Delrin® Renewable Attributed

The new renewable certified acetal homopolymer from DuPont

DuPont Delrin®

Delrin® Renewable Attributed – Breakthrough of Sustainability

Bio-waste

Bio-Methanol

Municipal waste

Heating source

Wind energy

Renewable-sourced electricity

Delrin® Renewable Attributed *

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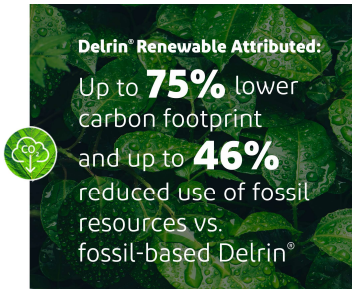
Reduces CO_2 emissions

Reduces the use of fossil resources

Maintains identical properties



* based on ISCC mass-balance

DUPONT

Delrin® Renewable Attributed – Correct claims

- base polymer produced from 100% certified bio-feedstock from waste (ISCC mass balance)
- bio-feedstock from second-generation sources, not in competition with the food and feed chain
- 100% certified renewable electricity used for production
- lower product cradle-to-gate carbon footprint
- reduction of non-renewable fossil resource usage

DUPONT™

From biomass waste to Delrin® Renewable Attributed

Fossil Feedstock

Natural gas

Renewable Feedstock

Municipal Solid Waste
Agricultural Waste
Organic Waste

Methane production

Methane

Methanol production

Methanol

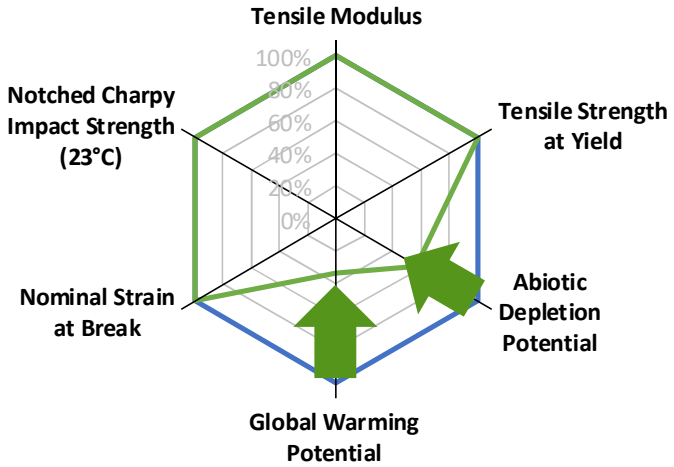
Delrin® plant

Delrin® Renewable Attributed

Sustainability certificates are passed over the supply chain. An externally audited system verifies the origin of the upstream feedstock and the conversion for all the production steps

Delrin® RASC655 Renewable Attributed

		Delrin® SC655	Delrin® RASC655 Renewable Attributed
Global warming potential	%	100	26
Abiotic Depletion Potential	%	100	54
Melt mass-flow rate	g/10min	15	
Molding shrinkage (parallel / normal)	%	2.0 / 1.9	
Density	kg/m^3	1420	
Melt temperature	°C	178	
Tensile modulus	MPa	3100	
Yield stress	MPa	71	
Yield strain	%	17	
Nominal strain at break	%	30	
Charpy notched impact strength (23°C)	kJ/m^2	9	
Charpy notched impact strength (-30°C)	kJ/m^2	8	



Same processing, mechanical and tribological properties.

Allows fast adoption !

Manufacturing according to GMP principles, Food contact statements (EU/FDA), Testing against selected parts USP Class VI, Testing against relevant parts ISO 10993, extended change management process.

Delrin® Renewable Attributed solution space

Transformations in mobility, healthy living, and sustainability trend driving significant change in consumer behavior. Rewarded & Unique portfolio to meet the most stringent requirements.

Global Mega-trends

Automotive

Design cars of the future for sustainability, comfort, and safety

Industrial

Automation drives growth in material handling, food processing

Consumer

Lifestyles driving growth in sports and fitness devices like urban mobility

Healthcare

Smart healthcare enable Bio monitoring, smooth drug delivery

Portfolio offering

	General Purpose enhanced for car interior, optimized productivity	General Purpose enhanced for Food / Water Contact (FG)	Designed for Healthcare (Special Control, SC)
High Performance High Viscosity	RA100CPE	RAFG100	
	RA300CPE		
High Productivity Medium Viscosity	RA500CPE	RAFG500P	RASC655
	RA511CPE	RAFG511DP	
Enhanced Tribology			RASC698

Further portfolio based on business case

Summary: Delrin® Renewable Attributed helps achieving your sustainability goals

Increase the amount of renewable material in your products

100% of the base polymer of Delrin® Renewable Attributed is produced from renewable feedstock (mass balance)

Design parts that are thinner and lighter

The unique combination of stiffness and toughness of Delrin® compared to fossil based copolymer unlocks sustainable design

Give value to your waste

Delrin® can be reground multiple times without any loss of material properties

Reduce your CO_2 emission and fossil resource use

When using Delrin® Renewable Attributed, you design parts that are more sustainable:
think of CO_2 / part !