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# DWR: Durable Water Repellent

9 May 2012  
GC3 Innovator's  
Roundtable  
R. C. Buck

GC3 Innovators Roundtable  
May 9, 2012  
Ann Arbor, MI

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DuPont Chemicals & Fluoroproducts

# Overview

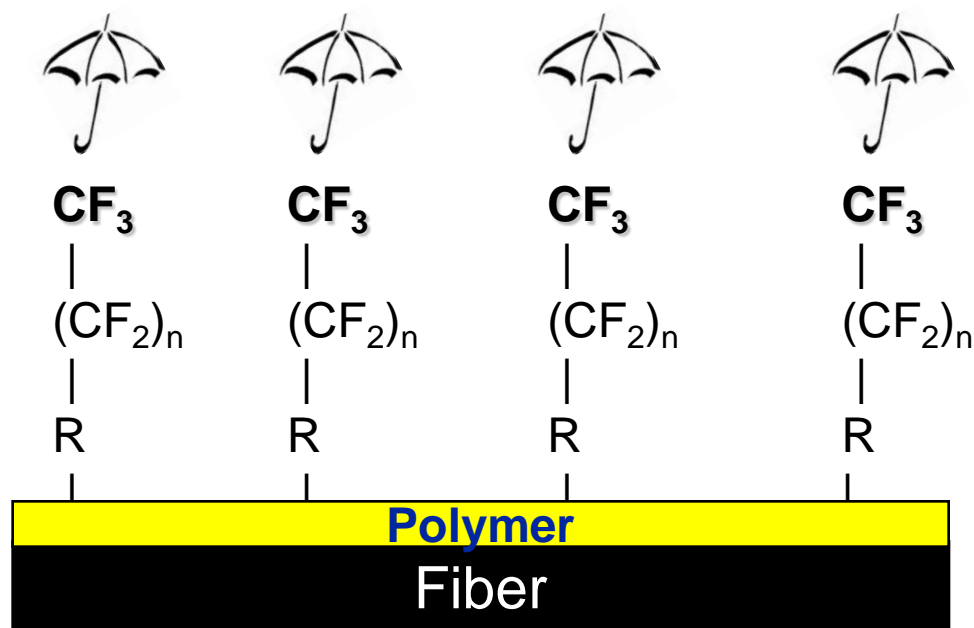
- **DWR finishes add value**
  - Protection: water, oil & soil repellent and release
  - Life-cycle benefits
- ***The Challenge:* Historic Long-Chain DWR technology is being replaced with more environmentally favorable Short-Chain technology**
  - Re-formulation and optimization required to achieve high-performance
  - Re-examining performance requirements
  - Regulatory and environmental drivers
- **Success requires Supply Chain Collaboration**
  - Long, complex supply chain - many steps and players



# Durable Water Repellent Polymers

## Why Fluorine? Performance

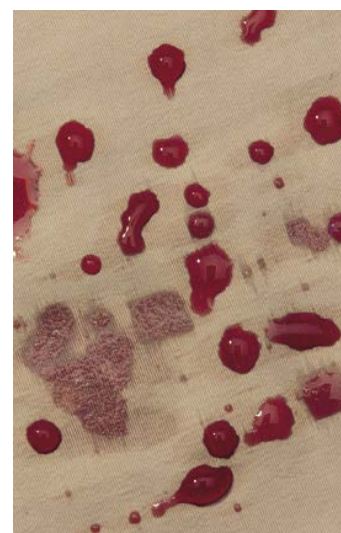
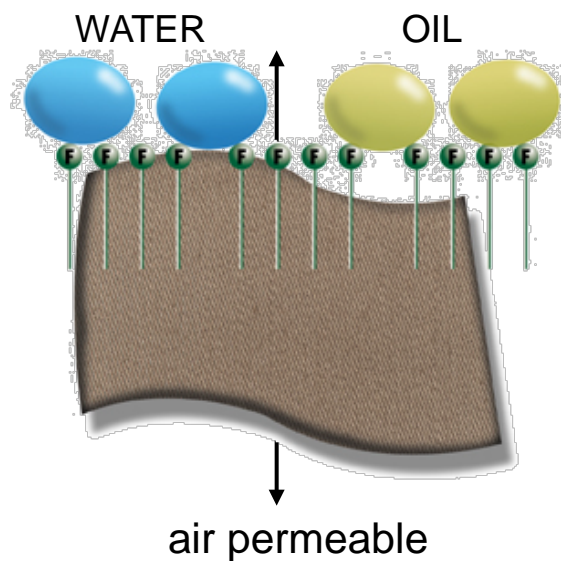
- Unique Surface Protection Properties: Water and Oil Repellency, Stain and soil repellency and Stain Release



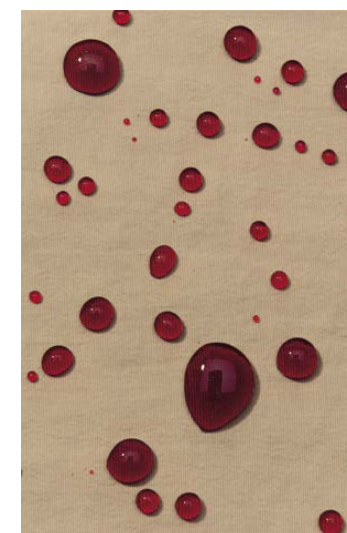
*Fiber and Fabric bulk properties are unaffected*

# DWR finishes add value

- **Fabrics treated for repellency fight off dry soil and nasty, unpredictable spills and splashes, allowing liquids to bead up and roll off.**
- **Liquid spills can easily be wiped away when blotted with a clean cloth, and dry soil can be brushed off easily.**



untreated



DWR treated

# Historic Long-Chain DWR technology is being replaced with more environmentally favorable Short-Chain technology

## Long Chain Products

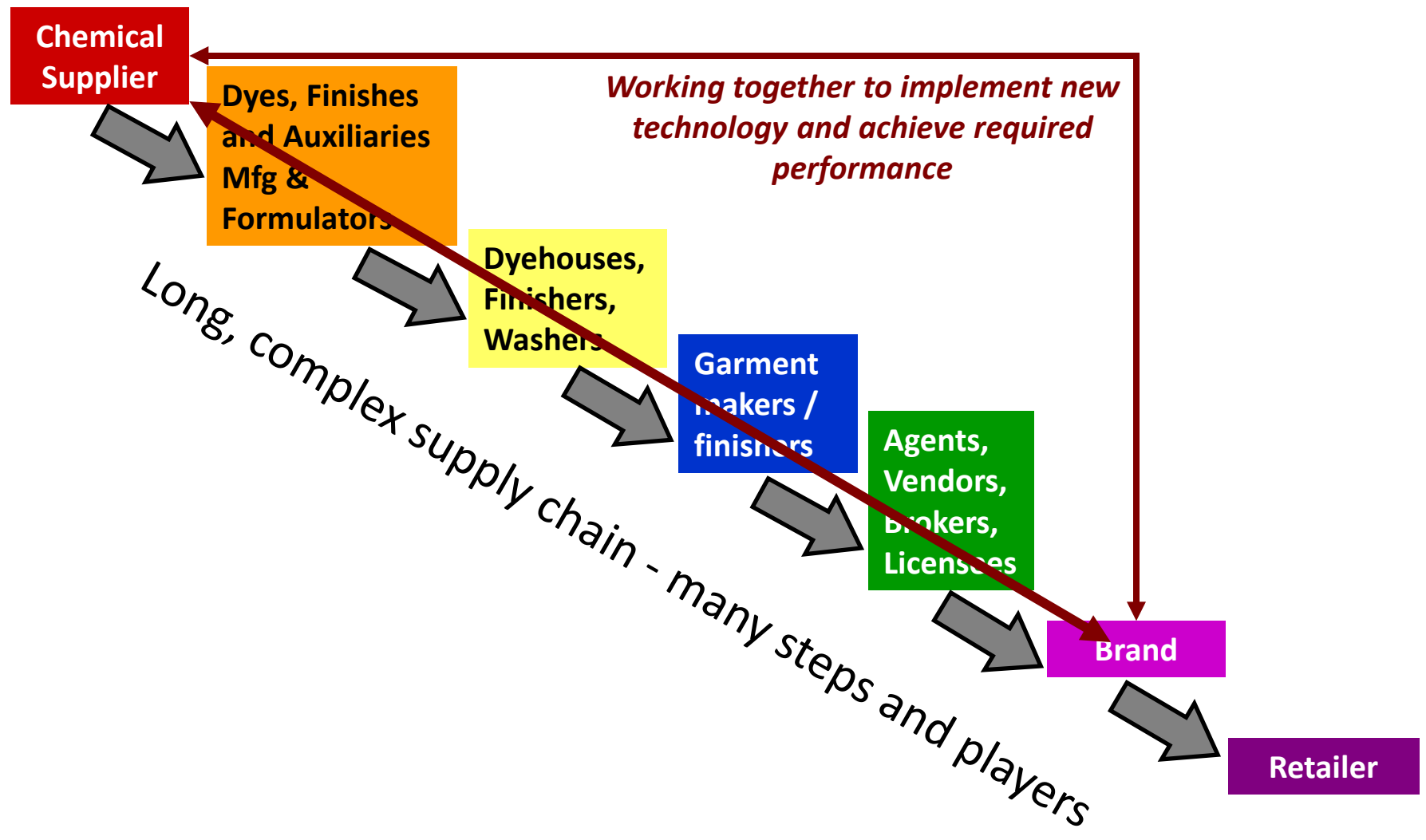
- **US EPA: PFOA 2010/15 Stewardship program; Chemical Action Plan**
- **Canada: Environmental performance agreement**
- **Europe: Classification & Labeling**

## Short Chain Products

- **Short chain products approved by regulators as acceptable replacements**
- **DWR supplier commitment**
- **Reformulation and optimization to achieve high-performance**



# Success requires Supply Chain Collaboration



# Overview

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