



**ADDITIVES &
COLORS FOR THE
PLASTICS INDUSTRY**

BUILDING & CONSTRUCTION SOLUTIONS



ABOUT TOSAF

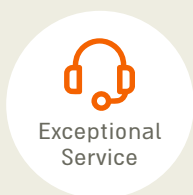
For over three decades, Tosaf has been developing and manufacturing high quality additives, compounds and color masterbatches for the plastics industry with the aim of providing for our customers' every need.

We have continuously grown and developed our offering, production capacity, and global reach, becoming a truly close to the market,

GLOBAL ORGANIZATION

Servicing customers in over 50 countries in Europe, North America, South America, Asia and the Middle East, Tosaf has over 1000 employees spread throughout our production sites, warehouses, sales and distribution offices around the world.

Tosaf CEO Amos Megides established the company in Israel in 1986, and still stands at its head, leading and inspiring his team to always uphold the following three pillars:



Tosaf's major shareholders include:
Megides Holdings Ltd. & the Ravago Group

VAST EXPERIENCE IN BUILDING & CONSTRUCTION

Building & construction is a dynamic industry, growing continuously to meet the increasing demands of modern urbanization. Residential housing, commercial buildings and supporting infrastructure must all adhere to rigorous standards prescribed by building regulations, including those aimed at creating environmentally-friendly, high-performance, healthier living spaces.

Producers of plastics, resins and compounds have a key role to play, providing innovative technologies and sophisticated solutions that improve performance, durability and even esthetic qualities such as color. At Tosaf, we have the solutions you need to support your building & construction customers, while yourself achieving production efficiencies that can reduce your costs and timelines.



OUR LEADING PRODUCTS

FLAME RETARDANT (FR)

As a leading producer of flame retardants for building & construction applications for more than 30 years, we offer an extensive product portfolio of flame retardant masterbatches to meet market demand. Using premium quality active ingredients and innovative formulations, we help our customers to achieve high-level product performance while helping reduce the harmful fire emission and fume effects. We offer both halogen-based and halogen-free solutions, taking into consideration the specific mechanical properties and qualities that our customers require. Sharing with you our knowhow and years of experience, we will advise on which Fire Retardant (FR) masterbatches to use, how to use them and addition levels, to optimize them for both your production process and end-user applications.

BLACK MASTERBATCH

Our black masterbatch is formulated to deliver maximum long-term UV protection, and color with mechanical stability. Careful selection of our coloring system and incorporation of functional additives provide improved processing, UV protection and stability, resistance to rapid crack propagation, short-term rupture strength and environmental stress cracking, while maximizing the material's long-term performance.

COLOR MASTERBATCH

Color masterbatches, whether yellow or orange for gas pipes, blue for water pipes, green for conduits or ANSI colors, are formulated to incorporate functional additives that enhance processing, UV resistance, resistance to rapid crack propagation, short term rupture strength and environmental stress cracking.

Tosaf is your one-stop-shop for color masterbatches, taking a coordinated approach to deliver creative solutions that meet all your color, functional and compliance needs.

UV

Polymers are susceptible to photo-oxidation that results in the deterioration of mechanical properties and surface appearance over time. This is especially critical for pipes and fittings which remain above ground for a significant amount of time. Our range of masterbatches eliminate or vastly reduce the effects of UV radiation and photo-oxidation.

In PC sheets, protection from solar radiation is achieved by a thin co-extrudate cap layer. We offer several grades of UV cap layer suitable for either solid or multiwall sheets. All of them minimize plate-out, are gently tinted with a bluish dye to counter the yellow color of the UV absorber, and contain optical brightener to make the layer visible in the lab.

LIGHT DIFFUSER

Light diffusion additives are used to eliminate the uncomfortable glare that can occur when direct sunlight comes through a clear PC sheet. Having developed, improved and built a database of unique light diffuser masterbatches and compounds, we offer products that maximize light transmission while providing high-quality light diffusion.

NEAR IR BLOCKERS

One of the main drawbacks of using a transparent cover or roofing in construction is that it lets in Near IR (NIR) energy creating a 'greenhouse' effect, which causes the covered area to become very hot, especially in summer. Our NIR masterbatch absorbs most of the NIR energy, with minimum effect on transparency to visible light.



INDUSTRY APPLICATIONS



CONSTRUCTION FILMS

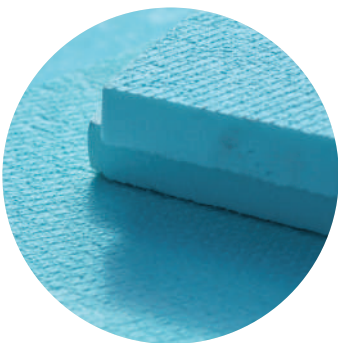
Fires at construction sites can have dire consequences for people, property and the environment. Regulations are in place requiring certain films used to protect and store materials at outdoor or indoor construction and renovation sites to be flame retardant.

We offer a full range of flame retardants that meet both European and American fire safety standards. We understand that regulatory compliance can be costly to implement. Being highly concentrated for reduced let down ratio with minimum effect on film transparency, our construction film additives offer a cost-effective solution.



PE FOAM

Being a flammable material, polyethylene must be protected with flame retardants. Our vast experience and knowledge of flame retardant additives allows us to offer a range of tailor-made halogen-based and halogen-free solutions for both cross-linked and non-cross-linked PE foams. Using the latest technology, we produce highly concentrated masterbatches that have minimum effect on the foam itself, and meet diverse regulations and industry standards.



XPS SHEETS

Extruded Polystyrene Foam (XPS) is strong and durable, providing high-performance thermal insulation for residential and industrial buildings when used in inverted roofs, floors or ceilings.

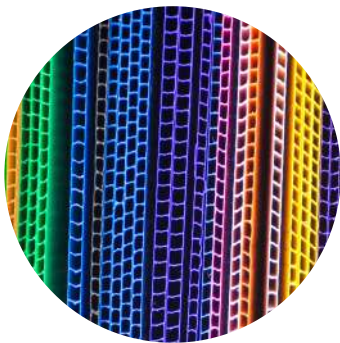
As a leading producer of flame retardants for the XPS industry for more than 20 years, we offer an extensive product portfolio of flame retardant masterbatches to meet market demand. Recognizing that different XPS producers require different thermal stability, we develop tailor-made solutions that meet stringent thermal stability requirements, as well as low and medium thermal stability packages.

OUR GLOBAL REACH



PRODUCTION PLANTS

SALES OFFICES



PP CORRUGATED SHEETS

Corrugated polypropylene sheets, also known as twin wall sheets or multiwall sheets, are durable and light weight. Produced in a continuous extrusion process, they tend to be up to 100mm in thickness. As well as being used for advertising purposes, they are used in building and construction, in public and private buildings, outdoors or indoors. Additives such as flame retardants, UV stabilizers and color masterbatches give the sheets the various properties they require, to enhance their functionality and comply with relevant regulations.



PC SHEETS

There is a growing global trend to integrate transparent plastic sheets in place of glass in building applications such as malls, swimming pools, train stations and DIY. The most commonly used option is polycarbonate (PC) sheets, which are produced in solid, multiwall or corrugated form. Each form of the PC sheets has its own production challenges. Because polycarbonate is a transparent polymer, its optical properties are of utmost importance, along with optical manipulations where transparent colors, light diffuser and near-IR heat shielders are used.

At Tosaf, we offer a comprehensive range of solutions for PC sheet producers.



PIPES & FITTINGS

Pipes and fittings – whether for use in pressure pipe for transporting gaseous fuels or potable water, plumbing, drainage or optical fiber and service conduits – represent a demanding application for plastics. We have developed products that are suitable for use with a range of materials, including HDPE, PA-12, PB, PP and ABS, and can also formulate custom-made masterbatches and compounds on demand.

Because we understand the importance of production rates and costs, our solutions make for consistent processing of materials, with the convenience of choice and availability with technical support.



GEOMEMBRANES & GEO GRIDS

A good geomembrane masterbatch grade will have excellent long-term use, good dispersion and afford very good UV protection. Our range of high performance masterbatches, specially designed for use in applications such as potable water containment, landfill containment and waterproof tunnel lining, can extend the life of geomembranes produced from a wide range of polymers. They provide very good dispersion and conform with internationally recognized standards. The high-quality carbon black that we use provides superior UV performance, while our advanced stabilization package provides excellent long-term thermal stability and life prediction.