
We believe there is enough plastic on earth to fulfill our future needs, without creating any new plastic. Ever.

Why recycled plastics are hard to trust?

- Mixed waste = **variable chemistry**.
- Chain scission (PET) → **reduced molecular weight.**
- Rubber degradation (ABS, HIPS) → **poor impact and gloss.**
- Odor and VOC issues limit adoption.
- Unpredictable quality discourages engineers.

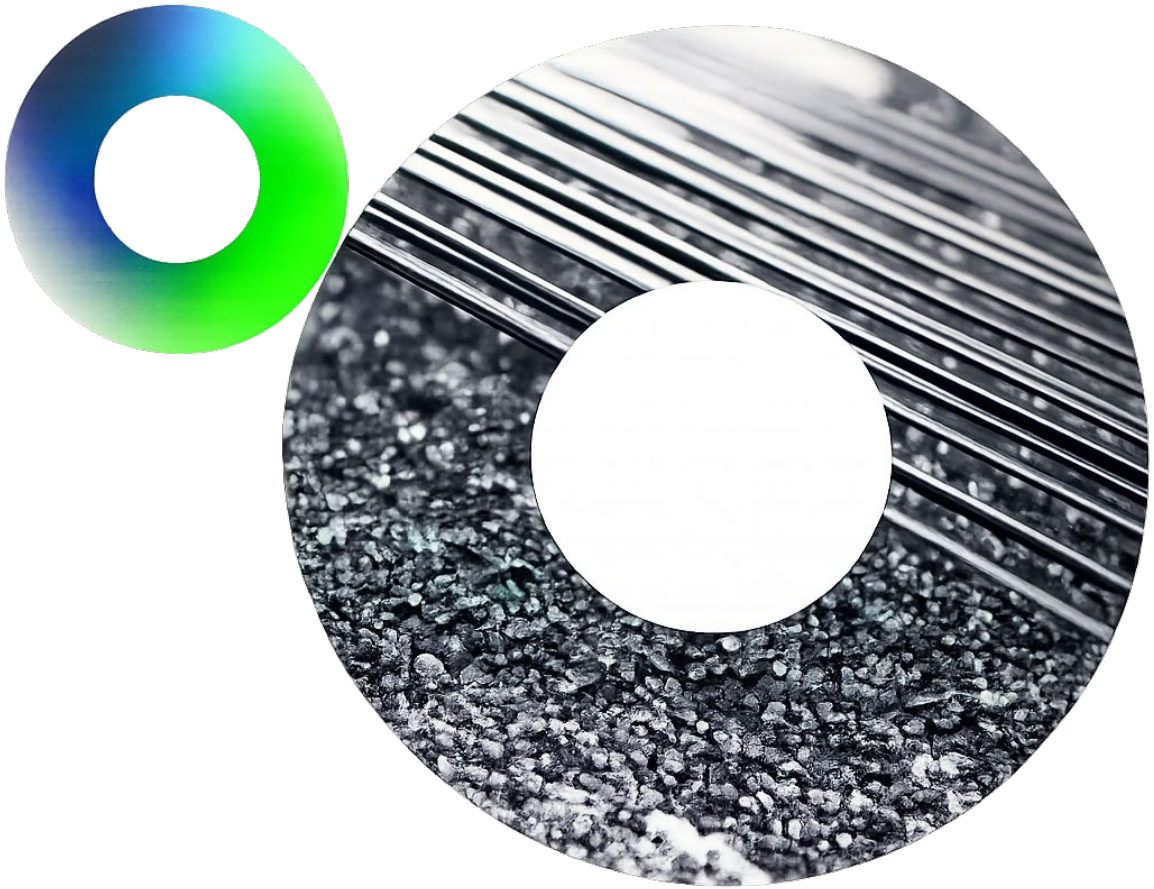
Why circularity is a technical challenge?

The challenge: **how to reuse it** effectively without losing performance;

Circularity requires **engineering**, not just collection.

Who is Lavergne?

Lavergne designs and manufactures high performance materials from complex and constrained feedstocks.




We don’t need new plastic to grow
We need to engineer circular systems.
Mission: Make Plastic Circular®.
Approach: science-driven, data-based, performance-verified.

Who is Lavergne?

40+ Years of Expertise

Leaders in **recycled post-consumer plastics**

Sustainable Solution

Developing **reliable**, **high-performance** recycled materials

Global Footprint

Operations in **Canada**, **Belgium**, and **Vietnam**

Closed Loop

Driving real **closed-loop action** to make plastics truly **circular**

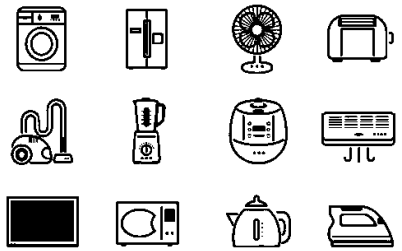
Strategic Partnerships

Collaborating with **industry leaders** to ensure **reliability and excellence**

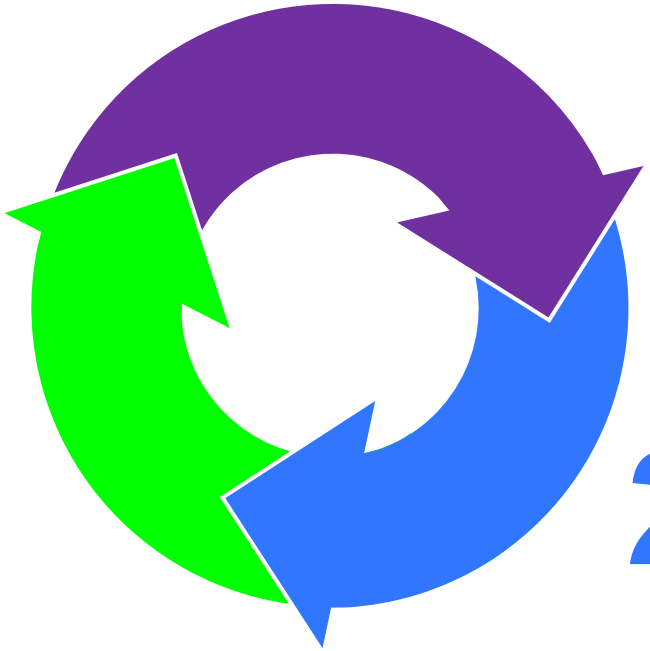
Family Business

Family-owned company built on trust and innovation

3 Lavergne's pillars of circularity



1 Feedstock

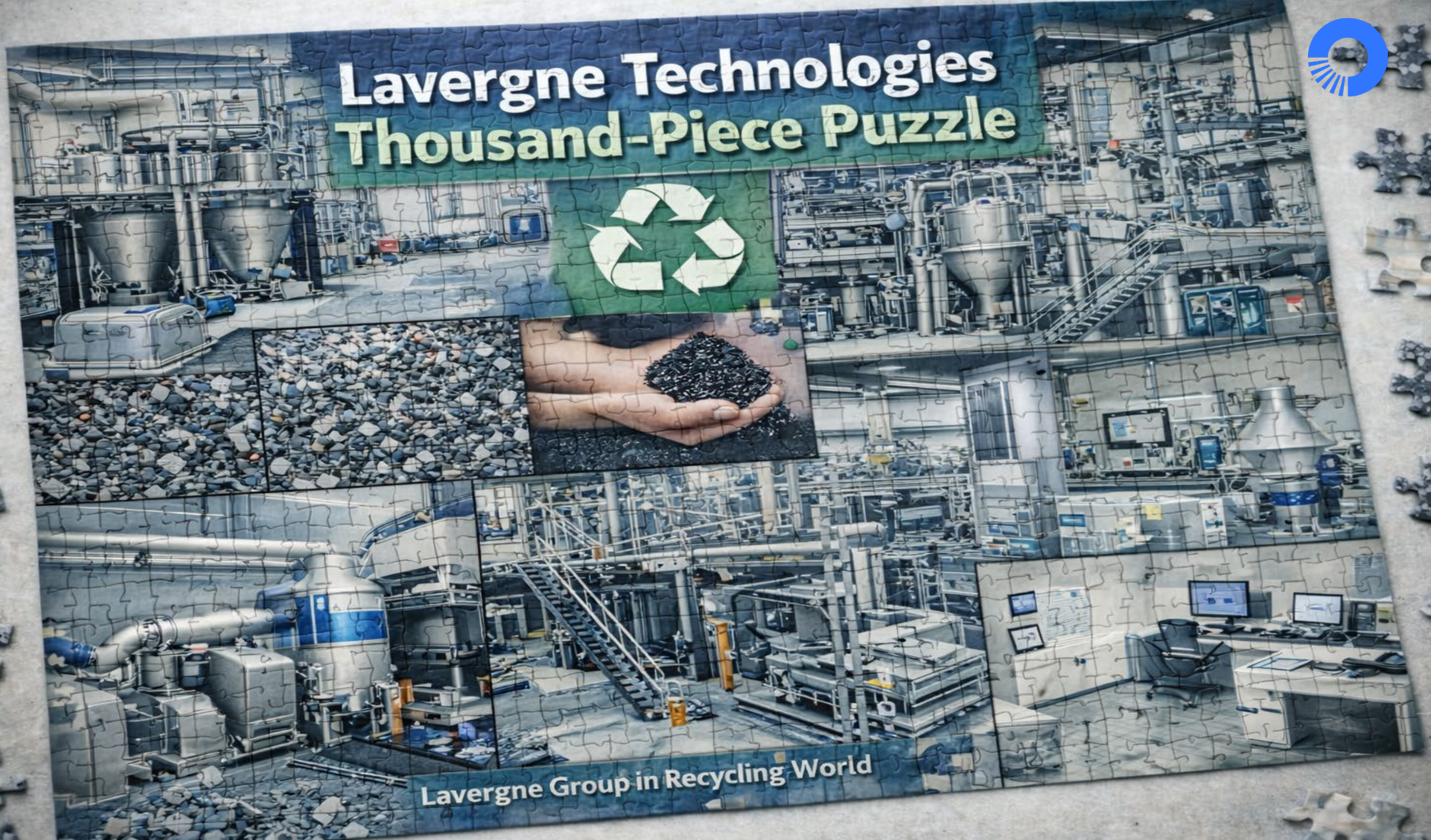


2 Technology

3 Usability

Why input quality determines output performance

- Dedicated feedstock streams
- Long-term **partnerships** ensure consistency.
- **No spot-market** purchasing.
- Every batch analyzed: **FTIR, color, bromine, moisture, MFR**.


Lavergne Technologies
Thousand-Piece Puzzle
Lavergne Group in Recycling World

Feedstock Processing *(Plastics Care Center)*

1. Cleaning and size reduction
2. Sorting (optical, density, electrostatic)
3. Lab testing: MFR, color, bromine, moisture
4. Blending for consistent composition
5. Certified traceability under UL 2809

Feedstock Processing *(Plastics Care Center)*

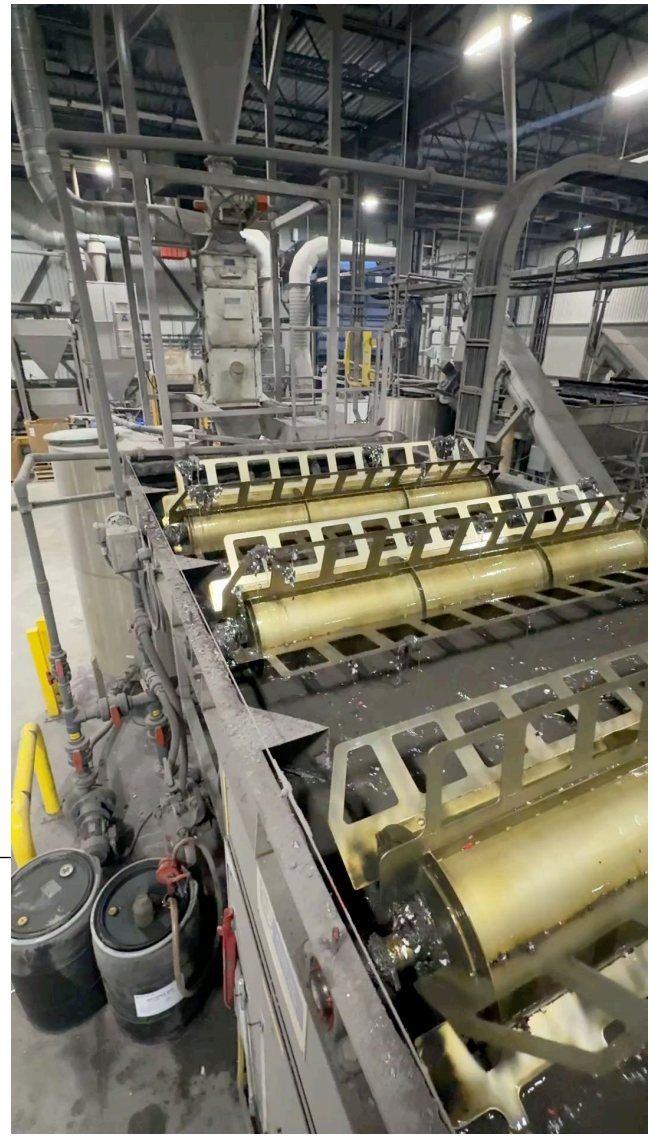
Wet Process

Feedstock

Grinding (size reduction)

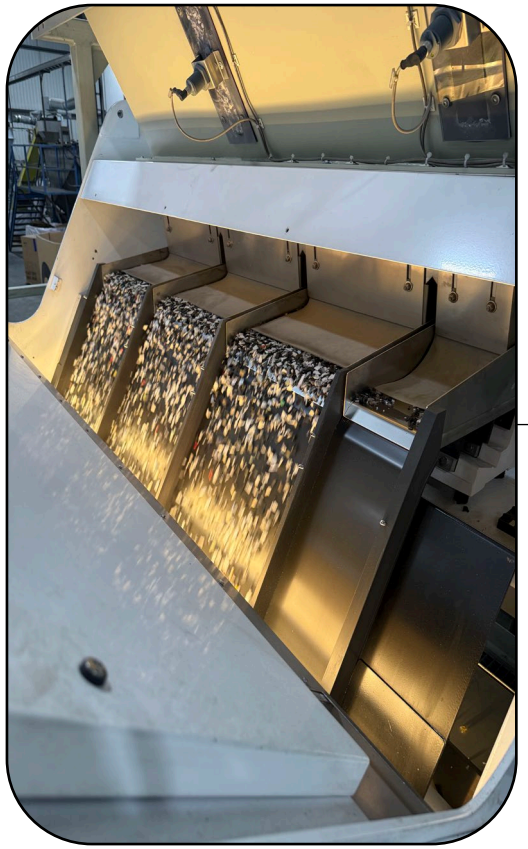
Metal Separator

Ferrous and Non-Ferrous



Feedstock Processing *(Plastics Care Center)*

Dry Process



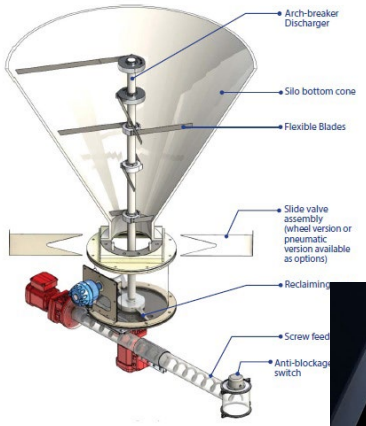
Rubber Sorter
Removes rubber, wood, foam

Electrostatic Separator
ABS from HIPS

Color Separator

Feedstock Processing *(Material Blending)*

Blending Silos



Capacity – Industrial mixing silos can handle 80 to 100 tons of material, allowing full-scale batch homogenization for large production runs.

Technology – A central vertical screw mixing system continuously circulates resin from the bottom cone to the top, blending all layers evenly.

Result – Ensures a uniform and stable mix with consistent melt flow, colour, and mechanical properties — essential for high-quality PCR resin compounding and molding.

Feedstock Processing *(Material characterisation)*

Laboratory

Pre Production Testing

Samples are collected from each 100-ton blended silo to confirm uniform blending and material consistency.

Characterization

The material undergoes full laboratory analysis to verify performance properties and quality standards.

Additive Determination

Based on test results, the required additive package is defined, and the final recipe is issued to the mixing center to ensure target application performance.

Feedstock Processing *(Additives Mixing)*

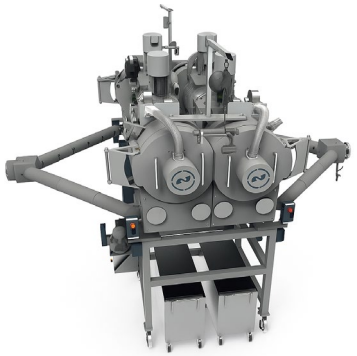
Additives Center

The process of creating a tailored resin for specific applications involves several steps. The molecular chain of the resin must be reconstructed in order to provide the desired properties and characteristics.

This is done by carefully selecting and combining the appropriate additives to create the desired structure and properties.

Proprietary knowledge to recipes (secret sauce) additives are added to the base polymer. These additives are carefully selected and blended in order to provide the resin with specific properties, such as color matching, UV resistance, and other characteristics that are required for the specific application.

Processing Technology *(Filtration)*

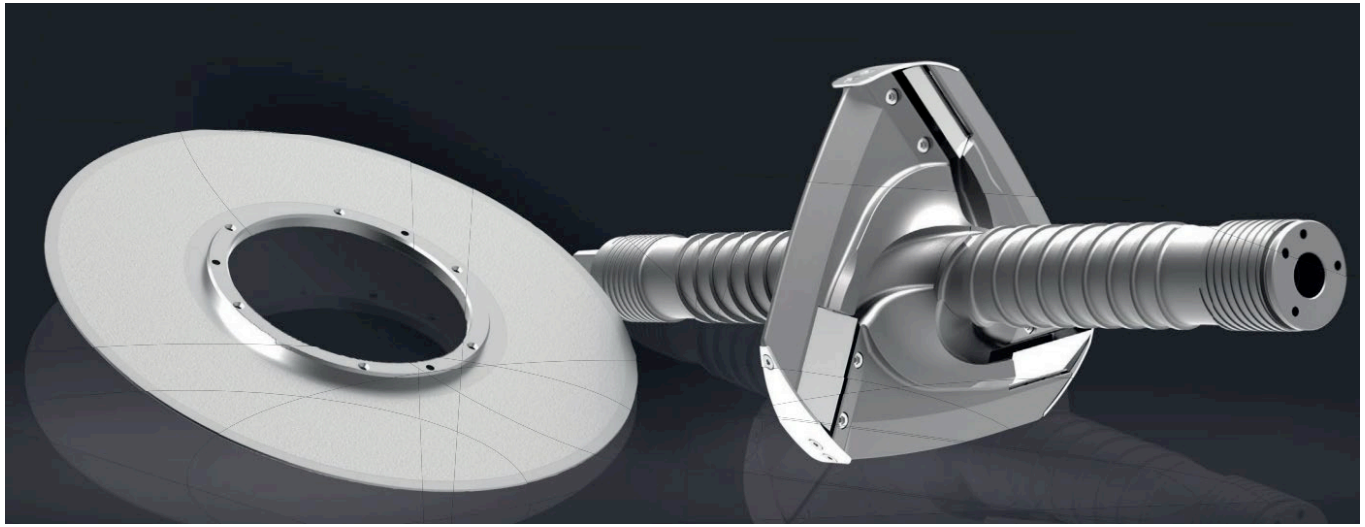


High-Precision Melt Filtration Screen

What It Does
Removes impurities from molten plastic with extreme precision — ensuring every recycled pellet meets the highest quality standards.

Why It's Innovative
- **Flat, laser-drilled steel screen:** engineered for strength and long life.
- **Self-cleaning design:** runs continuously with minimal downtime.
- **Smart pressure control:** delivers steady melt flow and consistent resin quality.

The Result
- Exceptionally **clean, stable melt**
- **Higher yield** and **less waste**
- **Reliable quality** for demanding applications



Processing Technology *(Compounding & Extrusion)*

Reactive Compounding: Rebuilding the Polymer, Not Just Recycling It

Conventional mechanical recycling:

- Grind → Melt → Re-pelletize.
- Polymer chains remain broken → shorter molecular weight.
- Properties decrease every cycle (strength, gloss, processability).

Lavergne's approach — *Reactive Compounding*:

- **Controlled chemistry** inside the extruder**.**
- **Polyesters (PET, PET/PBT):** chain extenders reconnect molecules, restoring IV and melt strength.
- **Styrenics (ABS, HIPS, PC/ABS):** compatibilizers repair phase adhesion between SAN and PB or PS and PB; stabilizers prevent rubber oxidation and maintain gloss and impact.

Output = **restored mechanicals, stable melt flow, consistent surface finish.**

Feedstock Processing *(*COA & Release)

Laboratory Final Product Certification

Postproduction Testing
Pelletized product is sampled and tested to confirm compliance with performance and quality specifications.

Certificate of Analysis
A COA is issued for each lot and provided to the client to confirm specification compliance.

Sample Retention
Samples are retained for three to five years, depending on application requirements, to ensure traceability and long-term assurance.

Lavergne's Core Brands/Products

Lavergne product families are engineered/tailored to match or exceed virgin material performance using sustainable feedstocks:

- **VYTEEN® ABS, PC/ABS & PC:**
  - Acrylonitrile Butadiene Styrene – Versatile, impact-resistant resins for general-purpose applications and cosmetic finishes.
- **VYSTYRENE® HIPS:**
  - High-Impact Polystyrene – Cost-effective, rigid materials for structural and housing needs.
- **VYPET® PET:**
  - Polyethylene Terephthalate – Reactive Compounding, reinforced for demanding engineering uses.

Post-Consumer Recycled Certifications

UL Yellow Card

REACH & RoHS

UL 2809

ISO 9001 / 14001 / 17025 / IATF 16949

UL 2809

- Independent third-party validation of Lavergne's PCR resins.
- Confirms how much post-consumer material is really in each formulation.
- Tracks feedstock → compounding → pellet with full traceability.
- Renewed annually through UL audits.

UL Yellow Card

Lavergne recycled resins are UL-recognized, tested for **flammability, mechanical, and thermal performance**, ensuring safe use in electrical, electronic, and appliance applications.

iq.ul.com

PROSPECTOR® CLICK TO CONTINUE

View additional material information including performance and processing data

The information presented on the UL Prospector datasheet was acquired by UL Prospector from the producer of the material. UL Prospector makes substantial efforts to assure the accuracy of this data. However, UL Prospector assumes no responsibility for the data values and strongly encourages that upon final material selection, data points are validated with the material supplier.

Component - Plastics E216152

Guide Information

View Certificate of Compliance

LE GROUPE LAVERGNE INC

8800 Croissant 1, Anjou QC H1J 1C8 CA

VYSTYRENE PS

High Impact Polystyrene (HIPS), Recycled, furnished as pellets [contains mechanically recycled content]

Color	Min. Thk (mm)	Flame Class	HWI	HAI	RTI Elec (°C)	RTI Imp (°C)	RTI Str (°C)
ALL	1.5	HB	-	-	50	50	50
	3.0	HB	-	-	50	50	50

Comparative Tracking Index (CTI): -

Dielectric Strength (kV/mm): -

High-Voltage Arc Tracking Rate (HVTR): -

Dimensional Change (%): -

Inclined Plane Tracking (IPT) kV: -

Volume Resistivity (10^x ohm-cm): -

Surface Resistivity (10^x ohms/square): -

High Volt, Low Current Arc Resis (D495): -

NOTE - Grade designation may be followed by a color description

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date: 2015-07-30

Last Revised: 2025-08-06

ALSO CERTIFIED TO IEC REQUIREMENTS

Component - Plastics

File Number: E216152

LE GROUPE LAVERGNE INC

8800 Croissant 1

Anjou, QC H1J 1C8 Canada

VYSTYRENE PS

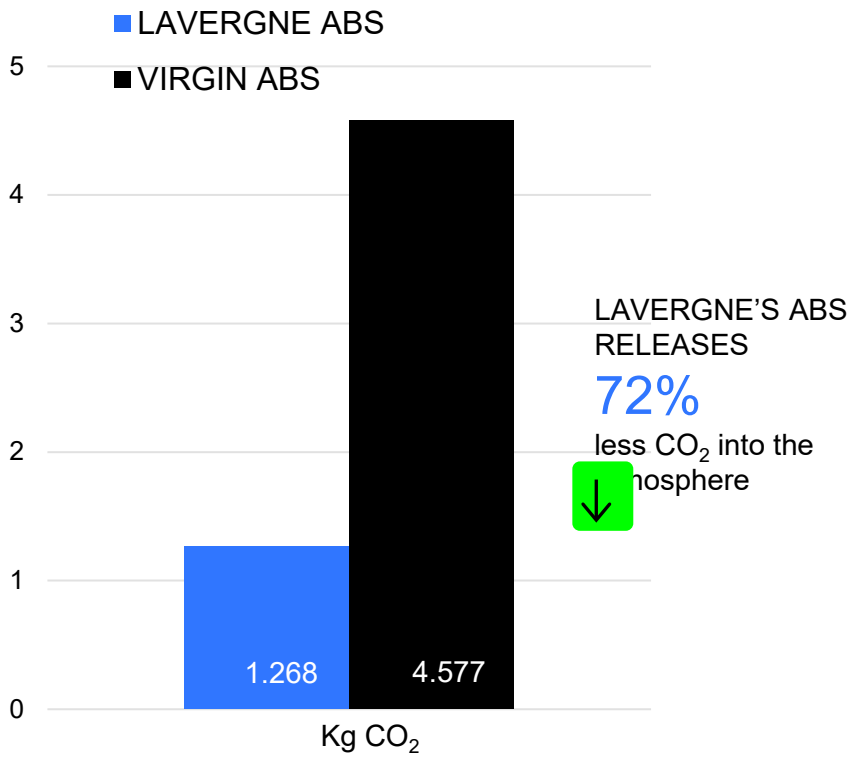
High Impact Polystyrene (HIPS), pellets, Recycled

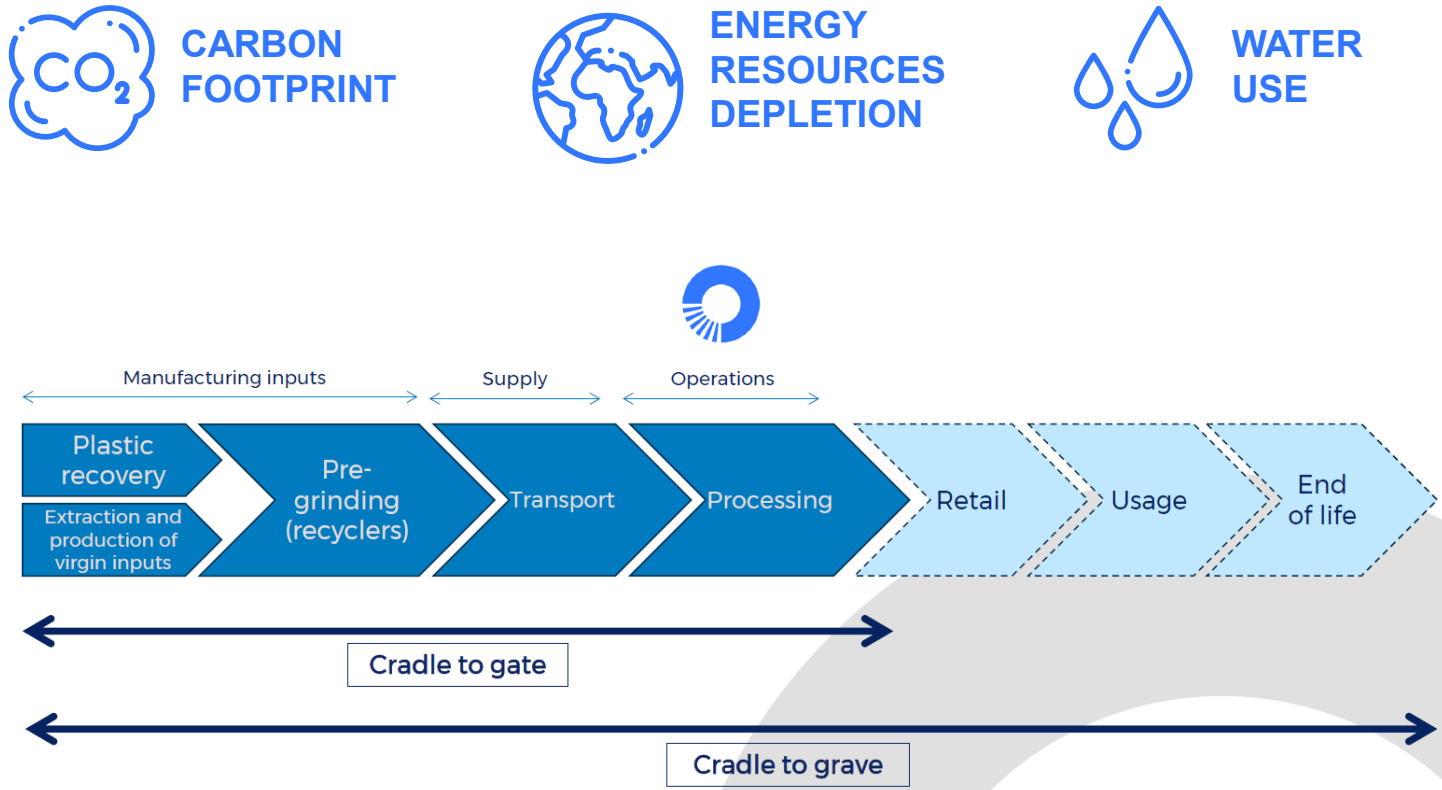
NOTE - Grade designation may be followed by a color description

Flammability	Value	Test Method
Flame Rating		
1.5 mm, ALL	HB	UL 94
3.0 mm, ALL	HB	UL 94
3.0 mm, ALL	HB40	IEC 60695-11-10, -20
1.5 mm, ALL	HB75	IEC 60695-11-10, -20
Thermal	**Value**	**Test Method**
RTI Elec		UL 746B
1.5 mm	50.0 °C	
3.0 mm	50.0 °C	
RTI Imp		UL 746B
1.5 mm	50.0 °C	
3.0 mm	50.0 °C	
RTI Str		UL 746B
1.5 mm	50.0 °C	
3.0 mm	50.0 °C	

LCAs

Our proprietary life-cycle assessment tool quantifies CO_2 and energy savings for each resin, providing customers with verified environmental data for their applications.





ultra|POLYMERS|

a Spirit of Partnership

Part of the **Partnership Puzzle** with Lavergne

40 YEARS START UP COMPANY

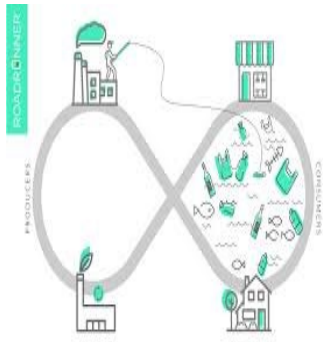
THRIVING THROUGH INNOVATION & COLLABORATION

Completely integrated from start to finish

Forged strategic global partnerships

Spearheading revolutionary tech to combat plastic waste

Expanding our global presence unwaveringly.



Crafting closed-loop solutions for OEMs worldwide

Advancing the greenest plastics material boldly

Offsetting more carbon, pioneering circular solutions nurturing sustainable communities

Who Lavergne makes recycled plastics for?

consumer electronics

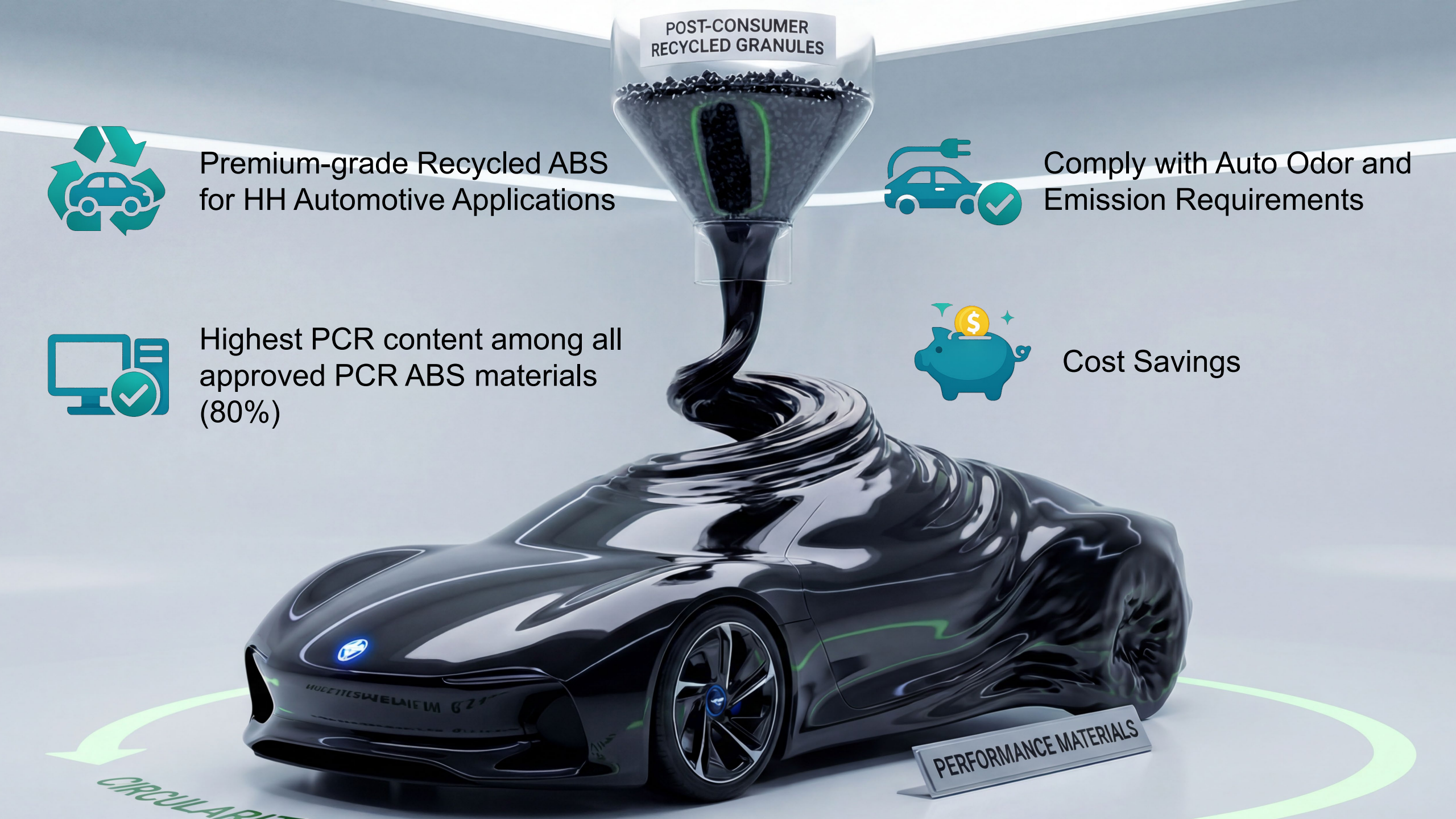


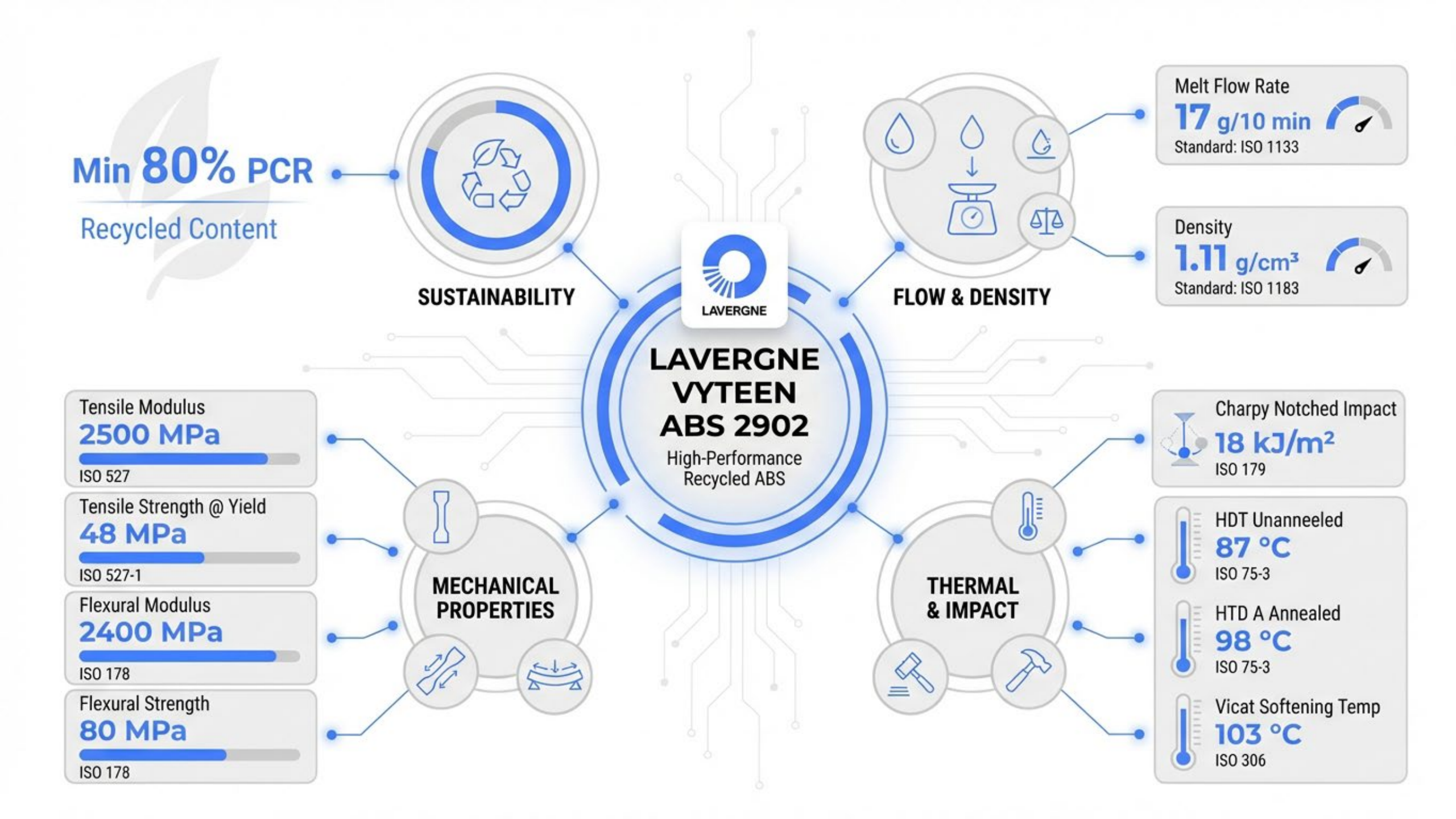
home appliances



automotive





POST-CONSUMER
RECYCLED GRANULES
Premium-grade Recycled ABS for HH Automotive Applications
Comply with Auto Odor and Emission Requirements
Highest PCR content among all approved PCR ABS materials (80%)
Cost Savings
PERFORMANCE MATERIALS


Min 80% PCR
Recycled Content
SUSTAINABILITY
LAVERGNE
LAVERGNE VYTEEN ABS 2902
High-Performance Recycled ABS
FLOW & DENSITY
Melt Flow Rate
17 g/10 min
Standard: ISO 1133
Density
1.11 g/cm³
Standard: ISO 1183
MECHANICAL PROPERTIES
Tensile Modulus
2500 MPa
ISO 527
Tensile Strength @ Yield
48 MPa
ISO 527-1
Flexural Modulus
2400 MPa
ISO 178
Flexural Strength
80 MPa
ISO 178
THERMAL & IMPACT
Charpy Notched Impact
18 kJ/m²
ISO 179
HDT Unanneeled
87 °C
ISO 75-3
HTD A Annealed
98 °C
ISO 75-3
Vicat Softening Temp
103 °C
ISO 306


instant ink
how2recycle.info
PAPER WRAP
Black
Ink Cartridge
Tri-color
Ink Cartridge
Recyclable prints and packaging


Precisos. Confiables. Siem
22
Tricolor
Colorido
Tri-color


Precisos. Confiables. Siempre.
21
Tinta Negra
Preto
Black

SONOS

NESPRESSO

dyson

BORGWARNER

Circularity is a choice.

Recycled stands shoulder to shoulder with virgin plastics

Proven process. Proven people. Proven performance.

The biggest brands are our partners.


NANUK™

MERCI
THANK YOU

Jean Luc Lavergne
Founder

jllavergne@lavergne.ca

lavergne.ca