

The POPFREE list of DWR alternatives

This document contains a non-exhaustive list of PFAS-free Durable Water Repellence (DWR) treatments for industrial use on textile or leather. The list was compiled within the [POPFREE](#) project, with support from an international apparel and footwear brand as a resource for PFAS substitution.

The chemical products in this list have passed a basic toxicology evaluation based on the [GreenScreen methodology](#). The validation has in this case been restricted to a general CAS number screening, removing chemistries with problematic toxicology profiles.

The list does not guarantee a certain chemical content. Before implementing any new chemistry, we recommend thorough evaluation of both performance and environmental and health impacts. As a minimum effort for new chemistries, it is always recommended to perform RSL lab testing, MRSL compliance follow-up, and applicable performance testing according to your company's standards.

For further advice and deeper knowledge in PFAS substitution and chemicals management, go to <https://www.ri.se/en/popfree> and download the **PFAS Substitution Guide for Textile Supply Chains**.

If you need assistance in your PFAS substitution efforts or have any questions, you can contact POPFREE at RISE <https://www.ri.se/en/popfree/contact-us-at-popfree>

Other lists of PFAS-free DWR

The number of PFAS-free alternatives has been growing rapidly since 2010. It is not always easy to find all the viable solutions out there for performance and environmental profile evaluation. Below are a few sources that may help you further in your search.

[ChemSec Marketplace](#) – an open database of green chemistry and safer solutions for many uses. It is connected to SIN list, making it possible to first search for a PFAS chemical and then finding an alternative.

[The ZDHC Gateway Chemical Module](#) – a search engine for ZDHC members which claims being the world's first of safer chemistry for the entire value chain.

[A Danish EPA report about PFAS alternatives](#) in textiles from 2015.

[A University of California research report about alternatives](#) from 2017, in collaboration with W.L. Gore and Associates.

[Greenscreen Certified™ Products](#) - A list of PFAS-free products (mainly textiles and firefighting foams) that are certified to different levels under Greenscreen.

[Green Science Policy Institute PFAS-Free Page](#) - A non-exhaustive list of products and product lines that do not contain PFAS. A spreadsheet of the list is available [here](#).

Supplier	Use	Examples of PFAS-free DWR	Web
3M	General	PM-2688, PM-3705, PM-3888, PM-3869	https://www.3mindia.in/3M/en_IN/p/c/coatings/liquid-stain-repellents/
Archroma	General	Smartrepel Hydro SPK liq, Arkophob DAN New liq,	https://www.archroma.com/
Archroma	General	Ceralube PHD, Fluowet UD, Smartrepel Hydro AM	https://www.archroma.com/
Coats	General	Coats Nylon PFC-Free, Coats Polyester PFC-Free (used on AWF products)	https://coats.com/
Daikin	General	XF-4001, XF-5001, XF-5007, XF-5010, XF-5020, XF-5003, XF-5013, XF-5023, XF-5005, XF-5015, XF-5017, XF-5025, XF-5027	https://www.daikinchemicals.com/solutions/products/water-and-oil-repellents/unidyne-non-fluorinated-textiles.html
Defender Repellent Systems	General	Defender PM 289, Defender NM 290	https://www.defenderrepellent.com/
General Chem Co.	General	WR-ZERO	http://generalchem.co.kr/en/
Green Theme Technologies	General	EMPEL	https://greenthemetek.com/
HeiQ	General	BARRIER ECO family (ECO-DRY, ECO-CEL, ECO-LED)	https://www.heiq.com/products/textile-technologies/heiq-eco-dry-water-repellent/
Huntsman/ Chemours	General	Zelan R-3, Phobotex RSY, Phobotex REC	https://www.huntsman.com/markets/textiles/apparel

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Jintex	General	JINTEXGUARD BIO-DWR, BIO-DWR 2.0, DWR-C946, DWR-S940, DWR-L928, DWR-P920, DWR-L992, NFT	https://www.jintex-chemical.com/en/category/Technologies/index.html
Kuan Chuan	General	Water Shield TW-G1, Water Shield TW-G2	https://www.kuanchuan.com/en/Products/18/Green-pel-Non-Fluorine-Water-Repellency-
MEISEI	General	MEISHIELD P-350K, MEISHIELD P-410K, MEISHIELD Z-1	http://www.meisei-chem.co.jp/english/products/detail.php?no=Nzl=
NanPao	General	P791, P907	https://www.nanpao.com/
NICCA	General	NEOSEED NR-7080, NR-7200, NR-7400, NR-7314, NR-8000, NR-8800	http://neoseed-info.com/
Nuri	Leather, synthetic leather	Lofec A-750, Lofec WA-351A	http://nuriind.kr/eng/
Organoclick	Woven fabrics	OC Aquasil (TM) Tex 320	https://organoclick.com/oc-aquasil-tex-hydrophobing-agents-for-nonwovens-and-technical-textiles/
Rudolf	General	RUCO-DRY ECO PLUS, RUCO-DRY DHY, RUCO-COAT FC/BC	https://rudolf.de/brands/bionic-finish-eco

Supplier	Use	Examples of PFAS-free DWR	Web
Schill+ Seilacher	General	Evoral AST, Evoral NFT, Evoral BBN, Evoral FLT, Evoral S	https://www.schillseilacher.de/en
Schill+ Seilacher	Leather	Perfectol PQ, Perfectol HQ, Perfectol TT, Perfectol TG, Perfectol EQS, Perfectol WR, Perfectol QX, Perfectol XR, Limanol GEW, VP 19 PV 28	https://www.schillseilacher.de/en
Sciessent	General	CURB Water Repellent	https://www.sciessent.com/water-repellent-anti-odor-antimicrobial-products/curb-water-repellent/
Stahl	General	EX-WR-77-047, WR-43-064	https://www.stahl.com/
Stahl	Leather, synthetic leather	Densotan (A, CP), Densodrin (CD, CS, DP, DS, EN, ENS, EP, ER, HP, OF, S, SI), Dermaphob (WA-71 liq, FWM pa)	https://www.stahl.com/
Trumpler	Leather, synthetic leather	TRUPOSIST	https://www.trumpler.com/