm of your hand.

The RTP 100 eXtra Performance series of PP compounds is another great solution from RTP Company, your global leader in engineered thermoplastics.





# RTP 100 EXTRA PERFORMANCE SERIES

#### GLASS FIBER REINFORCED POLYPROPYLENE COMPOUNDS

#### PROPERTY COMPARISON: STANDARD VS. XP COMPOUNDS

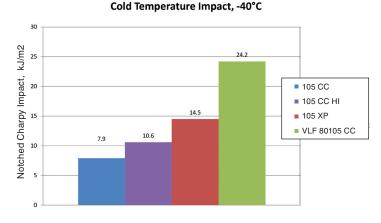
|               | 10% Glass Filled   |              | 20% Glass Filled   |              | 30% Glass Filled   |       |              | 40% Glass Filled   |              | 50% Glass Filled   |              |
|---------------|--------------------|--------------|--------------------|--------------|--------------------|-------|--------------|--------------------|--------------|--------------------|--------------|
|               | Standard<br>101 CC | XP<br>101 XP | Standard<br>103 CC | XP<br>103 XP | Standard<br>105 CC | PA66* | XP<br>105 XP | Standard<br>107 CC | XP<br>107 XP | Standard<br>109 CC | XP<br>109 XP |
| TS (Mpa)      | 45                 | 65           | 60                 | 90           | 75                 | 111   | 105          | 82                 | 120          | 95                 | 132          |
| ТМ (Мра)      | 2500               | 2750         | 4000               | 5000         | 6000               | 7720  | 6500         | 7000               | 9000         | 10500              | 11000        |
| TE (%)        | 6.0-8.0            | 4.0-5.0      | 5                  | 3.5          | 4.0-5.0            | 2.79  | 3.25         | 4                  | 3.1          | 3.5                | 2.75         |
| FS (Mpa)      | 65                 | 85           | 90                 | 140          | 110                | 220   | 165          | 130                | 185          | 150                | 210          |
| FM (Mpa)      | 2250               | 3000         | 3500               | 5000         | 5000               | 7600  | 6000         | 6500               | 8000         | 9000               | 10000        |
| ISONI (kJ/m2) | 5                  | 10           | 7                  | 13           | 8                  | 10    | 16           | 9                  | 17           | 10                 | 18           |
| ISOUI (kJ/m2) | 40                 | 40           | 42                 | 60           | 48                 | 45    | 70           | 50                 | 75           | 52                 | 75           |
| SG            | 0.97               | 0.97         | 1.04               | 1.04         | 1.13               | 1.37  | 1.13         | 1.22               | 1.21         | 1.32               | 1.33         |

<sup>\*</sup>Represents conditioned values, equilibrium @50% RH

#### STRENGTH COMPARISON @ 85°C

## **RTP GF Polypropylene Products** ASTM D638 Tensile Test 85°C 70 60 Tensile Stress - MPa RTP 105 CC RTP 105 XP RTP 199 x 70815 20 10 0.01 0.03 0.04 0.05 0.06 Tensile Strain - mm/mm

#### COLD TEMPERATURE IMPACT @ -40°C



#### **SUMMARY**

RTP 100 XP compounds fill the gap between standard glass filled polypropylene compounds and Very Long Fiber (VLF) compounds. With excellent stiffness and cold temperature impact, XP compounds provide a new and dramatically improved choice in reinforced polypropylene.



### RTP COMPANY: YOUR GLOBAL COMPOUNDER OF CUSTOM ENGINEERED THERMOPLASTICS

No information supplied by RTP Company constitutes a warranty regarding product performance or use. Any information regarding performance or use is only offered as suggestion for investigation for use, based upon RTP Company or other customer experience. RTP Company makes no warranties, expressed or implied, concerning the suitability or fitness of any of its products for any particular purpose. It is the responsibility of the customer to determine that the product is safe, lawful and technically suitable for the intended use. The disclosure of information herein is not a license to operate under, or a recommendation to infringe any patents.