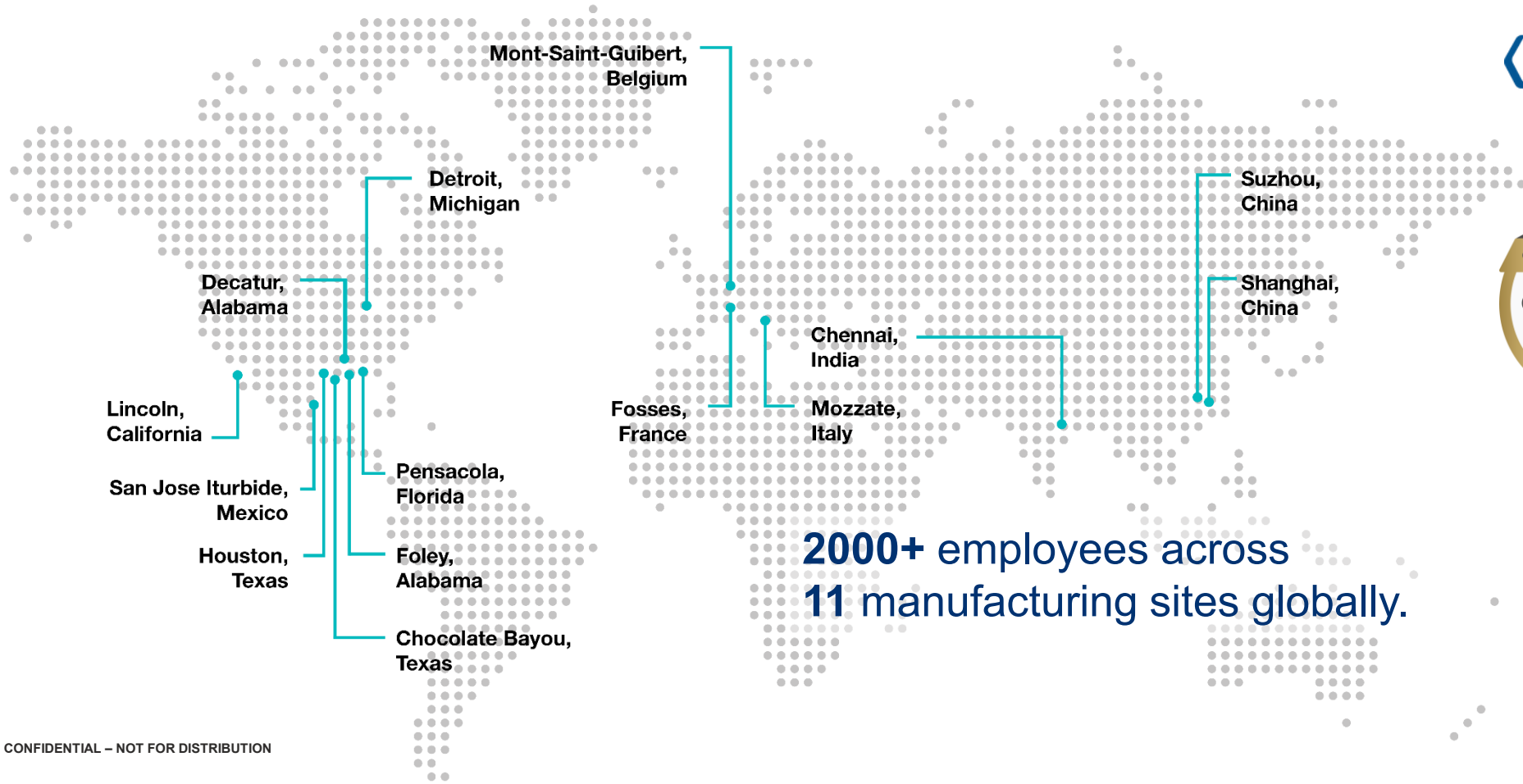
ASCEND®
PERFORMANCE MATERIALS

Innovative Polyamides For The Most Demanding Medical Solutions

Ascend Overview

We make high-performance materials for everyday essentials and new technologies. Our purpose is to improve the quality of life today and inspire a better tomorrow.



2000+ employees across **11** manufacturing sites globally.

Participants in

American Chemistry Council

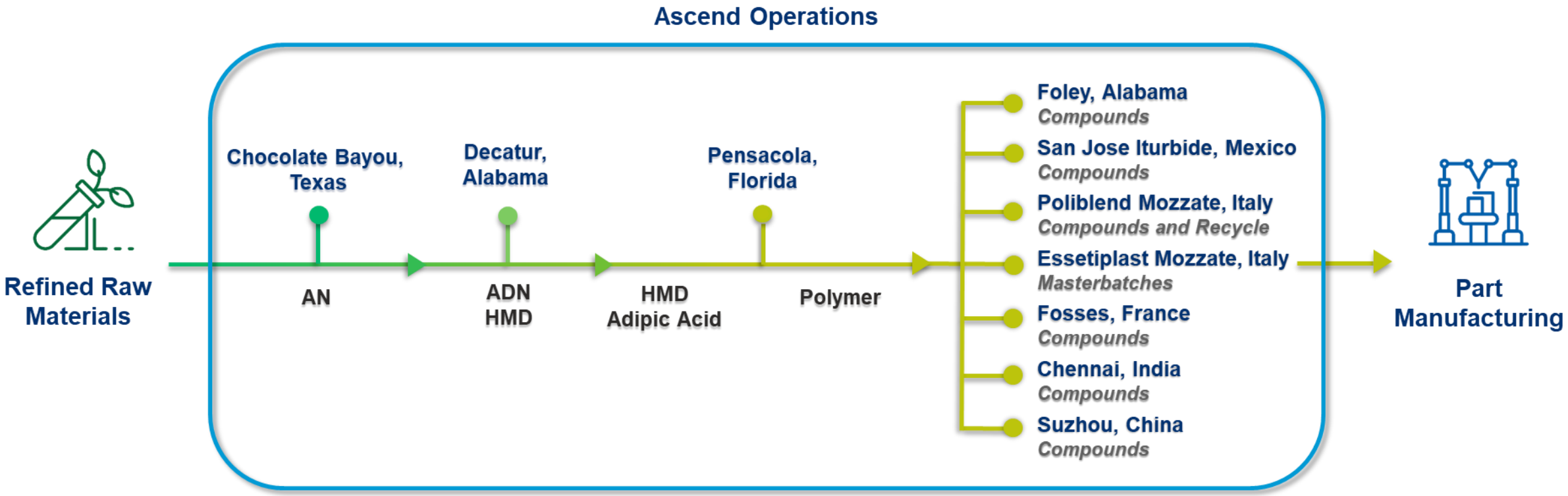
PLASTICS EUROPE

GOLD | Top 5% ecovadis Sustainability Rating DEC 2024

WE SUPPORT UN GLOBAL COMPACT

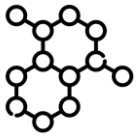
Global excellence, local service

Ascend is the world's largest fully-integrated PA66 manufacturer



Complete ownership from chemicals through polymerization, compounding, and final medical-grade resin.

The advantages of full integration



Backbone Customization
Optimized stiffness, flexibility, sterilization resistance

Traceability & Quality Control
Full visibility from monomer to resin to engineered material

Lot-to-Lot Consistency
Predictable performance, every shipment

Regulatory Support
ISO 10993 & USP Class VI

Supply Chain Security
Global footprint, captive feedstocks

A broad portfolio of over 350 PA solutions

ASCEND PERFORMANCE MATERIALS

HiDURA MED

Medical-grade polyamides
- ISO 10993-5, -10 compliant
- BSE/TSE, REACH, RoHS compliant
- USP Class VI

Acteev MED

Medical-grade polyamides with enhanced protection
- Embedded with antimicrobial and anti-fungal zinc ions
- Anti-odor
- Broad portfolio capability

HiDURA LUX

Amorphous polyamides for packaging
- Enhanced aesthetics
- Increased stiffness
- Reduced shrinkage
- Reduced crystallization rate

Starflam

Flame-retardant polyamides for electrical safety
- Enhanced relative thermal index (RTI)
- Enhanced heat resistance
- Halogen free

Vydyne

Flagship polyamides
- Temperature resistance
- Tunable performance
- Fast cycling

HiDURA® MED

Our solution for direct contact applications in healthcare

Application spaces:

- Handles, housing and handheld instruments
- Clamps and surgical accessories
- Catheter hubs and introducers
- Wound care and sutures
- Medical connectors
- Medical packaging

ASCEND® PERFORMANCE MATERIALS

High-performance polyamide 6,6 produced under the highest quality standards. Current portfolio includes neat, impact modified, and glass filled products.

- ISO 10993-5 & -10 compliant
- BSE/TSE, REACH, RoHS compliant
- USP Class VI certified*
- EtO & Gamma sterilization data
- Disinfectant resistance data

Material	Resin type	Density	Tensile modulus (23°C) dry	Tensile stress (break, 23°C) dry	Flexural modulus (23°C) dry	Melting temp.
AP NT0860	Unfilled, fast cycle times.	1.14 g/cm³	2900 MPa	81 MPa	3300 MPa	
AI1 NT0861	Super tough, impact modified	1.08 g/cm³	2200 MPa	43 MPa	1800 MPa	260°C
AG33 NT0862	Glass fiber reinforced	1.40 g/cm³	10600 MPa	205 MPa	10200 MPa	

Applications transitioned to our advanced materials

ASCEND PERFORMANCE MATERIALS

Inflation Device for Catheters

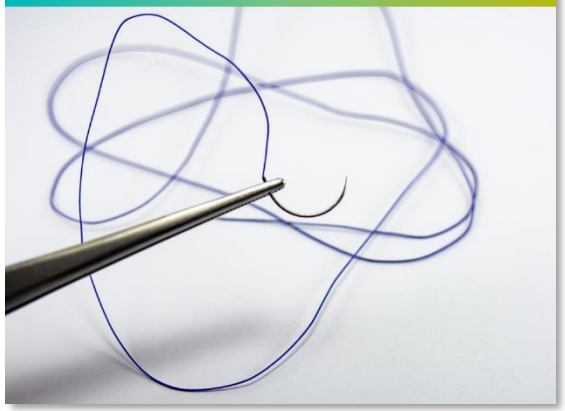
Valves

Medical Clamps

Surgical Tools

Forceps & Scalpel Handles

Monofilament



Chest Compression

Acteev MED

Embedded with antimicrobial zinc ions to permanently protect materials

Application spaces:

- Wound care
- Skin contact device
- Diagnostic garments
- Hospital lift
- Lymphedema treatment
- Brace
- Wound closure
- Post surgical garments

ASCEND PERFORMANCE MATERIALS

Acteev MED prevents the formation of biofilm by controlling the bioburden and reducing the bacteria adherence to the surface. ASTM E3151 protocol used to prepare the samples,

- ISO 10993-5 & -10 compliant
- BSE/TSE, REACH, RoHS compliant
- USP Class VI certified*
- EtO & Gamma sterilization data
- Disinfectant resistance data

Material	Function	Density	Tensile modulus (23°C) dry	Tensile stress (break, 23°C) dry	Flexural modulus (23°C) dry	Melting temp.
AP NT0809	Antimicrobial /Antifungal	1.14 g/cm³	3100 MPa	52 MPa	3199 MPa	260°C

Acteev MED

Embedded with antimicrobial zinc ions to permanently protect materials

Application spaces:

- Wound care
- Skin contact device
- Diagnostic garments
- Hospital lift
- Lymphedema treatment
- Brace
- Wound closure
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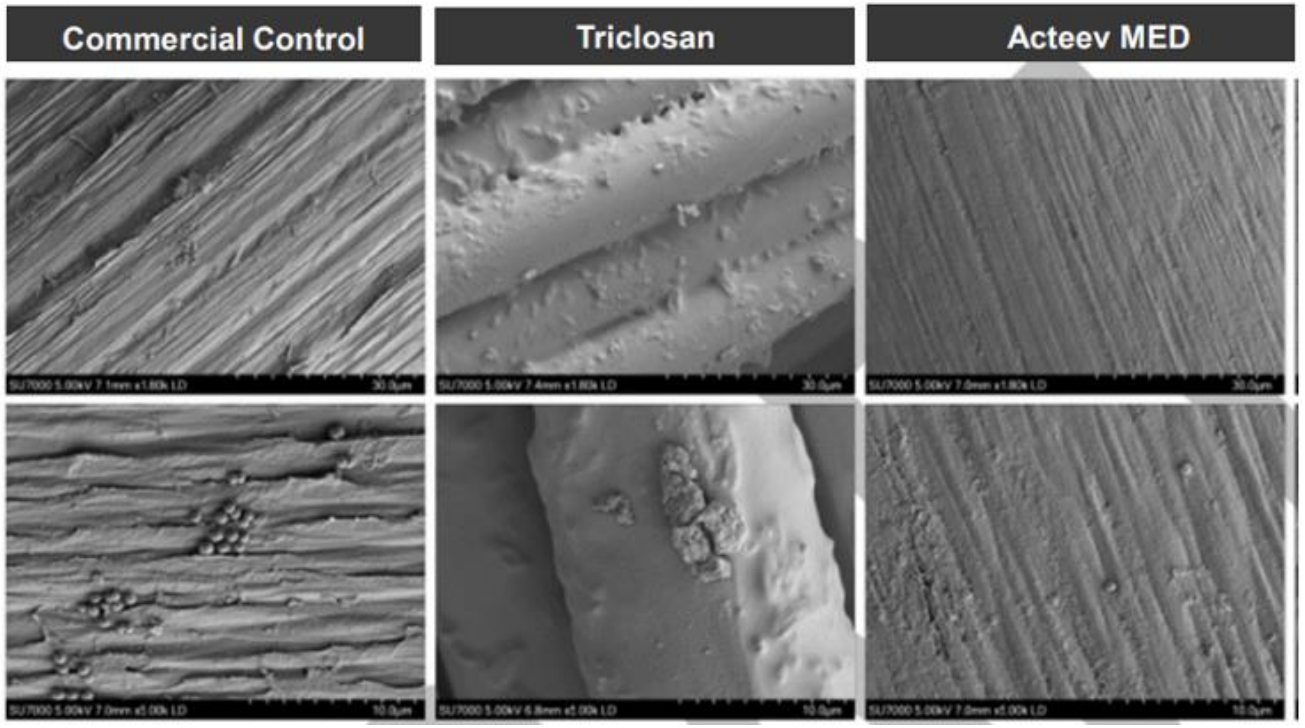
ASCEND PERFORMANCE MATERIALS

Acteev™ MED resists bacterial growth far better than both untreated and Triclosan-treated materials, confirming its potent antimicrobial performance.

Staph. aureus Newman (sensitive strain)



Applications transitioned our antimicrobial raw materials

ASCEND PERFORMANCE MATERIALS

Wound care

Skin contact device

Diagnostic garments

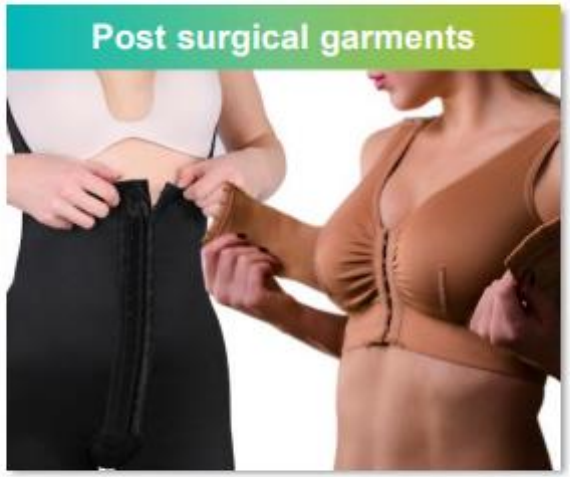
Hospital lift

Lymphedema treatment

Brace

Wound closure

Post surgical garments



HiDURA® LUX

HiDURA® PTR

High-performance, durable packaging solutions for demanding medical and pharmaceutical applications.

Low caprolactam leaching.

ASCEND® PERFORMANCE MATERIALS

Our portfolio includes:

The outstanding **puncture and tear resistance** of HiDura PTR.

The exceptional **clarity, gloss and barrier performance** of HiDura LUX.

Product	Density	Tensile stress (yield, 23°C, dry)	Tensile strain (break, 23°C, dry)	Flexural strength (23°C, dry)	Melting temp.
HiDura PTR 75HB	1.13 g/cm³	78 MPa	170%	84 MPa	243°C
HiDura PTR 833C	1.12 g/cm³	73 MPa	259%	70 MPa	232°C
HiDura PTR 840F	1.12 g/cm³	70 MPa	212%	74 MPa	227°C
HiDura LUX H3X	1.18 g/cm³	99 MPa	>50%	98 MPa	240–270°C

Application development and technical support

Full material, process and simulation support

Our expert applications team utilizes deep industry knowledge and advanced CAE to optimize designs.

Our mastery of polymer science and components reduces material use, speeds up production, and improves part functionality, enabling a swifter market entry.

Material, science and process support

- Material properties
- Thermal and chemical aging
- Part molding and testing
- Onsite molding trials
- Failure analysis
- Flame retardance testing

Computer-aided engineering support

- Part design and application development support
- Non-linear structural analysis
- Mold filling analysis
- Anisotropic analysis

Sustainable product solutions

	Low Carbon by insetting	BIOSERVE	Re Defyne™
Description	Engineering polymers with low carbon footprints via Ascend offsets	Engineering polymers made with mass balance and measurable bio-derived feedstocks	Engineering polymer compounds with mechanically pre- and post-consumer recycled content
Benefit	Low supplier scope 3 carbon footprint **without qualification or further testing**	Circularity and slight reduction in carbon footprint by **using fewer fossil fuels**	**Low carbon** footprint driven by **waste recovery/ circularity**
Impact to product performance/specification	Some	None	None
Certifications applicable	sphera®, Climate Action Reserve	ISCC	sphera®, Certified Recycled Content
GHG reductions	5 leaves	1 leaf	3 leaves

Ascend contacts

Kajal Bhakta
Account Specialist Healthcare
Email: kbhakt@ascendmaterials.com
Cel: +1 (713) 315-5853

Luis de Jesus
Technical Services
Email: ldejes@ascendmaterials.com
Cel: +1 (423) 440-9399

Tanner Gallo
Technology Supervisor Nylon
Email: tgallo@ascendmaterials.com
Cel: +1 (850) 968-8134

Rod Silva
Global Director Medical Business
Email: rnasci@ascendmaterials.com
Cel: +1 (281) 827-9355

https://www.ascendmaterials.com/

ASCEND
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North America
Houston, TX, USA
+1 713 315 5700

Europe
Mont-St-Guibert, Belgium
+32 10 60 8600

Asia
Shanghai, China
+86 21 2315 0888