



## RUCO<sup>®</sup>-DRY BIO NPE

Back to nature and beyond fluorine-free  
Water-repellent performance based on  
natural plant extracts.

At **RUDOLF GROUP** modern, real science pairs up with environmental consciousness. R&D constantly explores new technologies and innovations that help transforming the textile and fashion industries. We work to gradually reduce dependency on conventional raw materials so that a significant fraction of our products can be made from either natural, renewable alternatives to oil, or waste and/or byproducts from other industries.

This is what the RUDOLF GROUP calls aspirational chemistry: R&D driven by *genuine, tangible, environmental consciousness that truly defines us.*

That is, in fact, **BETTER CHEMISTRY.**

Biomimicry and our studies of natural models such as lotus leaves or feathers played an important role in redefining the environmental impact of some textile chemistry. They also gave birth to the very first fluorine-free DWR's.

Now we take a leapfrog and introduce **RUCO®-DRY BIO NPE**, our first perfectly *natural DWR entirely based on hydrophobic components extracted from > 99% biomass sources.*



---

**RUCO®-DRY BIO NPE** is the first durable water-repellent finish entirely based on a carefully selected mix of natural plant extracts. The well-balanced mix of plant-based ingredients combines excellent water and stain repellent effects with breathability and natural handfeel.

Unlike other 100% renewable raw materials, the water-repellent active ingredients in **RUCO®-DRY BIO NPE** are chemically and genetically non-modified and are not used as food, feed or fuel. Furthermore, all of the plant extracts that compose **RUCO®-DRY BIO NPE** are subject to a strict conservation and sustainability framework.

Because of this regulated agricultural scheme, the supply of **RUCO®-DRY BIO NPE** is sizable yet limited to creation and marketing of exclusive collaborations in performance outdoor and sports apparel that embed state-of-the-art, all-natural technology.

## Performance & Features

- Excellent initial water repellency on synthetics, cellulosics and blends; spray rating 100 acc. to AATCC 22
- Superb resistance to home laundering (up to 30x acc. to DIN EN ISO 6330, addition of crosslinker e.g. RUCO-LINK XHC for cellulosics and blends is recommended for maximized durability)
- Initial performance is easily restored through tumble drying or ironing finished articles after laundering
- Excellent repellence towards water-based stains such as coffee, tea, orange juice, etc.
- Retains the fabric's inherent breathability and comfortable wear features
- No impairment of the fabric's appearance or handfeel
- Active component made from > 99% bio carbon



## Additional benefits

- Free of PFAS-based and halogenated compounds;
- Free of APEOs
- Free of solvents
- Non-flammable
- bluesign® approval to be finalized
- GOTS 5.0 approved additive by ECOCERT Greenlife

It makes sense and it's logic. It's **BIO-LOGIC**

  
**BIO-LOGIC**  
*Natural Protection*