

Advanced Additive & Color Solutions to drive **Sustainability** 

# **CY**Gulf

# Making a Sustainable Impact Happen

At Tosaf, sustainability is at the heart of everything we do. Embracing the responsibility to leave a healthier, more sustainable world for generations to come, we developed a comprehensive sustainability framework built on **three core pillars**:

# Our Positive impact on both people and the planet



Find more in our new ESG report: www.tosaf.com/sustainability

# **Goals that Matter: Our SDG Alignment**

We rely on United Nations' Sustainable Development Goals (SDGs) as our sustainability compass. Every solution we develop is carefully evaluated for its impact on both people and the planet. We are aligned with the following key SDGs:











# **Our Sustainability Targets**

At Tosaf, we are committed to advancing sustainability across our operations and products. We have set ambitious targets to ensure we contribute positively to environmental preservation and sustainable development. Below are our key sustainability targets:



**Emissions Reduction Target** 

Reduce greenhouse gas emissions by **18%–25%** by 2030, **36%–50%** by 2040, and **achieve net-zero emissions** by 2050



Water Conservation Target

Achieve a **5% reduction** in water consumption by 2035



# **Environmental Management Certification Target**

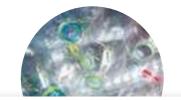
Obtain ISO 14001 certification at a minimum of one additional company site each year, with full implementation targeted by 2027



#### **Occupational Health & Safety Target**

Maintain a safe and healthy work environment with a goal of zero workplace accidents.

Additional target is to obtain ISO 45001 certification at a minimum of one additional company site each year, with full implementation targeted by 2026



#### **Product Design for Recycling**

**80%** of the company's products (by production volume) will be recyclable, by 2027 (excluding products that contain non-recyclable materials such as carbon, polyamide, and similar components).

# **Smarter Customized Solutions for a Sustainable Future**

We help our customers achieve their sustainability goals through our **Sustainable Solutions** Pathway, which focuses on four key actions:



#### Minimize

We offer additives that reduce reliance on virgin materials, enabling more sustainable formulations.



#### **Maximize**

Our innovative additives enhance the properties of recycled materials and polymers, expanding their usability while reducing carbon emissions.



#### Circularize

We support circular economy practices by providing additives that optimize recyclability and material recovery.



#### Equalize

We supply masterbatches that facilitate the replacement of virgin resins with biodegradable or low carbon footprint alternatives.

# **Our Sustainable Solutions**

Our portfolio of innovative solutions addresses a wide range of needs, while driving meaningful, long-term sustainability improvements.

This catalog features core solutions designed to address common industry needs. Customized grades are also available to support unique challenges & evolving requirements.



Minimizing raw material, energy, and time consumption.

## T-Foam™ - Foaming solutions 🍎 🍪



Foaming agent MB Reduce the density of the article by introducing gas into the material. This yields reduced consumption of polymer and overall lighter articles. Also helps in the elimination of sink marks, easing mold fill, and de-warping.

Solution	Description
FA2989PE EU	Endothermic FA for injection molding thick-wall applications.
FA0953PE EU	Fine structure FA for XPS, thin wall applications, and direct gassing foam nucleation.
FA0979PE EU	Ultrafine cell structure FA for thin films and piping.

#### BeanUsed® and Enviro-Tec® - Sustainable filler compounds (6)





Sustainable fillers are renewable non-plastic post-consumer materials replacing use of virgin materials. Our BeaNused® Coffee beans compounds and Eggshell compounds allow you to replace virgin resin or traditional fillers and reduction of carbon footprint.

Solution	Description
BeaNused® CPP5N0252	Recycled <b>Coffee Beans</b> compound, 30% on PP, natural.
BeaNused® CHI5N0240	Recycled <b>coffee beans</b> compound, 20% on HIPS, natural.
Enviro-Tec® 3010	Recycled <b>Eggshell</b> compound, 30% on PP, natural.
Enviro-Tec® 3005	Recycled <b>Eggshell</b> compound, 60% on LDPE, natural.
Enviro-Tec® 3035	Recycled <b>Oystershell</b> compound, 60% on LDPE, natural.

# CrystalClear™ - Nucleating solutions 🍎 🖰



Nucleating MB encourages nucleation and crystallization of the polymer, allowing for shorter cycle times and increased throughputs. Also assists in improving the mechanical and optical properties as well as shrinking and warping behavior.

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Solution	Description
NU3701PP EU	Standard and cost-effective nucleating agent for PP.
NU2753HP EU	Nucleating agent for clear PP articles.
NU6670PP EU	Clarifying agent MB for PP.
NU3703PE EU	Nucleating agent for PE.
FA0979PE EU	Ultrafine foaming agent tailored for nucleation of various resins.

## T-Aid™ - Processing aid solutions 🖔 💯



Processing aids and lubricants ease and modify the polymer melt's flow behavior. Helps in eliminating gels, sharkskin, and orange peel defects. preventing die build-up and reducing extrusion pressure. PFAS-free solution available!

Solution	Description
AP5645PE EU	Highly effective synergistic processing aid additive, suitable for process temperatures of up to 230 °C.
AP5618PE EU	Highly effective synergistic processing aid additive, suitable for process temperatures of above 230 °C. Suitable for the processing of HALS containing products.
AP9709PE EU	PFAS-free processing aid. Suitable for temperatures of up to 240 °C.
AP9711PE EU	PFAS-free processing aid. Suitable for all temperature range.

# IRapid™ - Heating solutions 🖗 🖏



IR heating MB are speeding up IR heating process such as blow molding, thermoforming, sealing, etc.

Solution	Description
IR9354PE EU	IR heating MB for polyolefins.
IR9360ET EU	IR heating MB for PET.

### PurgeSeal™ - Purge and shutdown solutions 🖔 💯



Purge compounds assist in fast removal of additives, colorants, and build-up from all machine components. Shutdown compounds are used for easy and trouble-free start-up after a long stop. Use of purge compounds reduces raw material waste, shortens machine downtimes, and increases overall production output. Speed up and simplify the machine maintenance.

Solution	Description
CL9250PE EU	Purge compound for small-to-medium injection molding machines.
CL9253PE EU	General purpose purge compound for injection molding and extursion.
CL9247PE EU	Extra strong purge and shutdown compound for extrusion blow-molding process.
CL9251PE EU	Purge compound for large injection molding, blow molding and extrusion lines.
CL9258PE EU	Purge compound for tie layer extruders and manifolds.
CL1524PE EU	Purge and shutdown compound for PO extrusion lines.

#### **PearlLite™ - Pearlescent solutions (6)**



Promoting cavitation and subsequent low density of BOPP films Reducing raw material consumption and packaging costs.

Solution	Description
ZD1738HP EU	Fine particle size pearlized MB for production of moderate density (~0.6) cavitated film with extra glossy pearlescent effect.
ZD3733HP EU	Mineral-free pearlized MB.
FA0979PE EU	Ultrafine cell structure FA for pearlescent PP and PE ribbons and films.











Reaplcing carbon black with sustainable solutions.



Solution	Description
Envrio-Tec® 910	Recovered carbon black MB, rPE carrier, equivalent to 40% HAF carbon black masterbatch. Other carriers available.
Envrio-Tec® 911	Recovered carbon black MB, rPS carrier, other styrenic carriers including ABS are available, High opacity.
Envrio-Tec® 914	Recovered carbon black MB, PBAT carrier, suitable for use in various biodegrdable polymers.
Envrio-Tec® 915	Captured carbon black MB, renewable PE carrier, carbon negative, UV resistant, Food Contact. Also available in renewable PS and various polymers.



### **Maximize**

Maximizing the use of recycled materials

# AO MaX™ - Antioxidant solutions 🧐 🖒 🔞





Antioxidant (AO) packages tailored to revive recycled resins and rectify thermal damage. Eliminates gels, melt instability, malodors, etc.

Solution	Description
A08513PE EU	Cost-effective AO masterbatch for polyolefin films. Providing long-term thermal stability.
A01796PE EU	Cost-effective AO masterbatch for polyolefin clear film and sheets.
AO9682PE EU	Phenol-free AO package for stabilizing recycling processes against oxidative damage with reduced sensitivity to gas fading.
A09417GP EU	Pelletized and dust-free 1-pack solution for thermal stabilization of polyolefin compounds and PCR, specifically PE.
OP9437GP EU	Pelletized and dust-free 1-pack solution for thermal stabilization of polyolefin compounds and PCR, specifically PP.
OP9448GP EU	Pelletized and dust-free 1-pack solution for thermal stabilization of polyolefin compounds and PCR, specifically PP with acidic residues.
OP9454GP EU	Pelletized and dust-free 1-pack solution for thermal stabilization of polyolefin PCR containing barrier films scrap.
OP9461PE EU	Pelletized and dust-free 1-pack solution for thermal stabilization and compatibilization of polyolefin PCR containing barrier films scrap.

# T-Flow™ - Rheology control solutions 🧐 🧓





Our flow enhancer masterbatch improves the processability of recycled and off-spec resins, enable faster mold-fill and shorter cycle time in injection molding.

Solution	Description
CR7822HP EU	High performance pelletized flow enhancer for PP applications, suitable for transparent articles.
CR7827HP	High performance pelletized flow enhancer for PP applications, cost-effective, for non-transparent applications.
CR8920PE EU	Flow enhancer for PE application.

### IVSeal™ - Chain extender solutions 🔞 🖄





Increasing PET intrinsic viscosity (IV), processability, and properties, while Maintaining PET transparency. Allow the user to utilize more rPET in his product without compromising quality and producibility.

Solution	Description
CX9123ET EU	Chain extender MB for PET applications, suitable for producers and recyclers
CX9124ET EU	Chain extender MB for PET applications, suitable for producers and recyclers

## OdorSeal™ - Odor control solutions (



Odor scavengers absorb and eliminate rancid odor typical for recycled materials. Suitable for materials with challenging organoleptic demands.

Solution	Description
OD7904LL EU	General purpose odor scavenger, suitable for transparent films.
OD9493PE EU	General purpose odor scavenger and thermal stabilizer, suitable for transparent films.
OD9499PE EU	High performance stabilization package, for demanding processes and products, including recycling of barrier films PIR and PCR.
OD9169PE EU	Cost effective solution for non-transparent articles.

# TopFusion™ - Grafted solutions 👸 🖒

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Solution	Description
TopFusion™ P100 EU	Concentrated PP-based coupling agent for filled and reinforced compounds and compatibilizer for recycling of mixed PP streams.
TopFusion™ PE212 EU	Concentrated PE-based coupling agent for filled (e.g., HFFR) compounds and compatibilizer for recycling of mixed PE streams, film grade.
TopFusion™ PE2002W	Concentrated PE-based coupling agent for filled (e.g., HFFR) compounds and compatibilizer for recycling of mixed PE streams. Highly cost effective.
IP0871HP	Compatibilizer for PE applications containing PE-PP scrap.
IP9793PE EU	Compatibilizer for PE applications containing PET-PE scrap.

#### DesiSeal™ - Moisture control solutions 🖔 🖄



Our highly effective moisture absorbents, efficiently eliminate internal moisture already at low dosing. Allow users to utilize more PCR in his product without compromising quality and producibility.

Solution	Description
CP2989PE EU	Cost effective desiccant MB for polyolefin films.
CP7859PE	Cost effective desiccant MB for polyolefin films.









# BluTint™ - Shade control solutions 👸 🔊



Rectify and diminish yellowness and improve clarity. Allow the user to utilize more PCR in his product without compromising quality and producibility.

Solution	Description
MT603431 EU	Blue toner for diminishing yellowness of articles made with rPET.
MT603242 EU	Blue toner for diminishing yellowness of articles made with rPET.
MT480571	Blue toner for diminishing yellowness of articles made with rPET.

### ColorUp™ - Color upcycling solutions for PCR 🎘 🖄



Special robust Color solutions MB for PCR and PIR. Help to counteract the common shade fluctuations of recycled feedstock. Combi-packages of color with additives, such as UV and thermal stabilization, impact and mechanical modification, desiccation, compatibilization.

### AASeal™ - Acetaldehyde control solutions 🎘 🖄



Using an increased share of rPET in the final article is leading to increased acetaldehyde (AA) levels on the article surface. AASeal absorbs and minimizes AA content. AAseal allows the producer to incorporate high share of rPET into the products without impacting the flavor.

Solution	Description
AA4445ET EU	AA scavenger MB for blow molded PET bottles made with rPET.
AA4446SP EU	AA scavenger MB for blow molded PET bottles made with rPET, liquid form.

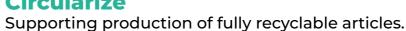
## SlipControl™ - COF control solutions 🍎 🖄



PCR streams with high content of slip or other migrative additives can have negative impact on the product properties, such as reduced coefficient of friction (COF). Tosaf SlipControl™ absorbs the excess slip and allows control of the obtained COF

Solution	Description
IP8730PE EU	Slip absorber for flexible polyolefin films.





#### K-NoIR™ - NIR-sortable black solutions 🏀 🖄



Articles colored by carbon black cannot be sorted in automated recycling facilities and end up in landfill. Tosaf K-NoIR™ NIR-sortable black are strong and opaque black solutions which are fully NIR-sortable, as verified by commercial systems and international standards. Full food contract approvals and non-magnetic.

Solution	Description
IR9090PEK EU	High-performance IR-detectable black for polyolefin applications
IR9092PEK EU	Cost effective, high strength, non-magnetic NIR black for polyolefin applications
IR9096ETK EU	Cost effective, high strength, non-magnetic NIR black for polyester applications
IR9158PEK EU	Super high loaded NIR black for polyolefin applications, film grade
IR9295PSK EU	High loaded NIR black for polystrrene applications, including XPS

#### T-Matte™ - Matte solutions 🍪 👸 🖄





Tosaf T-Matte MB provides a matte appearance for PE and PP films. These can replace lamination of layers of different polymers (e.g., PET) and/or printing. The matte film is fully recyclable and can be categorized as a mono-polymer product (PE or PP).

Solution	Description
MT7636PE EU	Matte compound for PE films
MT0523DP EU	Matte compound for BOPP films
MT004047 EU	Frost effect MB for blow molded PET bottles

## L-TEC® - Laser marking solutions 🖓 👸 🖒





Laser marking MB can replace coloring, printing, and labeling and provide an efficient and fully recyclable solution. Tosaf's advanced laser marking additives yield permanent, high-contrast markings on plastic products. Our cost-effective solution delivers superior precision and durability while maximizing production speeds.

Solution	Description
LM8708PE EU	Laser marking MB for clear applications at low letdown ratio.
LM8871LL EU	Laser marking MB for clear articles.
LM0309PE EU	Laser marking MB for clear and highly-pigmented applications.
LM8870ET EU	Laser marking MB for clear PET articles.



Reduces time and

energy cnsumption





#### UVSeal™ - UV control solutions

Protecting UV light sensitive ingredients (food, cosmetic, etc.) against degradation without compromising transparency and recyclability. Fully transparent and non-yellowing. Tailored UV blocking according to demand.

Solution	Description
UV0188PE	UV absorber masterbatch, can be used in shrink films to protect the packaged goods against decomposition due to light exposure.
UV8799PE EU	UV absorber MB for polyolefin applications, SVHC-free, low blooming.
UV7263ET EU	UV absorber MB for PET applications, transparent, fully recyclable and SVHC-Free.

# O,Seal™ - Oxygen control solutions 🖒

Oxygen scavengers protect oxidation-susceptible foods & beverages against degradation induced by oxygen ingress and prolong their shelf-life. Actively absorbs and eliminates oxygen from the packaging headspace. Extending the shelf life of various food products. Replacing multilayered multi-material structures and can allow for downgauging of PET packaging materials.

Solution	Description
OS4441DP EU	Oxygen scavenger for PET bottles and trays.

# FogFree™ - Antifog solutions 🧐 👸 🖒

Tosaf antifog solutions reduce surface tension of the film and sheet and sheet condensing water, allowing for full transparency and visibility of the packaging content. For agriculture, our additives prevent crop damage while maintaining optimal surface properties. Tosaf developed tailored antifog solutions for mono-material packaging and agricultural films.

Solution	Description
AF9314ET	Long-lasting antifog for PETG.
AF9789ET	Long-lasting antifog for PETG, low sealing temperature.
AF9781EV EU	Antifog solution for EVA films and sealing layers.
AF9963HP EU	Novel and unique antifog solutions for thermoformed PP articles.



(e.g., PLA, PBS, PHA, PBAT, ...)

# BioBack™ - Solutions for biodegradable resins 👸 🖄



Our solutions support a wide range of applications, flexible and rigid, durable and disposable, transparent, colored, and opaque. We offer color and additive MB solutions for your biodegradable polymer of choice

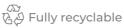
Solution	Description
MAT800999 EU	White for PBAT.
MPL800501 EU	White for PLA.
SL9149PL	Slip MB for PLA films.
SB9150PL EU	Slip/antiblock MB for PLA films.
AB9151PL	Antiblock MB for PLA films.

## MaxBalance™ - Masterbatch & Compounds Solutions (6)



Solutions for reduction of carbon footprint by utilization of PCR, bio-based, chemically recycled, and mass balance resins









# **Making it Happen Globally**





# **Innovating for the Future**

We are constantly preparing for the challenges of tomorrow, today!

- Immersing ourselves in your industry to deliver forward-thinking solutions.
- ✓ Customization is key We'll create the precise solution you need.
- We heavily invest in cutting-edge machinery and technology to uphold the highest quality standards.
- Prioritizing sustainability with recyclable, environmentally-friendly products designed for a better future.

- www.cmgulf.com
- in CMGulf (COMPOUNDMASTER GULF FZE)

