

## Shell-Tech Free™ 6053



**Shell-Tech Free™ 6053** was developed to meet the textile industry's desire for a more sustainable durable water repellent. It is a specialty fluorocarbon-free aqueous finish based on a reactive hydrophobic polymer designed to impart high water repellency to a variety of natural and synthetic fiber-based textiles. **Shell-Tech Free™ 6053** significantly outperforms conventional fluorochemical repellent products in water impact resistance while yielding low mark-off on finished fabrics. The finish can also be processed using milder cure conditions than conventional DWRs.

### Physical Properties

- Appearance: Off white liquid
- pH of 1 % solution: 5.00 (+/- 1)
- Solid Content (%): 28-30
- Ionic Nature: Nonionic to weakly cationic
- Chemical Structure: Reactive hydrophobic polymer emulsion
- Compatibility: Compatible with cationic and nonionic products
- Stability: Stable to dilute acids
- Miscibility: Miscible with water

### Advantages

- High Initial Spray-Rating for Synthetics, Cotton rich fabrics, Poly/Lycra & Poly/Cotton blends fabrics.
- Unique Feature: Very High and Long-Lasting Water Impact Resistance. Yields Low Mark-off or Chalk Mark formation on finished fabrics.
- Exhibits Superior Hot-oven storage stability-Hot humid storage conditions (105 ° F - 120 ° F).
- Good Shear stability & good running properties.
- This Fluorine-free DWR is very effective even at low pad-bath concentrations offering high spray rating.
- Finish can be effectively cured using simple tumble drying in domestic clothes dryer.

*<application information on next page>*

Information contained in this technical data sheet is up-to-date and correct to the best of our knowledge at the date of issue and are subject to change. As Organic Dyes and Pigments LLC cannot control or anticipate the conditions under which this product may be used, each user should review the information in specific context of the planned use. Organic Dyes and Pigments LLC will not be responsible for damages of any nature resulting from the use or reliance upon the information contained in this data sheet. No express or implied warranties are given. Released: RY 09/24



## Padding Process

- Use **Shell-Tech Free 6053** 2.0 %-4.0 % o.w.b. for Synthetic fiber fabrics such as polyester, acrylic and nylon. 6-10% o.w.b. for natural fiber fabrics such as cotton and linen.
- **Pick-up:** 60-70%
- **Bath pH:** 4.0-5.0; helpful to add 0.1% Acetic or citric.
  - For very high wash durability requirement, the addition of cross-linker **Altolink Conc. M290-E** @ 0.8%-2.0 % o.w.b. based on 4.0% -10.0% of water-repellent **Shell- Tech Free 6053** is recommended.
- **Curing:** 140-150 °C, 1-2 min OR 160 °C for 40-45 sec fabric temperature. (For polyester at maximum pick up, ensure curing at temperature 150–160°C gives better spray rating.)

## Additional Notes

- **Shell-Tech Free 6053** can generally be used with most coating or finishing chemicals; however, laboratory testing for compatibility is suggested.
- For optimal results with **Shell-Tech Free 6053**, pickup should be 60- 70%
- A minimum 150 °C temperature for curing is recommended.
- Stir well before use.
- Shelf life: 12 months when stored between 40-90 °F in original containers

Information contained in this technical data sheet is up-to-date and correct to the best of our knowledge at the date of issue and are subject to change. As Organic Dyes and Pigments LLC cannot control or anticipate the conditions under which this product may be used, each user should review the information in specific context of the planned use. Organic Dyes and Pigments LLC will not be responsible for damages of any nature resulting from the use or reliance upon the information contained in this data sheet. No express or implied warranties are given. Released: RY 09/24

**Contact an ORCO™ Representative TODAY!**



Corporate Office  
1 Crownmark Drive  
Lincoln, RI 02865  
Tel: 800-556-6784  
Fax: 401-434-2390  
email: [info@organicdye.com](mailto:info@organicdye.com)

[www.organicdye.com](http://www.organicdye.com)

ISO 9001 Certified