



Tin, PVC Stabilizers and Polymers (TPP)

It's all about **the chemistry™**

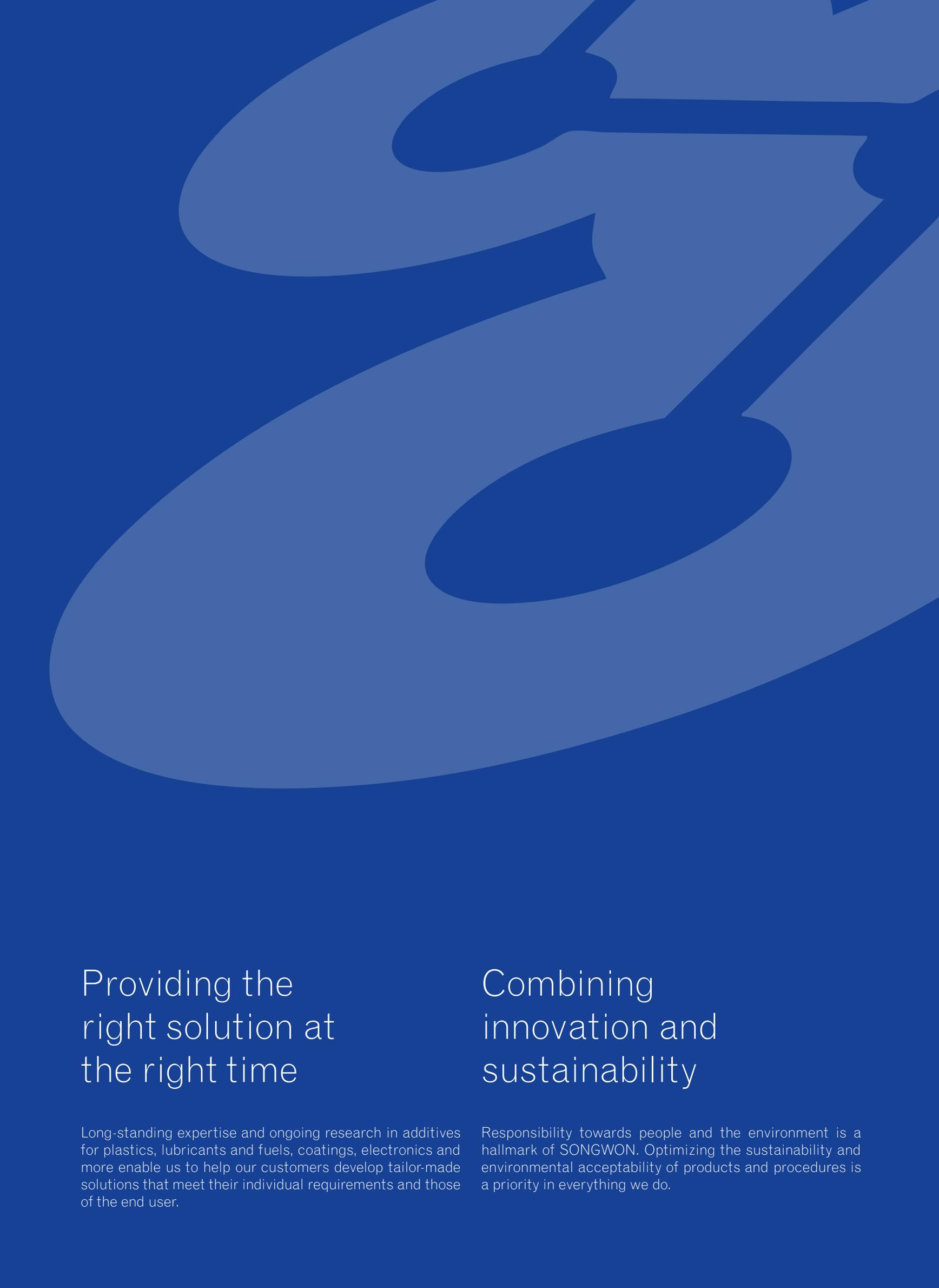




Creating value for customer and consumer

At SONGWON, we are passionate about people. Our committed teams work together with customers to drive new opportunities and set new trends that add value throughout the chain, from manufacturer to end user.

Our clients benefit from a global framework combined with readily accessible local organizations, including customer service offices and technical support centers in numerous different countries. Wherever they are in the world, our customers can reach us easily and count on our availability at all times.



Providing the right solution at the right time

Long-standing expertise and ongoing research in additives for plastics, lubricants and fuels, coatings, electronics and more enable us to help our customers develop tailor-made solutions that meet their individual requirements and those of the end user.

Combining innovation and sustainability

Responsibility towards people and the environment is a hallmark of SONGWON. Optimizing the sustainability and environmental acceptability of products and procedures is a priority in everything we do.



Tin, PVC Stabilizers and Polymers (TPP)

TPP products are used for a wide range of industries and applications

A number of SONGWON's businesses are grouped under TPP, which stands for Tin, PVC Stabilizers and Polymers.

Tin Intermediates and Catalysts

SONGWON's tin intermediates and catalysts stabilize PVC and prevent degradation of PVC resins, which require high heat resistance. They are also highly suitable as catalysts in electrodeposition coatings for automotive and industrial goods, for transesterification reactions used in the manufacture of plastics and as sourcing materials for developing electrically conductive thin film.

Electrodeposition paints for the automotive and aerospace industries are rapidly applied, give uniform coverage and provide protection against corrosion.

Glass coatings add appeal and shine as well as providing protection against scratches and other damage.

Electrically conductive thin films are used a wide variety of applications today, including wireless communications, telecommunications, integrated circuits, solar cells and light crystal displays.

PVC Stabilizers and Plasticizers

Polyvinyl chloride (PVC), the third most widely produced synthetic plastic polymer after polyethylene (PE) and polypropylene (PP), comes in two basic forms: rigid and flexible.

Rigid PVC is used in construction applications such as doors and windows, as well as in the packaging, automotive, household and furniture, and medical sectors.

Flexible PVC today often replaces rubber in plumbing, electrical cable insulation, imitation leather, signage and inflatable products.

One Pack Systems for PVC stabilization allow efficient and accurate dosing.

Plasticizers improve the flexibility and durability of plastic end products.

Polymers

SONGWON offers a broad range of polymers including "solution" polyurethanes, which are thermosetting and/or thermoplastic as well as polyester diols and super absorbent polymers.

- One of the most versatile plastic materials available today, polyurethanes are used in a very wide variety of consumer and industrial products. Thermosetting polyurethane (PU) does not melt when heated, while thermoplastic polyurethane (TPU) can be melted and molded as required.

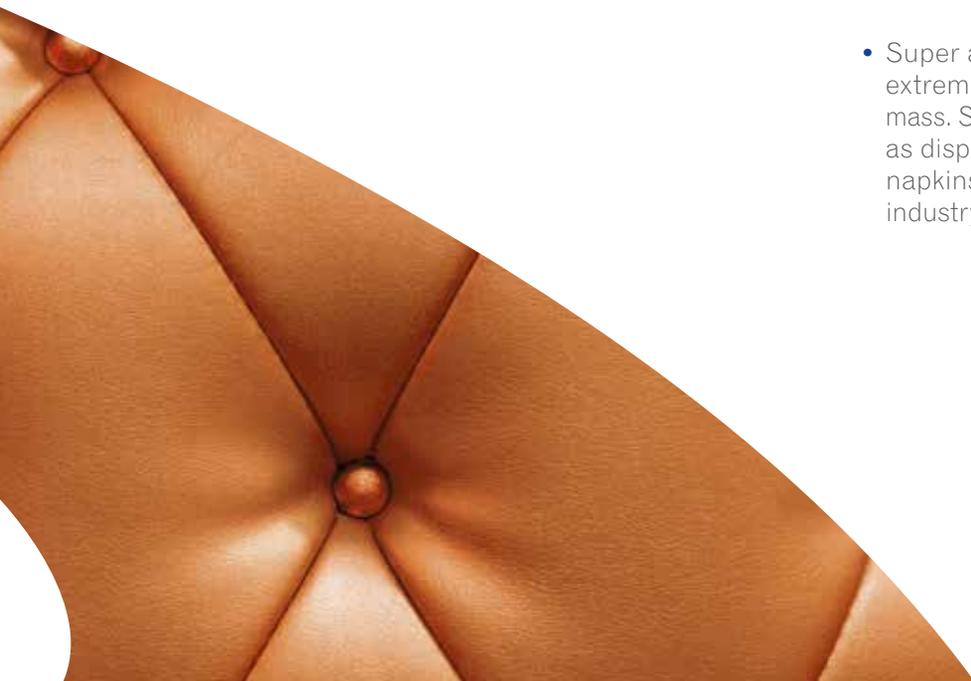
Solution-type polyurethanes are suitable for a vast array of applications, from synthetic leather products to adhesive layers in packaging and ink binders for printing on packaging.

Thermoplastic polyurethanes are used in numerous industrial applications, ranging from auto-body side molding to wire and cable coatings.

- Polyester diols are polymers formed from a dicarboxylic acid and a diol. Their most common applications include clothing, food packaging and plastic water and soft drinks bottles.

Polyester diols are used to produce high-quality polyurethane coatings with excellent transparency as well as outstanding physical and chemical resistance.

- Super absorbent polyacrylates can absorb and retain extremely large amounts of liquid relative to their own mass. SONGWON's range is suitable for applications such as disposable diapers, incontinence pads and sanitary napkins, as well as water-holding agents for the cable industry, construction, packaging and more.





For further information, please go to:

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SONGWON provides customers with warranties and representations as to the chemical or technical specifications, compositions and/or the suitability for use for any particular purpose exclusively in individual written agreements.

The facts and figures contained herein have been carefully compiled to the best of SONGWON's knowledge but are essentially intended for informational purposes only.

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