

Differentiated performance in nylon fibers and filaments: Novadyn™ DT/DI polyamide



Face any of the following challenges? Start a discussion with INVISTA

- Does your application require a thick nylon 6 monofilament with high transparency and tenacity?
- Are you looking for ways to improve nylon 66's tenacity and stiffness?
- Are you seeking for new transparent nylons with differentiated performance?
- Could you benefit from a lower-cost alternative to current transparent nylons?
- Do you need to lower crystallization rates to improve processability and/or properties in nylon 6, nylon 66, or other polyamides?
- Would you like to replace a nylon copolymer with a nylon 6 or nylon 66 blend, creating the ability to tailor product performance?

Performance

Novadyn™ DT/DI significantly improves the transparency of nylon 6 monofilament. This improvement is differentiated from competing nylon 6I/6T products.¹

Novadyn™ DT/DI improves the tenacity of nylon 6 more than competing nylon 6I/6T products.

Novadyn™ DT/DI improves the tenacity and stiffness of nylon 66 fully drawn yarns.

With a Tg of 145 °C, Novadyn™ DT/DI improves properties of traditional nylons (nylon 6 and nylon 66) at elevated temperatures.

Cost effectiveness

INVISTA is committed to becoming the transparent nylon cost leader, building upon its integrated low-cost raw material position.

Novadyn™ DT/DI gives nylon monofilament and fiber producers the ability to economically control processing conditions and physical properties arising from the extent of crystallinity.

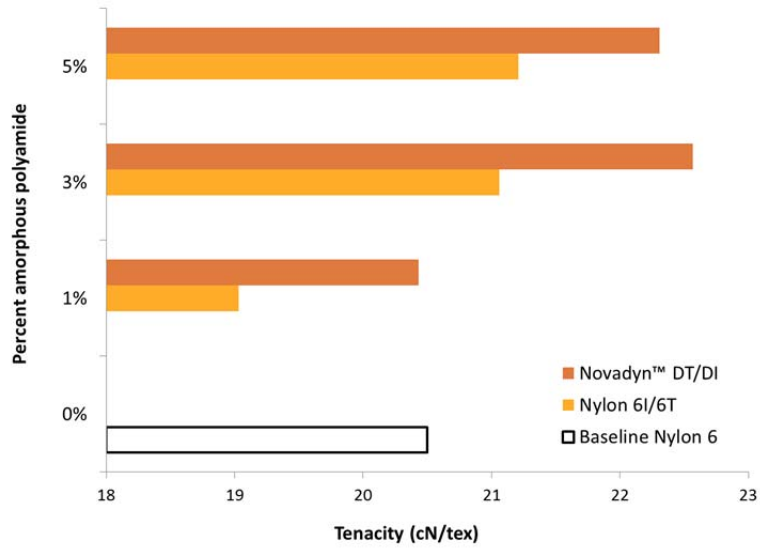
Recycled content

Novadyn™ DT/DI's unique combination of properties is derived from DYTEK® A Amine, a monomer which is used in many high performance polyamides. DYTEK® A Amine is typically 99% pure and manufactured from recovered and refined materials that would otherwise be burned with heat recovery, giving Novadyn™ DT/DI at least 43% recycled content.²

¹ Based on 1.5 mm monofilament evaluation

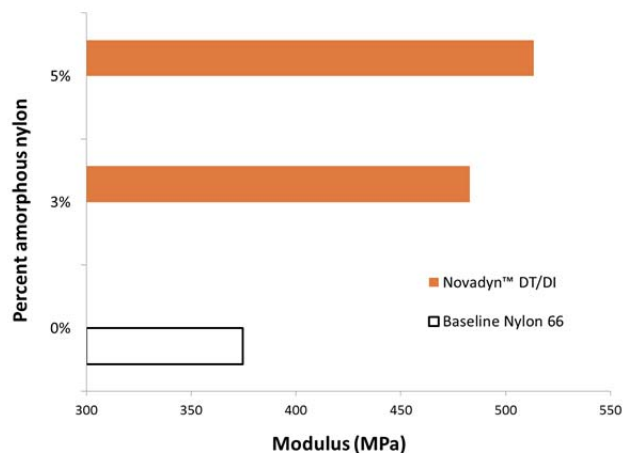
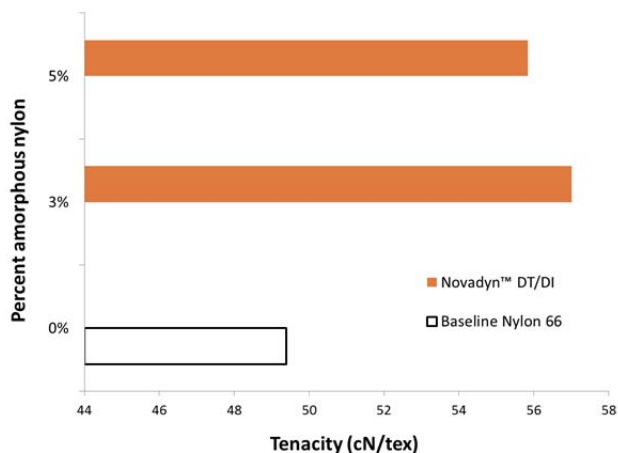
² Recycled content is defined by ISO 14021, section 7.8.

Improving Nylon 6 monofilament



	NYLON 6	NOVADYN™ DT/DI + NYLON 6 BLEND	Nylon 6I/6T + NYLON 6 BLEND
Clarity	Baseline	++	+
Tenacity	Baseline	++	+
Glass transition temperature	Baseline	++	+
Cost	\$	\$\$	\$\$\$

Improving Nylon 66 fibers³



Potential applications

Novadyn™ DT/DI could be considered for many existing and new monofilament and fiber applications, including:

- Industrial fishing line, weed trimmer line and other thick monofilaments
- Nylon 66 and nylon 6 fiber applications for improved spinnability
- Pulp and paper processing equipment, including paper machine clothing
- Fiber applications with pigments or other additives that act as nucleating agents

INVISTA sells base resin Novadyn™ DT/DI to monofilament and fiber manufacturers. Novadyn™ DT/DI is a highly versatile polymer, with other uses in film (nylon 6 blend) and injection molded applications, in both transparent applications and as a polyamide blend additives that boosts conditioned properties, glass transition temperature and other properties. For further information please refer to the Novadyn™ DT/DI technical data sheet and the Novadyn™ HPPA website.

3 Fully drawn yarn

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