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Kai Müller
CEO
ROWA GROUP

Dear Business Associates,
dear Ladies and Gentlemen,

before we address the current situation and upcoming technical issues, we would like to pay silent tribute to Mr. Edgar E. Nordmann, our highly esteemed shareholder and constant companion. We are very grateful for the many memories of this outstanding person and the years spent together full of energy and inspiration. We wish his family much strength during this difficult time.

Our way of working has changed in many respects in recent years. By this I don't just mean that we are interacting more digitally as a team and with customers and partners, or that the issue of sustainability and reducing the CO₂ footprint is becoming increasingly important across all product and production areas - I also mean that the continuing difficult situation on the raw materials market means that we are required to act and react even more quickly and flexibly.

While this is a challenge for the ROWA GROUP companies, it is not a hurdle. Flexibility, reliability and a customer-oriented approach have always been the cornerstones of our companies - this is also reflected in our latest topics: On page 6, for example, we explain which services ROMIRA can offer beyond the actual product portfolio, in the field of thermal analysis, for instance. With a new, additional plant, ROWA Masterbatch has not only increased its capacity but also its reaction capability in production - read more about this on page 3. Likewise on this page, learn why ROWASOL's liquid colors are ideally suited for the coloring of recycled plastics. A further, highly illustrative example of our adaptability and hands-on mentality comes from the USA, where our colleague Jon Smith produces the required spare parts quickly and precisely using 3D printing.

I hope you enjoy reading this issue and I look forward to meeting you in person at one of the upcoming trade fairs. Three teams from the ROWA GROUP, ROMIRA, ROWASOL and ROWA Masterbatch, will be at the KUTENO which will certainly be a great opportunity for exciting and interesting face-to-face discussions!

With kind regards

Your Kai Müller

IMPRINT

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Obituary Edgar E. Nordmann

The ROWA GROUP mourns the loss of our treasured shareholder and long-time associate Edgar E. Nordmann.

In his function as a shareholder of Georg Nordmann Holding AG, Edgar E. Nordmann oversaw the foundation and development of the ROWA group of companies with great interest for many decades before he withdrew from his active role in recent years.

As a visionary, Edgar E. Nordmann was a very courageous, energetic, ambitious and joyous person; combined with his approachable, positive attitude, he had a meaningful balancing personality. „In his gregarious manner and optimistic way of thinking, he provided many of us with motivation and advice. We owe a great debt of gratitude for his work, we will never forget him,“ expresses Managing Director Kai Müller, who on behalf of the entire staff of ROWA GROUP Holding with ROMIRA, ROWA Masterbatch, ROWA Lack, ROWASOL and TRAMACO expresses his deepest sympathy to the family.



born 29 September 1939
Hamburg

deceased 8 March 2023
Kuala Lumpur



**New employee in field service:
FULL POWER AHEAD FOR ROWA MASTERBATCH**

A very warm welcome! The ROWA Masterbatch team is delighted to welcome Arnold Mengedoth as Technical Account Manager.

The appointment of Mr. Mengedoth is good news in two respects: Firstly, our new colleague is a specialist in the processing of thermoplastics and masterbatches. Prior to his most recent seven years as an application engineer advising customers in all fields on the use of thermoplastics and masterbatches, he had 25 years of experience in plastic injection molding, 18 of which as production manager in a large injection molding company. Mr. Mengedoth consequently has extensive experience in the industry and an enormous amount of technical expertise in both injection molding and extrusion applications. Secondly, thanks to the new sales structure, Mr. Mengedoth, a native of East Westphalia, is now working one hundred percent for ROWA Masterbatch and is responsible for the entire northern half of Germany, including North Rhine-Westphalia, North Hesse, Thuringia and most of Saxony.

Masterbatch can provide the customer with an all-round customer service package,“ says Bernhard Scheffold, Managing Director of ROWA Masterbatch, commenting on the addition to the team. ■



ARNOLD MENGEDOTH

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The future firmly in focus NEW PRODUCTION PLANT GOES INTO OPERATION

Two fundamental cornerstones of the excellent reputation that ROWA Masterbatch enjoys with its customers and partners are flexibility and reliability. Besides the specialist and advisory skills of our experts, the company also boasts machinery that is geared to the specific needs of its customers and is equipped with state-of-the-art technology in order to design production processes in line with demand and with a view to the future.

Continual investment in efficient and modern plants ensures the ability to adapt to new requirements and product innovations. ROWA Masterbatch has successfully completed the renovation of an additional production plant at its Pinneberg site. The approx. 700 m² area was stripped out and refurbished to create the technical conditions for the capacity expansion according to the most modern standards. Special attention was given to the optimum energy efficiency of the supply and exhaust air system with heat recovery.

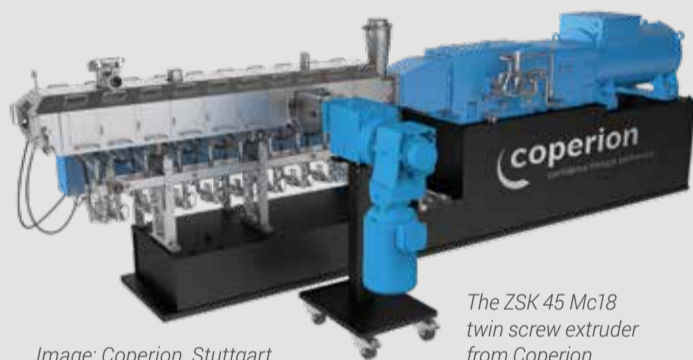


Image: Coperion, Stuttgart

The ZSK 45 Mc18
twin screw extruder
from Coperion

The first of three planned production plants has recently successfully entered into operation: This plant, which is centered around a ZSK 45 Mc18 twin screw extruder from Coperion, enables reliable production of masterbatch to a consistently high quality standard. The plant is designed to allow ROWA Masterbatch to react flexibly to all market requirements. Several container mixing systems are installed upstream of the extruder. The ingredients are fed into the ZSK twin-screw extruder through gravimetric feeders, where they are very carefully dispersed and homogenized in an extremely short time. Particularly shear-sensitive functional additives and pigments can be added and processed downstream via a ZS-B side feeder. Depending on the requirements, the masterbatch flow can be both strand pelletized and underwater pelletized after exiting the ZSK extruder. Coperion has congratulated ROWA Masterbatch on this forward-looking production expansion and is very proud to be part of the project with the ZSK 45Mc18.

We will keep you informed here in the ROWAnews regarding further plant modernization measures and our comprehensive production possibilities for individual, polymer-specific masterbatch solutions and specialized projects - and of course we would also be more than happy to discuss this with you in person! ■

➤ More information

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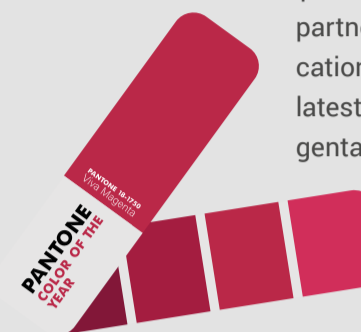
Strong, stronger, Viva Magenta! THE PANTONE COLOR OF THE YEAR IS A BOLD AND FEARLESS RED

"In this age of technology, we draw inspiration from nature and what is real. ...

Pantone 18-1750 Viva Magenta descends from the family of reds and is inspired by the red of cochineal, one of the most precious dyes in the natural dye family and one of the strongest and brightest known to the world" commented Leatrice Eiseman, Executive Director of the Pantone Color Institute, on this year's choice of Color of the Year.

Viva Magenta is a courageous and highly expressive color that will certainly set striking accents and radiate optimism in kitchens, living rooms, offices and fashion accessories.

It takes neither courage nor risk taking to work with Pantone 18-1750 Viva Magenta, as the experts at ROWA Masterbatch are specialists in polymer-specific and customized developments making us your ideal partner to color plastic applications of all varieties in the latest trending color Viva Magenta. ■



ROWASOL

Recyclate coloring made easy EFFICIENTLY COLOR ALL TYPES OF RECYCLED PLASTIC WITH ROWASOL LIQUID COLORS

It has been proven numerous times that liquid pigment dispersions offer added value in many applications due to their high color strength and homogeneous incorporation in plastics processing. But that's not all of the advantages: When it comes to the TOP topic of recycling, liquid colors can score points with several of their properties.

The use of recycled plastics is becoming increasingly important with simultaneously increasing demands on the properties. In addition to the mechanical characteristics, the color is also playing an increasingly important role, since recyclates are increasingly being used in consumer goods and food packaging - a trend that will definitely continue to gain in relevance.

Post-Industrial Recycled (PIR) plastics are processed according to type and color and can be colored with comparatively little effort. Although the post-consumer recyclates (PCR) are also sorted by material, they also contain foreign materials and are always a colored mix, which usually results in a shade of gray without the addition of colorants. Over-coloring this efficiently and homogeneously is a challenge that is made for liquid colors. Because the liquid concentrate already wets the recyclate chips in the feed area, so that the colorant is evenly distributed before the polymer is melted in the extruder. Moreover, it is irrelevant whether the recyclate contains different fractions, e.g. with regard to melt index and plastic type, since the universal carrier is well compatible with all materials. And since this is based on renewable raw materials, the proportion of fossil components in the product is also reduced in this way.

The illustration opposite shows an example of PCR chips made of HD-PE, which were directly injection molded with different liquid colors. The plate at the front of the picture shows the original color of the recyclate, from which four attractive earth tones could still be produced despite the dark green basic tone.

Much more potential can be exploited if liquid single pigment dispersions are mixed by the user himself to

create the finished color. The color formulation can then be quickly and efficiently adapted to the changing color of the PCR with minimal effort. And in the case of an upstream re-granulation of the recyclate, e.g. on a twin-screw extruder, inline color correction is even possible by feeding the „monos“ separately.



ROWASOL will be happy to support you in selecting the right dosing systems and creating your own coloristics. ■

➤ More information

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CRE.ACTIVE SOLUTIONS BY ROMIRA... INSPIRED TODAY, TO DESIGN TOMORROW!



CRE.ACTIVE DESIGN MOLD IN COLOR SOLUTIONS

- » limitless and disruptive design for visible parts
- » saving energy and costs compared to use of several molds and subsequent surface treatment
- » no additional rework for part decorating e.g. painting required after injection molding
- » lower transport and energy costs
- » less need of raw material
- » easier integration of raw materials into closed material loop streams thanks to the recyclability of MOLD IN COLOR solutions
- » carbon footprint reduction



CRE.ACTIVE PERFORMANCE SOLUTIONS

- » innovative technical polymer compounds
- » optimized technical parts
- » weight reduction
- » metal replacement
- » outstanding compromise of mechanical properties and still very good surface quality
- » reducing wall thickness
- » higher density
- » simplifying part designs
- » significant CO₂ reduction



ROMITRON® PPS FOR E-MOBILITY

Well recognized for their engineering polymers and MOLD IN COLOR solutions, ROMIRA focuses on the development of specialty compounds based on high heat ROMITRON® PPS for e-mobility.

New applications in electric vehicles (EVs) led to increased demand for polymers with higher thermal and electrical properties. Meanwhile, other features like electromagnetic interference (EMI) shielding and thermal/electrical conductivity are getting more attention. In hybrid electric vehicles (HEVs), downsizing of the combustion engine leads to local hot spots, which thermal management systems need to be able to handle. ROMITRON® PPS has interesting characteristics such as outstanding heat resistance (continuous service temperature 200 °C), inherent flame retardancy, and excellent chemical resistance to meet the challenging EVs requirements. The main drivers for ROMITRON® PPS in EVs/HEVs are expected as follows:

DEMAND FOR HIGH VOLTAGE PARTS

High voltage plastic parts need higher levels of flame retardancy and comparative tracking index (CTI), along with increased heat cycle/thermal shock resistance. Parts such as inverter and electric motor cores, housings, and capacitor cases need to withstand at elevated temperatures and have excellent heat cycle performance.

HIGHER DEMAND FOR THERMAL MANAGEMENT SYSTEMS

Compared to internal combustion engine cars, the thermal management systems in HEV/EVs support additional components such as lithium batteries, traction motor (operating temperature of coils up to 190 °C), high power electronic con-

trollers, etc. Cooling pumps for the batteries and the electric motor operate in constant exposure to the water-glycol coolants. Battery cooling systems stay in use not only when driving but during charging cycles that extends coolant exposure time. Therefore, polymers with a higher level of chemical resistance are required. ROMITRON® PPS is an ideal choice for EVs thermal management applications due to its outstanding chemical and heat resistance.

DEMAND FOR METAL INSERT PARTS

EVs/HEVs have different parts to be injected with metal inserts. For example, high voltage busbars are thick copper bars overmolded with PPS due to its good flow and excellent electrical insulation.

In addition to standard glass fiber/mineral filled ROMITRON® PPS, ROMIRA develops ROMITRON® PPS blends and compounds reinforced with specialty fillers/additives. As an example, 30% short carbon fiber filled ROMITRON® EXP3159 offers high strength/rigidity and can add other effects such as EMI shielding to the injected parts. There are several EV parts in need of EMI protection over different frequencies such as battery and electronics housings, infotainment enclosures, ADAS and LiDAR housings, etc. ROMITRON® EXP3159 can contribute to EMI protection along with highest flammability rating V-0 (0.8mm thickness). The use of carbon fiber facilitates heat transfer from sensitive areas as well.

There is also the newly developed ROMITRON® EXP3178 grade with close to 35% weight reduction comparing standard highly filled PPS GF/M65. Thanks to ROMIRA's long compounding experience and ultra-modern production facilities, re-processed carbon fiber and other lightweight fillers are incorporated in to the PPS matrix to achieve high levels of weight saving. ■



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ROMITRON® PPS

Applications

HIGH POTENTIAL PRODUCTS

ROTEC® PA M series: An almost limitless portfolio of solutions enabling CRE.ACTIVE Performance and CRE.ACTIV Design.

The highly-filled polyamides in the ROTEC® PA M series, which are manufactured with special mineral fillers and a specific process technology, provide excellent mechanical properties such as rigidity and impact strength, as well as dimensional stability and a broad processing window, even at higher temperatures. The ROMIRA products are also noted for their excellent surface quality and haptics.

ROTEC® PA M series offers designers almost unlimited possibilities and users do not have to compromise on surface quality, irrespective of whether they are dealing with technical or aesthetic parts. For instance, aesthetic parts can be produced with a ceramic look and haptic, as well as with a metallic look and haptic. It is also possible to create matt surfaces and Cool-Touch very effectively. The fillers in combination WITH and WITHOUT coating make the Cool-Touch properties of the end product more attractive in terms of quality. A further advantage: Numerous pure color shades can

be developed on the basis of mineral-filled PA compounds.



APPLICATION EXAMPLE ROTEC® PA M

A variety of applications are possible with the ROTEC® PA M series - including items such as door handles (inside and outside) and knobs for the automotive sector, household appliances as well as bathroom components, housings for power tools and products in the

cosmetics sector: for example, ROTEC® PA6 3501 M60 is currently being tested for cosmetic packaging with a ceramic effect - in this case, not only the tactile qualities are important, but also the acoustic properties of the material are relevant when it comes to a positive perception of quality.

The future demonstrates the potential offered by the ROTEC® PA M series: ROTEC® PA6 3501 M60 with chrome plating and metalization has the potential to replace ABS in the cosmetics industry. The level of shrinkage between the ROMIRA material and ABS is similar. The existing ABS molds could be used to produce parts using our material. ■

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METAL-TO-PLASTIC CONVERSION WITH ROTEC® HPPA

ROMIRA offers ROTEC® HPPA polymer compounds as metal replacement solution for automotive applications, in particular electric vehicles (EVs) sector. These compounds can effectively contribute to weight saving, improvement of efficiency, and reduction of carbon footprint.

In recent years, there has been a visible trend in polymeric solutions and metal replacement in automotive industry. In internal combustion engine cars, engineered polymers are being widely used and it gets even more when it comes to EVs due to the vital need for range extension and higher efficiency. From an economical point of view, there are more justifying factors for polymeric solutions in EVs. Main supply chains need to be reshaped, and polymer suppliers need to adapt to new metal-to-plastic conversion, and light-weighting requirements. These open up new opportunities for high performance polymers such as ROTEC® HPPA.

ROTEC® HPPA is a high performance polyamide that has been designed to be used as metal replacement. This compound combines metal-like strength and rigidity with very low moisture absorption rate (up to 60% lower rate than PA6). It has also very low thermal expansion (close to that of aluminum and zinc alloys) that makes it well-suited for metal insert molding. Flame retardant (V-0 rating at 3mm thickness) and UV resistant grades have been developed for specific applications.

ROTEC® HPPA can be injection molded using standard machines with no need for special tools/equipment that is necessary for some other high performance polyamides. The main added values of ROTEC® HPPA can be described as follows:

» **Lighter and higher efficiency: ROTEC® HPPA has high strength-to-weight ratio whereby complex structural parts as strong as aluminum with 40%**

weight reduction can be produced using glass fiber reinforced ROTEC® HPPA

» **Design innovation: injection molding of ROTEC® HPPA gives more design flexibility than metal forming techniques so that multiple metal parts can be effectively integrated to a single part**

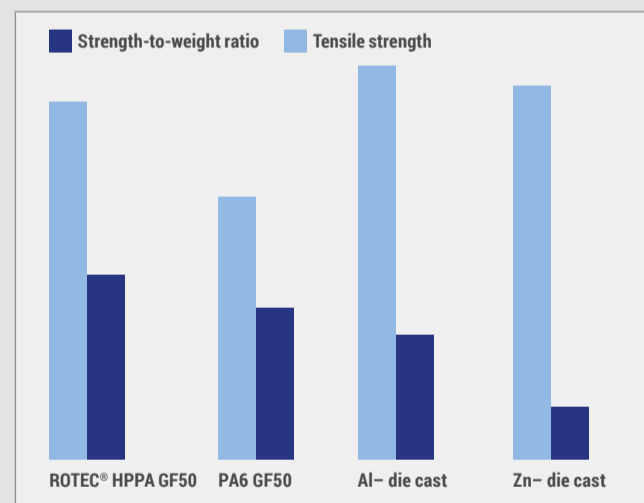
» **Cost and time saving: the use of ROTEC® HPPA eliminates extra costs induced by additional metal production steps such as drilling, finishing, and assembly. Also, mold wear and maintenance level is much lower than metals.**

» **Less total CO₂ emission: lower weight, less carbon footprint in raw material production and final fuel consumption**

The application of ROTEC® HPPA is not limited to metal replacement but also as substitution to standard PA6 and PA66 compounds where there is risk of failure due to moisture absorption and degradation of properties. In particular, functional parts in vital need for retaining mechanical properties over a long service period. The other application is in thin wall parts where high rigidity/modulus cannot be achieved by standard PA6/PA66 compounds. The high strength-to-weight ratio of ROTEC® HPPA allows it to be served for downsizing and thinning of PA6/PA66 parts.

In case there is demand for a higher level of weight saving, carbon fiber filled compounds could be possible solutions. High price and carbon footprint are the two main concerns about carbon fiber reinforced

compounds in automotive industry. The use of re-processed virgin carbon fiber in ROTEC® PA compounds results in a considerable decrease in carbon footprint, and total costs. ■



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Service at its best

INSIGHT INTO THE ROMIRA SERVICE CATALOG

Product quality at the highest level, expertise, over 25 years of experience and a spirit of innovation are the cornerstones on which ROMIRA is built - and last but by no means least, a service culture that focuses on the needs of the customer. Our customer-oriented approach comprises not only individual consultation and product development, but also includes the following services:

DIFFERENTIAL SCANNING CALORIMETRY:

A new addition to the portfolio: ROMIRA is ideally positioned in the field of thermal analysis due to the „DSC 204 F1 Phoenix“ (DSC = Differential Scanning Calorimetry) including automatic sample changer from Netzsch. The team is able, for example, to perform a specific heat capacity (CP) determination - the heat capacity provides information about the ability of a material to store thermal energy. Having heat capacity and pvt data for Moldflow analysis, ROMIRA measures most of the data itself. Using Moldflow data, the customer can in turn undertake product simulations and thereby produce the right mold for the injection molding machine.



WEATHERING DEVICES:

Exposure and weathering simulations in the Xenotest equipment make it possible to quickly provide information on UV resistance and weathering stress of plastic components. ROMIRA has had several weathering devices, Xe-2 from Q-Sun and Xenotest 440 from Atlas, on hand for several years to test newly developed or modified formulations. The UV resistance of the plastic mixture depends primarily on the chemical structure of its components - polymers and additives. More often than not, however, colored materials are used and, more recently, metallic pigments have been increasingly introduced to give a metallic appearance. Consequently, it is essential to investigate the effect of pigments and dyes used in combination with the corresponding compound. For this purpose, test conditions can be set in accordance with ISO 4892-2 with window glass filter for indoor application and light (daylight filter) and sprinkler for outdoor application.



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RESEARCH & DEVELOPMENT



COMPONENT TESTING SUPPORT:

It is not always possible to compare the mechanical characteristics of components with those of injection-molded test specimens. This is often due to demanding geometries (ribbing, undercuts, retainers) or the injection molding process itself (flow direction of the melt). The MOLD IN COLOR CRE.ACTIVE Design (MIC) from ROMIRA opens up new design possibilities that can be assessed together with our customers in terms of mechanical properties. To provide the optimum level of support in this area, ROMIRA has recently acquired a CNC milling machine (Computerized Numerical Control). This enables the production of test specimens from plates or suitable component surfaces in accordance with DIN EN ISO 2818. Multipurpose test specimens in accordance with DIN ISO 3167, as well as simple ISO rods and other surfaces, can be produced depending on the component geometry. This involves cutting large components to size using a format saw or band saw (max. 310 x 350 x 150 mm) and adapting the milling program to the respective component specimen. Thereafter, the milled specimens are tested in the test laboratory.

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RHEOLOGY - PVT AND COMPRESSIBILITY:

ROMIRA recently added the „VisualRHEO“ rheometer to its equipment inventory, which uses a pvt module to provide better characterization of the flow behavior of materials. The pvt (pressure-volume-temperature) behavior establishes the relationship between pressure, volume and temperature in a material. Consequently, it provides an indication of how compressible a polymer melt is. This relationship between pressure, volume and temperature is of particular significance because polymers are processed at high temperatures and pressures. Using this new tool, the ROMIRA team is able to provide its (development) customers with important material characteristics and in doing so expand the relationships between material and component.

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ROMIRA

Services

Simple, precise - impressive!

A GROWING DEMAND FOR ROWA LACK PMMA DYE PREPARATIONS

ROWA Lack continues to make its mark in the field of ROWALID® PMMA dye preparations and underlines the company ambitions in this market segment with its product range policy. The ROWALID® preparations are not only a permanent fixture on the market, but are also characterized by steadily growing demand. By using the ROWALID® preparations, customers are provided with a modular system for designing their own coloristic objectives.

ROWALID® ACN-F grades comprise highly concentrated single dye preparations that are incorporated in a PMMA carrier system. A special production process is used to manufacture ROWALID® preparations, which aims to achieve a maximum degree of distribution of the dyes that cannot be attained with conventional dis-

persion methods. The “micropowder” dosage form in a defined particle size range not only enables a wide spectrum of compatibility, but the additive-free dye dispersions also guarantee a high level of color strength and transparency.

In a commercial environment that is becoming increasingly complex and requires highly sophisticated procedures, the straightforward processing of the products represents a significant advantage. In contrast to the use of pure colorants, no complex handling is necessary to achieve optimum distribution with maximum color strength.

With the ROWALID® ACN-F preparations, ROWA Lack provides a standard range of color shades with outstanding properties. In cooperation with our customers, we are also happy to develop project-specific customized preparations based on individual requirements. Various dye grades and dye contents can be selected to meet specific requirements. ■

TYPE	PC	CI	DESCRIPTION
ROWALID® PPY 4017 ACN	40 %	S.Y.93	Greenish yellow
ROWALID® PPY 4841 ACN-F	60 %	D.Y.54 / S.Y. 114	Neutral yellow
ROWALID® PPY 4842 ACN-F	60 %	D.O.	Reddish yellow
ROWALID® PPO 4845 ACN-F	60 %	S.O. 60	Yellowish orange
ROWALID® PPO 517 ACN	40 %	D.O. 47 / S.O. 107	Reddish orange
ROWALID® PPR 4843 ACN-F	60 %	S.R. 135	Yellowish red
ROWALID® PPR 2072 ACN	70 %	S.R. 111	Yellowish red
ROWALID® PPR 2046 ACN	70 %	S.R. 195	Bluish red
ROWALID® PPR 4853 ACN-F	60 %	S.V. 59 / D.V. 26	Reddish violet
ROWALID® PPB 4852 ACN-F	60 %	S.V. 13	Bluish violet
ROWALID® PPR 4856 ACN-F	60 %	S.R. 52	Magenta
ROWALID® PPB 4854 ACN-F	60 %	S.B. 104	Neutral blue
ROWALID® PPB 4847 ACN-F	60 %	S.B. 97	Reddish blue
ROWALID® PPG 4844 ACN-F	60 %	S.G. 65	Yellowish green
ROWALID® PPG 4846 ACN-F	60 %	S.G. 3	Bluish green
ROWALID® PPN 4857 ACN-F	60 %	Br. 53	Brown
ROWALID® PPK 4855 ACN-F	60 %	Sw. 27	Black



ROWALID®

Preparations

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The “Right Kick” for your products

FOAMING AGENT SYSTEMS AND ADDITIVES



The foaming agent systems developed by TRAMACO and distributed under the brand name TRACEL® react as chemical, endo- or exothermic foaming and nucleating agents. Upon heating, the reaction generates gas, which is dissolved in the polymer and leads to foaming of the plastic.

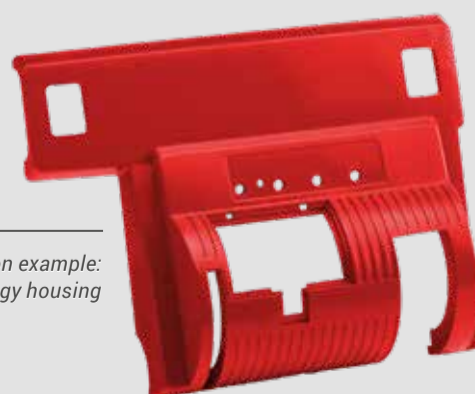
The foaming agent systems may be used in various plastics and are especially suited for injection molding and extrusion applications. In addition to the weight reduction resulting from the foaming and the material saving in injection molding, further interesting advantages may be achieved by the use of TRACEL®:

- » reduction of sink marks in the part
- » warpage reduction (particularly for big moldings)
- » flow improvement / melt temperature reduction
- » cycle time reduction
- » surface effects (visual/haptic)

Thermoplastic foam injection molding can run on regular injection molding machines. Compared to regular injection molding, only one shut-off nozzle is needed and it is recommended to use tools with

a higher chromium content (not less than 13 - 15 % Cr).

TRAMACO also offers green products with bio-based or biodegradable carriers in addition to the conventional foaming agents.



Application example:
 Medical technology housing

Furthermore TRAMACO develops and supplies additional additives such as slip agents and mold release agents (TRASIL & TRASLIP), antistatics (TRAPOR & TRASTATIC) and UV-stabilizers (TRASTAB).

Get the right kick for your products and contact our application engineers for an individual consultation. We will be pleased to render solution oriented advice. ■

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Passing the baton
EMERGENCY RESPONSE OFFICER DOMINICK RUNGE IS TO TAKE OVER FROM HANS MOOSBURGER

Expertise, experience, teamwork - there are many factors that have contributed to making the ROWA GROUP companies a long-standing market success.

Forces that are not immediately obvious, however, are also responsible for the efficient processes and the safety of the employees. Our colleague Hans Moosburger is one such „hidden champion“. Hans has been working in production at the ROWA GROUP since 1986, he has served as a first aider since 1990 and, after appropriate training, has been on duty as an Emergency Response Officer since 2006. He is now entrusting this task to Dominick Runge from plant engineering.



Marco Lange, Head of SHE (far left), thanks Dominick Runge together with Matthias Möller and Kai Müller to Dominick Runge and Hans Moosburger (from right to left) for their extraordinary contribution to the ROWA GROUP

We would like to express our sincere thanks to Hans Moosburger for his many years of service and also to Dominick Runge and all the currently 62 first aiders for their commitment! ■

NEW DEVELOPMENT

Innovation, Technology, Passion
JON SMITH: 3D PRINTING MADE IN THE USA

Jon has been with ROWA USA seven years, in plant and process engineering roles. His university studies were in Electrical Engineering. Creative innovation describes Jon well.

He is always coming up with new and improved methods to do things. His latest research work is in 3d printing. He does many projects using 3d printing including items to help the plant operation. Jon utilizes a Voron 2.4. 3d printer he built.

PROJECTS INCLUDE:

- » Ktron feeder agitator would break and the whole shaft had to be cut and replaced. Took hours and over \$1000 in parts: Replaced the metal keyway with a 3d printed one and now if something goes wrong, a 20 cent part breaks that takes 15 min to replace. Key way Idea generation ~ CAD design ~ to 3d printing with a part in my hand took under 30 minutes.
- » Custom geometries that otherwise couldn't be made, ex. herringbone planetary gear.

ADVANTAGES OF 3D PRINTING INCLUDE:

- » The part costs are lower.
- » Quick turnaround time, what normally takes days to weeks to get parts made, can take minutes to hours with 3d printing.
- » Metal plating: You can coat and electroplate 3d printed parts in copper, nickel or chromium to increase strength
- » Topology optimization can make parts hollow to save on weight and material costs - 80/20 rule of thumb, can remove 80 % of the solid material but only lose 20 % strength. ■



JON SMITH



<https://www.youtube.com/watch?v=3smr5CEdksc>



<https://www.thingiverse.com/thing:968011>

More information

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MAY **KUTENO**
Kunststofftechnik Nord
Die effiziente Zuliefermesse für die kunststoffverarbeitende Industrie

MAY 09. - 11. 2023,
RHEDA-WIEDENBRÜCK, STAND Z22
ROMIRA, ROWASOL, ROWA MASTERBATCH

SEPT **interplas**
Innovation. Maximum. Here.

SEPTEMBER 26. - 28. 2023,
BIRMINGHAM, HALL 4, STAND H12
ROMIRA

MAY **Plasttechnik**
Nordic

MAY 10. - 11. 2023,
MALMÖ, STAND B15
ROMIRA

OCT **Fakuma**

OCTOBER 17. - 21. 2023,
FRIEDRICHSHAFEN,
HALL B1, STAND 1212
ROWA GROUP

MAY JUN **EQUIPLAST**
The International Plastics and Rubber Event

MAY/JUNE 30. - 02. 2023,
BARCELONA, HALL 3, STAND G29
ROMIRA

NOV **Plast Eurasia**
Istanbul

NOVEMBER 22. - 25. 2023,
ISTANBUL,
ROMIRA

JUN **PIAE**
EUROPE

JUNE 21. - 22. 2023,
MANNHEIM,
ROMIRA

DEC **automotive interiors**
EXPO EUROPE

DECEMBER 05. - 07. 2023,
STUTT GART,
ROMIRA



For reasons of better readability, the masculine form is used for personal designations and personal nouns. Corresponding terms apply in principle to all genders for the purpose of equal treatment. The abbreviated form of language is for editorial reasons only and does not imply any valuation.

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