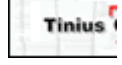
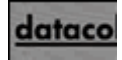


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Technology

Online Color Matching Service Launches

A new subscription-based online service that permits formulating custom colors on the Internet went "live" last month. It is aimed at smaller companies that don't have their own color-matching system and color data can also be used by larger firms that want a uniform color-matching method across global locations. First announced late last year, matchmycolor.com is a new service from SpecialChem, the French operator of plastics additives information website, www.specialchem.com. (For an earlier report, visit <http://www.plasticstechnology.com/articles/200503cu1.html>.) SpecialChem's partners in its new service include pigment suppliers Ciba Specialty Chemicals and DuPont Titanium Technologies, color-measurement systems X-Rite, and French color-trends consultant Nelli RodiTrendLab.

Available at www.matchmycolor.com, the new service is initially aimed at color matching in PVC, HDPE, and ABS, with other resins to come later this year. Users can select colors from a compendium of color catalogs or they can match an existing color. Users upload colorimetric data from a spectrophotometer or a variety of standard models is supported) or input the data by hand. One can select a colorant set according to application requirements (such as heat and weather resistance, food contact, etc.), along with the base color and black and white pigments. For translucent colors, one specifies the layer thickness and whether to match over black or white. The uploaded target color will then appear on-screen. Users can also input their own ingredient costs, if desired.

Then one clicks "Calculate" and a color formula is computed using Ciba's proprietary Colibri color-matching software and a library of colorants from Ciba, DuPont, and others. The user gets an on-screen report of the best matches, including recipe details, colorimetric data (including curves), a visual representation of the formulation cost, specs on closeness to the original match, and metamerism under three different illuminants. The calculated color can be refined or corrected, and the final results can be exported to an Excel spreadsheet. The software leads the user through the process step by step. Users can save their results in a private work folder. Finally, they can order sample color chips, if desired. A similar series of steps is used for a Color Feasibility study to determine if a desired color can be matched for a particular application.

[Ciba Specialty Chemicals Corp](#)
[DuPont Titanium Technologies](#)
[SpecialChem](#)
[X-Rite](#)

3D Blow Different Parts From One Parison Die

A new horizontal 3D blow molder produces two different parts in two molds from one parison die. The compact station model K3D HP from the German parent of Kautex Inc., North Branch, N.J., has a clamp that opens and closes vertically. Different moldings with different lengths and weights are produced from a single parison of a given diameter, typically 1-3 in. A parison is extruded and placed robotically in the lower half of the mold. The clamp closes and the part is blown. While the part is cooling, another parison of a different length is

but the same diameter, is extruded and placed in the lower half of the second mold. When the clamp of first part remains in the top half of the mold, the empty mold half slides over, and the part is dropped on conveyor. The second mold half is now in place for clamping and blowing. The machine typically produces ducts 3 ft long. Tier 1 automotive supplier Cornaglia S.A. in Beinasco, Italy, recently installed a K3D HP to produce ducts for Fiat. The ducts have the same diameter but different lengths and weights. The air duct made in the station has a gross weight of 242 g and a parison length of about 570 mm while the other parison is 11 ft long and weighs 477 g. The ducts are produced via sequential coextrusion using polypropylene and a... (908) 253-6006 * PTDirect. 883UB

[Kautex Inc.](#)

New Test Method Assesses Bottle Barrier Faster

SIG Corpoplast in Germany (U.S. office in North Branch, N.J.) has developed a faster test method to measure barrier performance of internal coatings for PET bottles. The new barrier tester provides a measurement in 20 min. vs. the typical 4 to 14 days with traditional methods. Bottles are exposed to a conditioned environment at 23 C for 60 min. The inside of the bottle is flushed with dry air, and a sensor, which seals the bottle at the same time, subsequently measures the gradual increase in water vapor inside the bottle. After about 20 min there is a linear increase in humidity. The increase in water vapor is measured for another 100 sec to determine the barrier coating.

The measurements are said to be reproducible with the widely used Mocon test, an industry benchmark for barrier coatings. The quick test method is still in development but SIG Corpoplast is using it to determine barrier performance of its plasma coating system for PET bottles, called Plasmax.

[SIG Corpoplast](#)

PET Wine Bottle Is An Airline First

A New Zealand PET bottle maker has developed what it says is the airline industry's first PET wine bottle with a shelf life of 12 months. The 187-cc bottle, developed by Linkplas in Auckland for Montana Wines, weighs 135 g, vs. 154 g for the glass version. Air New Zealand achieves weight savings of more than 2 tons a day on flights to and from Australia. Other airlines are expected to use the PET bottle later this year, according to Morrison, Linkplas managing director.

The stretch-blown bottle was produced on an Aoki single-station machine (sold here by Aoki La America, Inc., Elk Grove Village, Ill.). The bottle shape is a modified version of the glass bottle and can be filled on standard filling lines. It is considerably heavier than similar-size PET bottles in order to maintain a glass appearance and withstand 150-kg topload pressure when the aluminum cap is fitted. In addition, a minimum wall thickness is necessary to provide adequate barrier. Morrison declined to disclose the barrier technology but said the monolayer bottle was manufactured utilizing a proprietary processing technique that optimizes the barrier of PET. Linkplas: +64 9-444-3691, www.linkplas.com

[Aoki Laboratory America, Inc.](#)

Biggest Conical Twin-Screw for Wood Composites

What is said to be the world's largest counter-rotating, conical twin-screw extruder for wood-plastic composites was shipped last year by Cincinnati Milacron in Batavia, Ohio, to Hughes Processing in La Mirada, Calif. The model TC96 extruder, with screw diam. of 202 mm at the large end, tapering to 96 mm and 30:1 nominal length, is double-vented for high outputs with wood fiber. It runs wood-filled ABS, ASA, PP, HDPE, and PS at over 2600 lb/hr and wood-filled PVC at over 2600 lb/hr. Previously, the highest output of wood composite from a conical twin-screw was 1700 to 2000 lb/hr. With the new machine, Hughes increased its wood content from the maximum to 30%. Milacron says the TC96 can process up to 70% wood.

[Cincinnati Extrusion Inc.](#)

PE Sheet Contains 70% Recycled Tire Rubber

A sheet extruder has found a route to lower material cost by compounding up to 70% crumb rubber from tires into polyethylene or polypropylene. Carolina Materials LLC in Belmont, N.C. (previously called Tex and located in Romulus, Mich.), uses patented technology to encapsulate the crumb rubber on a counter twin-screw from Sino-Alloy Machinery Inc. in Taiwan before extruding it into sheet on a single-screw from Cincinnati Milacron, Batavia, Ohio. Carolina Materials makes some sheet from pellets and some is directly compounded in-line. Commercial applications include bases for satellite dishes with up to 70% rubber content with up to 50% rubber. Carolina Materials is developing non-skid mats and will also market its 70% rubber PE in pellet form ("grade 1370"). Tel: (704) 825-1033 * www.carolinamaterials.net

[Carolina Materials LLC](#)

PP Impact Copolymer Is Clear, Stiff & Tough

A new polypropylene impact copolymer for injection molding frozen-food packaging and freezer-to-microwave containers as well as housewares and toys, boasts an excellent balance of high flow, clarity, and gloss plus high and low-temperature toughness. Clyrell EC140R is the latest addition to a new line of heterophasic impact copolymers produced with the Catalloy process by Basell Polyolefins, Elkton, Md. Due to its outstanding properties, Basell says, products can be transparent, tinted or molded in solid or bright colors with high gloss, and the added benefit of minimal stress whitening. The 30-MFR resin has a tensile modulus of 123,250 psi and Charpy impact at -20 C of 4 KJ/m². A 0.4-mm-thick plaque shows 9% haze and 98% light transmissivity.

[Basell North America Inc.](#)

Non-Phthalate Plasticizer Based on Castor Oil

A new food-grade plasticizer for flexible PVC has been developed as an alternative to phthalates. Grin N-Safe from Denmark's Danisco, is made from fully hardened castor oil and acetic acid. It is available from Compound Solutions, Inc., Twinsburg, Ohio. The product has been approved by the EU for food-contact applications and is expected to find future uses in toys and medical equipment. U.S. FDA approval for food contact is expected this year. Tel: (330) 425-3457 * www.danisco.com

[Compound Solutions, Inc.](#)

New Type of Nano-Filler

Barium sulfate, commonly used as a radio-opaque filler in medical plastics, has now been precipitated into smaller sized particles of 10 to 50 microns by Solvay Barium Strontium GmbH in Hannover, Germany. Solvay offers surface treatments that improve both dispersion and resin coupling.

Not only do the spherical nano-particles enable filled resins to be clear, but they enhance some mechanical properties better than conventional fillers. For example, just 2.5% of Solvay's Blanc Fixe Nanofine in epoxy increases elongation at break by 82% while impact strength rises 73% and tensile strength increases 19%. Tensile and flexural moduli are unaffected, and flexural strength declines 7%.

Solvay researchers recommend a maximum of 5% loading in epoxy. It has also been tried in polyurethane and cast acrylic. The filler has a density of around 4 g/cc. Tel: +49 511857 0 * www.solvay-bariumstrontium.com

Affordable Mechanical Testing Package

A complete, "out-of-the-box" mechanical testing package at an affordable price is a new offering from IRI Corp., Norwood, Mass. The Model 3345 QC Package includes a 5-kN (1000-lbf) tension and compression

machine, Instron's newest TouchPanel controller, 5-kN tensile wedge grips, and two compression plate intuitive TouchPanel screens are said to be easy to learn and use, and they eliminate the need for a PC data. The 3345 has Quick Test and Main test modes and four result displays: Pass/Fail, Results, Status Graph. A USB interface sends results to flash memory or a printer. Package price is \$17,400.

[Instron Corp.](#)

Topcoat Adds Slip to LSR Medical Parts

A new topcoat for injection molded liquid silicone elastomers is said to lower the coefficient of friction (COF) on molded medical parts such as catheters, prosthetics, and valves for reduced sticking and greater wear. Developed by GE Advanced Materials, Silicones, Waterford, N.Y. Its LSR Top Coat lowers the COF by 50% which also helps prevent adhesion of dust particles. The topcoat can be applied easily by dipping, spraying or brushing prior to curing in an air-circulating oven for 10 to 30 min at 100 to 180 C.

[GE Silicones](#)

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