

ROWA NEWS

NEWS FROM ROWA GROUP

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ROWA INC.

ROMIRA

ROWA MASTERBATCH

ROWA LACK

ROWSOL

TRAMACO

ROWA GROUP

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Kai Müller
CEO
ROWA GROUP

Dear business partners, ladies and gentlemen,

The key issues in our industry have not changed much since the last ROWAnews. We are still successfully meeting the challenges posed by the global economic and political situation. We as ROWA GROUP have made optimum use of the time, invested in processes, developed further service solutions and implemented digitalization opportunities wherever possible and appropriate. Primarily, we provide innovative products to support future-oriented demands. This was confirmed by a particularly successful new audit which gave considerable praise to the companies involved in the group.

At ROMIRA, we have formed an international automotive team with experts from our Central and Western European regions as well as Turkey in order to provide an even better cross-border service for the automobile industry, a sector that is extremely important to us. Our production specialists in the USA are also available as a further extension of this. As a result, we can serve suppliers in this industry almost without borders and with constructive synergies. At the same time, we have also been actively involved in the product development process for many years: For example, as part of the e-mobility megatrend with our ROWALID® masterbatches, which you can read more about on page 5.

With color expertise, we also utilize the new COLOR COMPETENCE CENTER for the precise individual color definition for all companies in our group. Please find enclosed a brochure or go to our website for additional information www.rowa-group.com/ccc. We would be happy to meet with you personally at K 2019 to discuss which additional services we can offer to contribute to your success. We want to concentrate on the important issues and challenges with you as well as take advantage of the opportunity for a productive discussion. The team at the ROWA GROUP is certainly looking forward to some interesting trade fair days and several exciting conversations with established and new contacts.

With best regards

Kai Müller



ROCK`N`ROLL ENGINEER: CHEMICAL ENGINEER, R&D AND COLOR EXPERTISE WITH A PASSION FOR MUSIC, REID PRICE

Reid joined Rowa Inc., USA, in December of 2016 to lead the Quality and R&D / Color departments after more than 14 years in the plastic industry in Research & Development leadership roles.

Graduate from the American Rowan University in Chemical Engineering specializing in plastic materials, Reid never stops learning through research, continuing education and learning from others. He uses cohorts, colleagues and suppliers to find solutions for customer challenges and then shares the knowledge with his team to help them continue to grow and expand.

"Customers are the core of our business – we have to provide solutions that work for their challenges", notes Reid. "I like what I do, I enjoy solving problems, seeking knowledge, and helping train and build others. In my spare time I enjoy performing as a singer songwriter. Music has been in my blood since I was young and first learned how to play the guitar. Classic Rock is my favorite music and what I perform at local Philadelphia clubs on the weekends. I believe

in working hard and playing hard – literally and figuratively." ■



If you have any questions for Reid or would like to join him at a local club for fun with music, he can be reached at his email address Reid.Price@RowaInc.net



FOR SOUND YOU CAN BE PROUD OF: ROMILOY® 4010/11

The ROMIRA experts are always out to further develop their products and to continuously improve them more precisely for many different applications. The new PA/ABS compound ROMILOY® 4010/11 is an outstanding example of this.

Due to their appearance and tactile qualities on structured surfaces without the need for subsequent lacquering, combined with superior technical properties and good chemical resistance, the ROMILOY® products are particularly impressive in a wide range of applications.

structure extremely well. The product has already been approved for use by many OEMs. In accordance with the customer's requirements, ROMIRA can produce almost all colors possible in plastics using the most suitable colorants - the new, modern



The newest version, ROMILOY® 4010/11, now features even better tactile properties, greater value and further improved, extremely high impact strength. The material also exhibits exceptional flow qualities, giving the additional advantage of a wide processing window. Puncture resistance tests according to ISO6603-2/40/20/C/2.5 were performed with very positive results, giving confidence in protection against accidental damage.

ROMILOY® 4010/11 is ideally suited for use in loudspeaker grilles, particularly as it reveals the surface

The newest version, ROMILOY® 4010/11, now features even better tactile properties, greater value and further improved, extremely high impact strength.

ROMIRA COLOR COMPETENCE CENTER provides the very best options in this respect.

We warmly invite our customers, designers and marketing experts to come to us and discuss their specific color ideas. As a result, each color can be reproduced in plastic within a very short time. ■

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A SUCCESSFUL PROJECT: A LOOK BACK OVER THREE YEARS OF QSC

The most stringent quality assurance together with continuous further development – ROMIRA has been combining expert knowledge from various areas in the „QUALITY SERVICE CENTER“ since 2016 to be able to offer customers quality and innovation at the very highest level.

The idea that emerged in 2016 from the bringing together of competences of various departments in order to generate synergies can now be described as a complete success. There are now 16 employees – including two trainees – from machine operators and colorists to chemical technicians and Masters of Science in chemistry working in the four areas of formula creation/incoming goods, quality assurance, development / laboratory organization and evaluation.

Alone in 2018, 4,540 production formulas were created, approx. 1,300 raw material batches tested and around 10,000 samples for testing technical properties as well as 570 development orders processed. The introduction of QSC means that color quality assurance is now carried out in-house. Regular external and internal training courses refresh the employee's qualifications so that they always keep abreast of the latest state of research.

In addition to injection molding and color metrics seminars, the program also includes training courses for TÜV test equipment representatives.

Q S C QUALITY SERVICE CENTER BY ROMIRA

We continuously invest in new machines to guarantee the best quality and state-of-the-art technology. For example, the UL combustion chamber enables precise testing for UL listings, and the latest generation of HDT/VST devices permits heat distortion temperature testing up to 300 °C. Due to the short-term acquisition of a speck scanner and a shore hardness tester, the focus will continue to be on the best. ■

FUNCTION THROUGH FILLER

The specific characteristics of the various plastics and their blends are as diverse as the areas in which they are used. The demands on functionality of components are increasing, particularly in sectors such as the construction and automotive industries or medical technology.

High-performance fillers and functional additives provide polymer systems with amazing functional or optical properties and consequently facilitate the use of plastics in an increasing range of unconventional applications. Special glass fiber-reinforced LURANYL® PPE/PS blends with WRAS, NSF, KTW and ACF certification are successfully used in fluid technology applications with hot water such as instantaneous water heaters. These products offer perfect solutions in applications requiring strength, stiffness, heat and chemical resistance, longevity combined with complex constructions.

Besides improved mechanical properties, special fillers can also be used to adjust electrical and thermal properties. One example is the electrically conductive and halogen-free flame-retardant polycarbonate ROTEC® PC 7010 FR-AS, which was specifically developed and successfully applied by ROMIRA for applications in fire and explosion protection.



Some fillers can also be used to produce exceptional haptic properties, such as our highly filled ROTEC® PA6 M50 for aesthetic packaging in the cosmetics segment. Combined with the particularly chemical-resistant polyamide-6, the special mineral filler used here ensures a high density and a ceramic-like surface appearance of the end products.

The prerequisite for suitable solutions is not only detailed knowledge of customers' requirements, but also an in-depth awareness of the latest developments in the field of fillers and additives. The appropriate selection of the filler and its processing make a decisive contribution to the properties profile of the final plastic product. Owing to the expertise of the ROMIRA employees and state-of-the-art production machines, which work with variable dosing systems, we can provide our customers with formulations precisely tailored to their requirements and technical standards. ■

ROWA GROUP
UPCOMING
OCTOBER 16.-23. 2019
HALL 8A, BOOTH B28

ROMIRA
TECHNISCHE KUNSTSTOFFE

ROWA
MASTERBATCH

ROWASOL

Tramaco

ROWALACK

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WITH SAFETY TO NEW APPLICATIONS

The health and medical device industry is subject to very strict regulations to ensure the highest quality and safety. Consequently, product development is both complex and time-consuming, and is accompanied by many conformity regulations, long-term tests, quality tests and certifications. ROMIRA is optimally prepared for these special conditions and can provide customised compounds for diagnostic devices in hospitals and laboratories.

Manufacturers of medical devices face a variety of risks and challenges: For instance, once they have selected and tested a material that meets all the stringent regulations and requirements for medical plastics, they must be able to rely on long-term availability and planning. A new material release procedure, including a certification process, is complicated, expensive and often extremely time-consuming.

The fact that medical device manufacturers are not regulated in the selection of polymers and are left to decide for themselves is also problematic. The upcoming EU regulation on medical devices (MDR - 2017/745), which will come into force on May 26, 2020, attaches great significance to risk management and product safety. In comparison to previously applicable directives, it contains a large number of new articles, rules and requirements - but does not contain any statements on the selection of materials.

The final version of VDI Directive 2017 „Plastics in Medical Technology“, published in July 2019, is a meaningful supplement to the existing regulations. The scope of the directive covers the composition and consistency of formulations of plastics, including blends, compounds and masterbatches.

ROMIRA considers itself a partner of the healthcare industry and offers customised compounds for medi-



cal and laboratory technology. The extensive product range is based on a multitude of different engineering plastics, selected colorants and high-performance fillers: such as the flame-retardant PC/PBT blend ROMILOY® 5130/01 or the flame-retardant PC/ASA blend ROMILOY® 8170, both of which are already used in numerous medical device applications.

ROMIRA safeguards these products through uniform formulas, committed change management and support with official approvals. The required raw materials are also secured by a „second source“ policy. This has

been verified several times in external and internal audits according to ISO 13485 or 21 CFR Part 820. This demonstrates a significant added value which is highly appreciated by ROMIRA customers. ■

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INTERNATIONALIZATION OF ROMIRA THREE QUESTIONS FOR SALES DIRECTOR SVEN GUZIELSKI



INTERVIEW

Sven Guzielski,
Sales Director of
ROMIRA GmbH

Mr. Guzielski, you joined ROMIRA in June 2018 as Sales Director. Can you give us a brief interim summary?

„I would be glad to, because it could only be positive. Firstly, I feel absolutely at home at ROMIRA with my area of responsibility and the highly motivated team. Secondly, as a business we are very well positioned, also at an international level.“

Can you give the readers some details on the subject of internationalization?

„Our international expansion is making great strides. The company is successfully following its long-term strategy. Key accounting at large, supra-regional OEMs and TIERs, often with sales in the tens of billions of Euro, is a key component of our success.

The worldwide integration of these corporate groups has introduced us to such markets and regions as Mexico, India and Australia, where we have not yet developed any sales activities for ourselves.

The multiplier effect of our quality products combined with customer service plays an important role here. A further indication of the good cooperation with our international partners is that they are increasingly joining us in Pinneberg to establish colors and tolerances together in a short time.

This is very efficient in terms of cost benefit thanks to our COLOR COMPETENCE CENTER (CCC+), where we sit down with the decision-makers and can quickly approve the desired quality.“

What kind of future developments do you see as opportunities for ROMIRA?

„The potential for growth lies in substituting alternative products and developing customer-specific niche products. Cooperating with our customers and the CCC+, we have succeeded in creating plastic solutions that previously were only possible in several steps and where plastics entirely replace other materials. This results in an ecological and economic advantage for our customers, a benefit that is becoming increasingly important and widely accepted in the current economic situation.

With this in mind, we have a positive outlook for the future and are looking forward to interesting discussions with partners from Germany and abroad at this year's **K Trade Fair, Hall 8A, Booth B28.** ■

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THE E-MOBILITY MEGATREND: ROWA MASTERBATCH IS ALONG FOR THE RIDE

It is becoming increasingly obvious in the everyday street scene: E-mobility is one of the big, maybe even the biggest megatrend. Whether for use as private cars, buses, shuttle service or sharing vehicles, different types of electric vehicles are on the road in both local and long-distance traffic – and more and more often ROWA Masterbatch is along for the ride.

The Federal Motor Transport Authority has estimated that in Germany alone there are currently over 200,000 electric and plug-in hybrid vehicles. And this is just the beginning. In the coming years the automotive industry plans to launch numerous battery-powered cars and plug-in hybrids onto the market. At the end of 2018 there were 60 electric car models available on the European market. The Transport & Environment Organization expect this figure to rise to 214 by 2021, and by 2025 around 22 percent of all new cars will be plug in vehicles. These estimates illustrate the megatrend towards e-mobility and also highlight the challenges and opportunities facing suppliers and material producers. ROWA Masterbatch has been well positioned in this field for a long time. The company has polymer-specific solutions for more or less all plastics; currently 160 different polymer carriers are in use. ROWA Masterbatch is already capable of meeting new, customer-specific requirements and product needs coming

from the e-mobility market environment. One example is PBT ORANGE masterbatch, which is used for the identification of high voltage. High temperature resistant thermoplastics such as PA66, PPA, PPS, etc. are also used in this field of applications.

Another use for ROWALID® Masterbatches in electric vehicles is for the on-board electrical systems, where cable harnesses are installed using connectors. These connectors are produced in corresponding signal colors to ensure simple, error-free connection. The most common plastics are PBT and TPU. ROWA Masterbatch already supplies the required colors used in this sector. Polymer-specific color concentrates can be produced within a very short time for the desired custom color coding of specific polymers used for electric car components. ROWA Masterbatch is well prepared for the expected increasing demand for special solutions for the automotive industry - the future is now. ■



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FLEXIBLE LIGHTING DESIGN WITH HIGH LUMINOUS EFFICACY

Light-scattering masterbatches for thermoplastic polyurethanes (TPU): ROWA Masterbatch, manufacturer of polymer-specific masterbatches, puts a sparkle in the eyes of their customer with the new ROWALID® products.

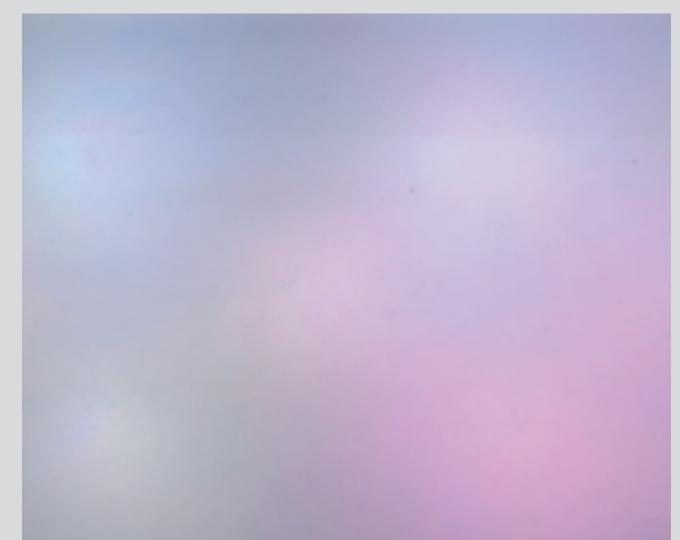
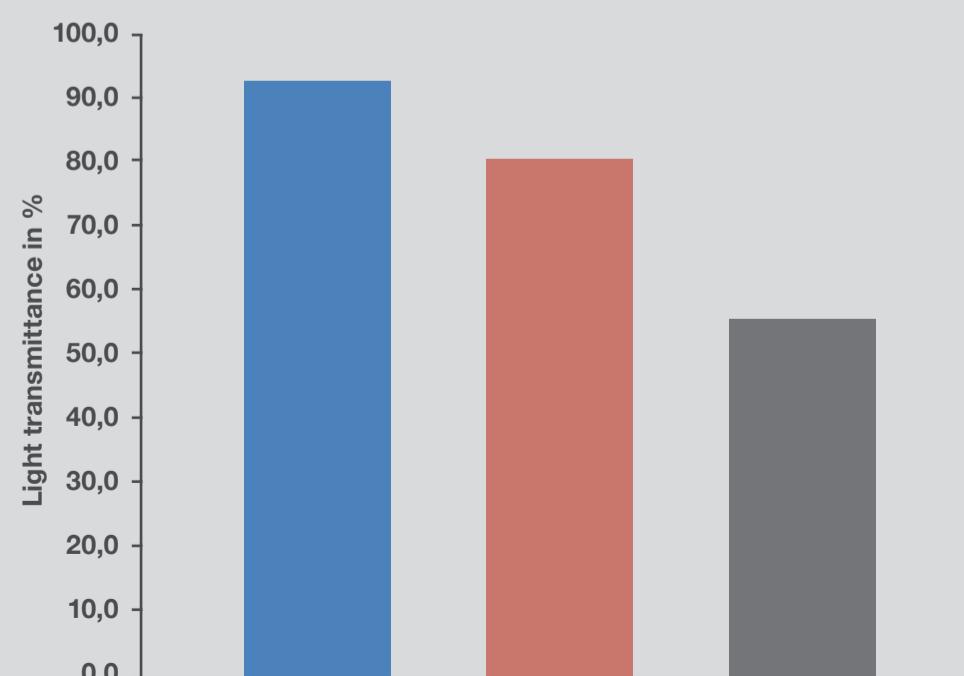
The popularity of LED lighting has made translucent plastics increasingly important for luminaire covers. The covers are used to diffuse the light emitted by the point-shaped luminaires as uniformly as possible, making the point-shaped light sources (hot spots) invisible by high light diffusion. At the same time, the user naturally wants the highest possible luminous efficacy.

The use of suitable materials can save on the number of luminaires and energy. With ROWALID® LDX masterbatches, components can be uniformly illuminated with a silky matt finish at maximum luminous efficacy without the hot spots shining through.

ROWA Masterbatch has so far successfully provided ROWALID® LD and ROWALID® LDX products for hard plastics such as polycarbonate, polymethylmethacrylate and polystyrene. New additions to the portfolio are ROWALID® LD and ROWALID® LDX products for thermoplastic polyurethanes (TPU). The flexibility of these soft thermoplastic elastomers enables new applications in lighting design. ■

- █ TPU aliphatic 1 mm
- █ ROWALID® LDX 1 mm
- █ ROWALID® LDX 3 mm

Light transmittance (D65/10°) of TPU plates provided with ROWALID®-LDX
blue: TPU, aliphatic, non-additive
red: ROWALID® LDX, 1 mm wall thickness, corresponds to image 1
grey: ROWALID® LDX, 3 mm wall thickness



ROWALID® LDX (polymeric scatter)



ROWALID® LD (inorganic scatter)

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OPTIMIZED FOR THE FUTURE

IMPROVING THE SCRATCH RESISTANCE OF PMMA WITH ROWALID® SR MASTERBATCHES

The many positive properties of acrylic glass (polymethyl methacrylate, abbreviated PMMA) have made it very popular and it is used in various industries. ROWA Masterbatch has improved the scratch resistance further enriching this valuable plastic.



Acrylic glass is frequently used in outdoor applications such as windows and facades and to create advertising spaces and company signs. Indoors it is used for room dividers, acrylic glass furniture and various decorative products. But the demand for this valuable plastic from the automotive industry, aviation technology and jewelry production is also increasing - and for good reasons:

Compared to silicate glass, acrylic glass weighs half as much and is highly shatter resistant and stable. It is a transparent and UV-stable plastic, thermally insulating and frost and heat-resistant. When used outdoors PMMA can also withstand the effects of weathering for many years without yellowing or becoming brittle.



These sustainable properties will ensure that the plastic will be used in ever increasing applications and is regarded as a trend-setting material. A disadvantage compared to glass is the low scratch resistance. However, this scratch resistance can now be significantly increased by a polymer-specific masterbatch.

Various test methods have been developed to assess the scratch resistance of molded plastic parts depending on the application and type of surface. ROWA Masterbatch chose the cross-hatch test, in which a test probe is guided over the surface at defined grid spacing whilst a controlled force is applied. The width, depth and visibility of the scratches produced by the probe are then used to assess scratch resistance. A microscopic and visual evaluation showed that the previously high scratch resistance of PMMA (PMMA has the highest scratch resistance of all thermoplastics) can be significantly improved using ROWALID® SR Masterbatches. Customers can use this new anti-scratch masterbatch as an additive to their standard products. ■



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URGENTLY REQUIRED: MORE OBJECTIVITY IN THE DEBATE ON PLASTICS

The pollution of the world's oceans, the use of plastic bags and packaging materials, micro-plastics in food ... barely any other topic provokes people as much as, to put it bluntly, plastic waste. Rightly so, in our opinion. The „plastics debate“ is an absolute necessity. But it is just as necessary that it is conducted objectively and seriously.

In the daily newspapers, magazines, on TV and online, plastic is being depicted all over as the number one enemy of the environment, often accompanied by pictures of a contaminated holiday paradise. Today „plastic“ has a more negative image than at any time in the past, a fact that occupies our industry more than almost any other topic. This is because if plastics are seen as the enemy then we - the producers - are also being criticized. We need to counteract this development with honesty, objectivity and, last but not least, self-confidence.



tics brings in a factual and serious manner. Plastic is a material with a future because it will continue to be a substitute for other materials - for example in the automotive industry, where it is indispensable for many applications. And its importance will continue to grow strongly with electric mobility. It does not make sense to regard electric vehicles as progress towards sustainability whilst demonizing plastic, as it is the most suitable material for the mobility of the future, for one reason due to its lesser weight.

The debate regarding the use and proper handling of plastics is important, but this must not be steered by emotion as is often the case. Objectivity and impartiality will prove indispensable if efficient solutions are to be developed. ■



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The improper disposal of plastic is without doubt a major problem and should be severely punished according to the ROWA GROUP. Like so many aspects in this context this issue must be very high on the political agenda.

It is important for our industry to communicate to the consumer the many advantages that processing plas-

A POSITIVE REVIEW AND FUTURE OUTLOOK REGARDING TECHTEXTIL

From 14. to 17. May 2019 industry experts gathered at Techtextil in Frankfurt as they do every two years. According to information released by the organizers the trade fair experienced a growth of 1.6 % compared to 2017 with 1,501 exhibitors from 57 countries attending. Additionally, with a total of 42,500 visitors, this year's fair had 1,800 more visitors than two years previously.

In the calendar of events the leading international trade fair for technical textiles and textile technologies, it is also a highlight for ROWA Lack. The booth's inviting design made it clearly stand out from the crowd and once again we were able to attract numerous visitors from the fields of development, application technology and sales, who came to talk to our experts and learn more about innovations from ROWA Lack. There was considerable interest in the latest developments in the field of textile construction and functional coatings, including anti-graffiti lacquers for artificial leather applications and anti-static lacquers for tar-paulins.

The sister fair Cinte Techtextil China in Shanghai in 2018, where Ningbo ROWA Coatings Technology Co. presented its extensive portfolio with representatives of ROWA Lack for the first time, was also very successful and offered an excellent platform for further expand business activities in Asia.



Both trade fairs are to be rated so positively for the ROWA Lack that this clearly speaks in favor of being back next year as an exhibitor. Make a note of the dates for Cinte Techtextil China in September 2020 and for Techtextil in Frankfurt in May 2021. ■



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ROWA LACK FURTHER EXPANDS ITS WATERBORNE LACQUER PORTFOLIO: AQUEOUS ROWANYL®-TYPES ARE NOW ALSO AVAILABLE

With various water-based products from the ROWAKRYL®, ROWATHAL® and ROWAFLON® ranges already available for applications such as PVC-coated tarpaulins, print media and artificial leather, waterborne coatings from the ROWANYL®-group now complete the product range.

The gloss product ROWANYL® 105004W, for example, is suitable for the production of (foamed) artificial leather, which is produced in a reverse process on release paper. A very high viscosity of the coating in combination with a still good flow behavior makes this possible – as this is indispensable to achieve a full-surface coating using a doctor blade. As the matting effect in this process is usually achie-

ved by the release paper being used, the new product can be used to produce both high-gloss and matt surfaces. Good chemical resistance and high flexibility round off the material's property profile.

The system can also be individually adapted to customer requirements based on ROWANYL® 105004W. If we have awakened your interest the ROWA lacquer

experts will be happy to advise you in person, including from 16. to 23. October 2019 at the **K Trade Fair** in Düsseldorf in Hall 8A, Booth B28. ■

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1 Release paper with leather grain



2 ROWANYL® 105004W applied to release paper



3 Preparation for application of plastisol top coat to dried ROWANYL®



4 Coated plastisol top coat



5 Preparation for application of plastisol adhesive coating to the pregelled plastisol top coat



6 Imitation leather that has set, detached from the release paper and has been cut to size

SUPER-FAST COLOR CHANGES IN COMPOUNDING - COOPERATION WITH KRAUSSMAFFEI EXTRUSION, OPM MECHATRONIC AND COLVISTEC AT K 2019

Liquid colors for plastic coloring need not be molten before processing and can therefore be injected further downstream in the process, bringing great advantages with respect to color change time and material consumption. At booth C24-27 of KraussMaffei Extrusion GmbH, Hannover, at this year's K Trade Fair in Düsseldorf, Germany, they will showcase this capability with an inline colorant system from OPM Mechatronic GmbH, Hörstel-Riesenbeck, together with the liquid colors from ROWASOL.

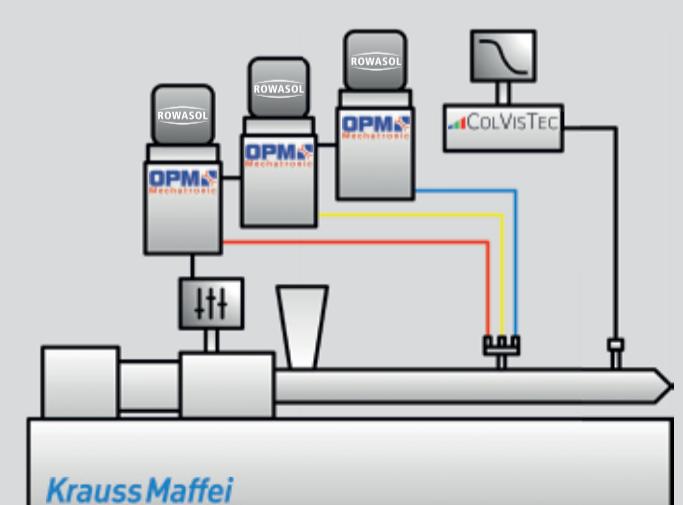
As part of KraussMaffei's „Circular Economy“ project, PP buckets are initially produced on a GX 1100 injection molding machine and shredded externally. Afterwards the milled material will be talcum-reinforced, colored and re-granulated on a ZE 28 BluePower twin-screw extruder.

The color is added by an eccentric-screw dosing system to inject three liquid colors directly and simultaneously into the plastic melt. The colorant is mixed with the plastic directly by the compounding extruder's specially configured twin screw. The master and the two slave modules are controlled and the formulation managed by KraussMaffei's central extruder control system. The liquid colors are supplied in re-usable ROWASOL COLOR CUBE containers for clean handling.

This innovative principle makes it possible to adjust the color whilst the process is running and change to

production of a completely different color in a matter of seconds. The three colors on exhibition red, yellow and blue cover a wide spectrum of colors according to the RGB principle.

To complete the process, an inline color measurement directly in the polymer melt with an UV-VIS spectrophotometer from ColVisTec AG, Berlin, follows shortly after the color addition near the extrusion die. This enables real-time monitoring of the color change and continuous quality assurance. ■



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After the compounding the re-granulate is processed on a PX 320 injection molding machine from KraussMaffei into an A-pillar support for automotive applications. This entire process illustrates in a tangible way how the „Circular Economy“ can be perfected using modern methods.

TRACEL® NUCLEATING AGENTS IN PHYSICAL FOAMING PROCESSES

TRACEL® INC nucleating agents can be supplied for various applications as e.g. packaging films and trays, cap seals, profiles, sheets, cable insulations and injection molded parts.

Tramaco's TRACEL® chemical foaming agents are widely used in the production of foamed polymer and rubber products in continuous and discontinuous production processes. A chemical reaction is initiated



by (heat) energy supplied during the processing, which leads to a thermal decomposition of the foaming agent and the release of gaseous products such as nitrogen (by exothermic foaming agents) and carbon dioxide

(by endothermic foaming agents). The resulting gases than can expand the polymer and thereby create a cellular structure.

Many thermoplastic foams are not expanded by the decomposition of a chemical foaming agent but through the expansion of a physical foaming agent injected under pressure. In general this also may be nitrogen or carbon dioxide as in chemical foaming, often other gases as e.g. butane or pentane are used. Physical foaming processes are applied both for extrusion and injection moulding. Thus e.g. very light foams for thermal insulation, electrical isolation materials or packaging applications can be produced. Whereas chemical foaming agents are self-nucleating, physical foaming agents require the addition of a nucleating agent to achieve a fine and regular cell structure.

While passive nucleating agents as talc only serve as heterogeneous nuclei for the cell formation in the

melt, active nucleating agents like the TRACEL®-types offer an extra impact by the (active) formation of a gas. In this way the foam properties can be improved, while the dosing – in comparison to a nucleation based on talc – can be reduced. ■

Generally, foams nucleated with TRACEL® have better mechanical properties than foams made just with passive nucleating agents. Actively nucleated foams are also easier to reprocess, whereas passive nucleating agents can cause adverse effects like plate-out in recycling. ■

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MISSION ACCOMPLISHED! ROWA TEAM BRAVES THE TEMPERATURES

Once again, a motivated team of colleagues took part in the 20th anniversary of the Hamburg Stadtpark Triathlon on May 26, 2019, with each one crossing the finish line!

The delighted ROWA GROUP employees proudly posed for the camera wearing their medals. Together with almost 1,000 other participants, they completed a 500 metre swim in the Stadtparksee, 20 kilometres

all three disciplines they all proved that they enjoyed the challenge, the endurance and the team spirit. Our congratulations to our colleagues for their sporting achievements! ■



ROWA GROUP

cycling and a five-kilometre run during a day of particularly unpleasant weather in Northern Germany. The rather cold 15 °C (59 °F) water temperature, which led to the swimmers choosing to wear wetsuits, did not deter these sporting aces from the ROWA GROUP. In



TRADE FAIRS 2019

The ROWA GROUP at international trade fairs



K 2019
Hall 8A, Booth B28
ROWA GROUP
Düsseldorf
16. to 23. October 2019



PLASTEURASIA
Hall 6, Booth 627
ROMIRA
Istanbul
04. to 07. December 2019

Preview 2020



PIAE EUROPE 2020
ROMIRA
Mannheim
25. to 26. March 2020

Why not take these opportunities to meet the ROWA GROUP at trade fairs this year and get the latest news on our products.

ROWA MASTERBATCH

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