



Uradil® FP-9300

EXCELLENT HEAT SEALABILITY FOR INCREASED OPERATIONAL EFFICIENCY

Alongside sustainability, packaging performance is always top of mind for brand owners. That's why we optimize our Uradil® FP-9300 coating to produce an excellent heat seal, without the need for undesirable substances in the formulation. This allows for improved recyclability while still maintaining excellent operational efficiency on packaging production lines.

High heat sealability meets improved recyclability

To ensure your packaging stands out on the shelf for all the

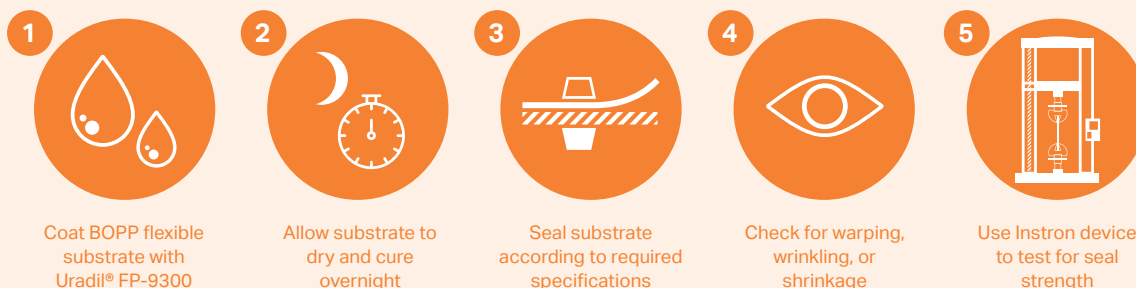
right reasons, Uradil® FP-9300 has undergone rigorous testing to ensure excellent heat sealability. This means that BOPP flexible plastic packaging coated with Uradil® FP-9300 maintains excellent optical and mechanical performance properties while offering improved recyclability.

Secure packaging every time

A heat seal curve test determines the strength of the packaging film's heat seal after stabilizing. We undertake heat seal tests to ensure our coating resins meet market requirements. The parameters measured are the following: seal limit and seal window.



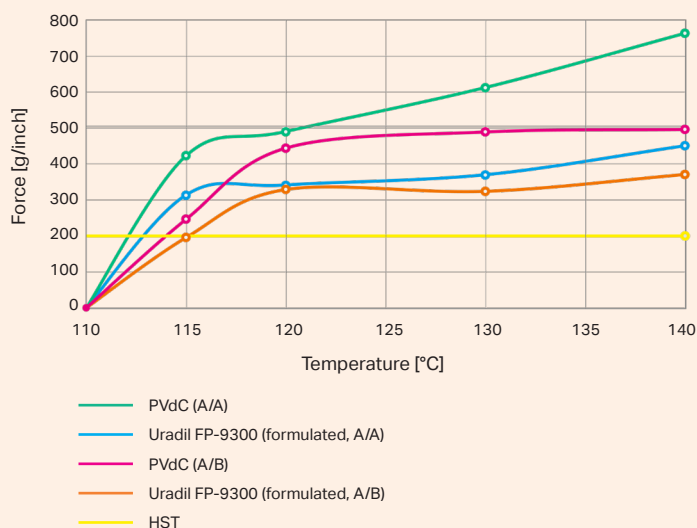
Covestro's step-by-step approach



- **Seal limit:** The minimum temperature needed for a proper seal at given times and pressures (°C).
- **Seal window:** The maximum and minimum temperatures between which proper seals can be formed on the packaging (°C).

This graph shows how the heat sealability of BOPP flexible plastic packaging is improved when it is coated with Uradil® FP-9300 in our labs. Uradil® FP-9300 offers the same heat sealability as PVdC, providing an alternative to chlorine-based formulations.

Heat seal curves



About Uradil® FP-9300

The new Uradil® FP-9300 is a water-based coating that improves the mechanical recyclability of flexible BOPP packaging films. It offers the same heat sealability, alcohol resistance, and aesthetic properties as PVdC-coated packaging. Unlike PVdC-coated packaging, however, when processed in mechanical recycling streams, it produces a high-quality, transparent recycle.

Uradil® FP-9300 is an alternative to chlorine-based coatings, enhancing the recyclability of BOPP flexible plastic packaging. Coating packaging in Uradil® FP-9300 reduces the risk of potentially degrading the quality of BOPP recycle or damaging recycling equipment through the production of hydrochloric acid.

Choosing Uradil® FP-9300 instead of PVdC is a step on the way toward building a circular economy for flexible BOPP packaging.

[Click here](#) to learn more about the heat-sealability properties of Uradil® FP-9300.

TERMS AND CONDITIONS

The manner in which you use our products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations, is beyond our control. Therefore, it is imperative that you test our products to determine suitability for your processing and intended uses. Your analysis must at least include testing to determine suitability from a technical, health, safety, and environmental and regulatory standpoint. Such testing has not necessarily been done by Covestro, and Covestro has not obtained any approvals or licenses for a particular use or application of the product, unless explicitly stated otherwise. If the intended use of the product is for the manufacture of a pharmaceutical/medical product, medical device¹ or of pre-cursor products for medical devices or for other specifically regulated applications which lead or may lead to a regulatory obligation of Covestro, Covestro must explicitly agree to such application before the sale. Any samples provided by Covestro are for testing purposes only and not for commercial use. Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale which are available upon request. All information, including technical assistance is given without warranty or guarantee and is subject to change without notice. It is expressly understood and agreed by you that you assume and hereby expressly release and indemnify us and hold us harmless from all liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance, and information. Any statement or recommendation not contained herein is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with any claim of any patent relative to any material or its use. No license is implied or in fact granted under the claims of any patent. These values are typical values only. Unless explicitly agreed in written form, they do not constitute a binding material specification or warranted values.

¹Please see the "Guidance on Use of Covestro Products in a Medical Application" document. Edition: July 2021