Arkema at K2013 – Düsseldorf - Germany
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Stand C57 / Hall 6

K2013: Arkema showcases its latest sustainable innovations in its specialty polymers and additives ranges

A rewarded Innovative Chemistry

Arkema places innovation at the heart of its development strategy. The consecration of its intense R&D policy, for the third consecutive year Arkema ranks among the “Top 100 innovative organizations and companies” in the world, as compiled by Thomson Reuters.

This presence in an internationally recognized classification rewards the innovation efforts of the Group which holds nearly 5,500 patents and files no fewer than 150 priority research patents every year around the world. Mostly focused on sustainable development, the technological advances yielded by Arkema’s R&D in specialty polymers make the Group one of most innovative chemicals manufacturers in the world.

K2013 is the opportunity for Arkema to showcase its latest significant innovations in its fluoropolymers, high-performance polyamides, polyolefins, organic peroxides, and plastic additives ranges.

Powering plastics performances for a sustainable world

Developing lightweight materials to replace metal and reduce oil consumption in transport, producing technical polymers from renewable raw materials, or improving the efficiency of key components to contribute to the development of new energies, are three of R&D Arkema’s five priority areas.

Its biosourced technical plastics (Rilsan® 11, Pebax® Rnew, Altuglas® Rnew), ultra high performance polymers (Rilsan® HT, Kynar®, Altuglas® Composite, Altuglas® ShieldUp), plastic additives (Durastrength®, Clearstrength®, Plastistrength®) as well as tie and sealing layer materials (Evatane®, Lotryl®, Orevac®, Lotader®, Evasin®) are helping meet these major sustainability challenges. The Group has turned eco-technologies into reality with increasingly efficient materials, the key to the competitiveness of its downstream markets.

Arkema offers the plastics industry an extensive range of high performance materials for the oil&gas, automotive, aerospace, packaging and consumer goods applications.
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- Chemicals and water filters  
- Clothing  
- Battery separators |
| ♦ New Kynar® PVDF foam solutions: combining lightweight with PVDF high performance properties | - Cable and wire jacketing  
- Insulation parts for construction and aircraft |
| ♦ New Kynar® PVDF “E” range: designed for potable water applications | - Fittings for water pipes |
| **High-performance polyamides: Arkema consolidates its leadership** | |
| ♦ A unique polyamide range (PA 10, 11 and 12) offering incomparable value to the market | - Fuel lines (automotive)  
- Air brake systems (trucks)  
- Cable and pipe (oil & gas extraction) |
| ♦ Pebax®: the highest performance among TPEs | - Consumer goods  
- Ski boots |
| ♦ Rilsan® Clear: unique transparency and glossy finish | - Optical (glasses)  
- Electronics  
- Medical devices |
| ♦ Engine Cooling and SCR (Selective Catalytic Reduction) systems: successful new metal & rubber replacement with Rilsan® HT | - Under-the-hood flexible tubing applications (automotive) |
| **Polyolefins: Arkema, a unique supplier of tie and sealing layers and barrier materials** | |
| ♦ Arkema expands its range of Ethylene acrylate copolymers with Lotryl® with a modified structure | - Flexible packaging  
- Impact modifiers for a broad range of plastics |
| ♦ Lotryl® Bestpeel 2012: optimised clarity and temperature resistance | - Sealing layer for all types of packaging |
| ♦ Evasin® EVOH: very high barrier properties to gas | - Multilayer food packaging  
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- Heating pipes |
| ♦ Orevac® OE825: new concentrate with high power of adhesion | - Multilayer packaging |
| ♦ Lotader® IM terpolymer impact modifiers: improving resistance of polyamides | - Impact modifiers for polyamides (automotive parts) |
| ♦ Orevac® 18410 in tie layer for oil and natural gas piping systems | - Tie layer for Oil & Gas pipes |
| ♦ Orevac® 18340 to enable excellent processability of HFFR compounds for cables and wires | - Processability agent for HFFR compounds (cables and wires) |
| ♦ Evatane™ 28-25PV: meeting the most stringent requirements in photovoltaic solar panel encapsulation | - Encapsulation in photovoltaic panels |
Arkema expands its range of processing aids and impact modifiers with new high performance grades and launches a new odourless organic peroxide

- Two new Impact Modifiers for PVC
- Four new Processing Aids for PVC
- Two new core/shell modifiers to boost the impact properties of Engineering Polymer compounds
- Luperox® FreeO makes malodorous synthetic rubber soles a thing of the past

Altuglas® International, the PMMA expert brand brings creativity, innovation and sustainable solutions

Altuglas®, the LED specialist
- New resin range for LED lighting: Altuglas® Diffuse
- New generation of coloured Altuglas® acrylic sheet optimised for LED signs: Altuglas® LED system and Altuglas® Night & Day
- New coloured Altuglas® acrylic blocks optimised for LED signs: Altuglas® Blocks LED system

Altuglas®, a weight “optimiser” in transport
- Altuglas® Composite, the first thermoplastic resin that processes like thermosets
- A fully transparent limousine car in Altuglas® ShiedUp
- An ultra-resistant boat cockpit window made of Altuglas® ShieldUp
- An ultra-resistant aircraft cockpit window in Altuglas®

Biopolymers, a sustainable recognised innovation
- Altuglas® Rnew resins allow major brands to meet their sustainability targets

Bringing added value to Medical devices
- New Altuglas® Luctor medical grade acrylic alloy designed to reduce processing costs
- New colours introduced in autumn 2013 for design specialists

A global chemical company and France’s leading chemicals producer, Arkema is building the future of the chemical industry every day. Deploying a responsible, innovation-based approach, we produce state-of-the-art specialty chemicals that provide customers with practical solutions to such challenges as climate change, access to drinking water, the future of energy, fossil fuel preservation and the need for lighter materials. With operations in more than 40 countries, some 14,000 employees and 10 research centers, Arkema generates annual revenue of €6.4 billion, and holds leadership positions in all its markets with a portfolio of internationally recognized brands.

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Arkema is a leading producer of PVDF (polyvinylidene fluoride) fluoropolymers. Its Kynar® PVDF products are world-renowned for their high chemical, abrasion, UV and thermal resistance. They can safely handle aggressive chemicals such as acids, halogens and solvents in applications up to 150°C. Their excellent sunlight resistance makes them outstanding candidates for outdoor applications. Arkema recently introduced several new grades: a new grade to produce ultra-resistant filaments fibers, a unique foam masterbatch to work with any Kynar® resins - as well as specific grades for production of light foam for aeronautic applications -, and grades developed for use in drinking water fitting and pipes.

♦ New high fluidity Kynar®705 for PVDF for all types of filament applications

Arkema has developed a new PVDF homopolymer resin called Kynar® 705, designed to meet the high fluidity requirements of multifilament extrusion while providing high tenacity, high whiteness, and low overall gel content.

Kynar® 705 can be spun into mono- and multifilament fibres to produce ultra-resistant woven textiles for water and chemical applications but also for sports & leisure clothing. Other potential applications for Kynar® 705 woven and nonwoven textiles include air filtration, battery separators, and chemical clean-up.

Due to the low viscosity of Kynar® 705, this grade can also be useful in the production of colour masterbatches, the injection moulding of ultra-thin parts, and as a rheology modifier for fluoropolymers.

♦ New Kynar® PVDF foam solutions: combine lightweight with PVDF high performance properties

The success of the PVDF foaming technology for wire and cable jacketing relies on the ability to achieve low density while maintaining good PVDF performance.

Arkema offers enhanced performance solutions to its customers for Kynar® and Kynar Flex® PVDF resins by supplying a unique foaming technology based on a novel foam concentrate. This foam masterbatch has been specifically designed to work with any Kynar® grade resins and allows a 50% density reduction of PVDF resins.

Targeted applications include plenum wire, cable and fibre optics jacketing, tube, pipe, sheet, film and rod applications, fireproof insulation and interior finishes for aircraft, and insulation parts for construction (pipes, windows, etc.).

Foamed samples utilising this new masterbatch show improved properties such as flexibility, strippability, ease of cutting, thermal and acoustic insulation, reduced shrink-back in fibre, and compressibility. This development results in a closed cell foam structure that maintains the barrier, chemical, and temperature resistance of Kynar® resins.

Meanwhile Arkema has collaborated with Zotefoam plc, a leading manufacturer of closed-cell crosslinked foams, which has developed ZOTEK® F, a unique ultra-light Kynar® foam for several markets such as the aviation market segment. The lightweight ZOTEK® F foam offers a significant weight reduction, of 95% compared to PVDF resins, and of up to 50% compared to traditional materials such as silicone used in many aviation applications. In one recent example, an OEM aircraft utilising ZOTEK® F components achieved an estimated weight reduction of an impressive 120kgs.
**New Kynar® PVDF “E” range: designed for potable water applications**

Arkema offers a specific product range designed for direct potable water contact. These Kynar® PVDF resins have been approved by KTW (German agency for water and gas certification) for water contact.

One of the main challenges for the water transport industry over the coming years lies in selecting the right material able to withstand years of service (longer than metal) without releasing any traces of contaminant or process additives into the water.

This “E” Kynar® range is characterized by the very good processability and mechanical performances of its grades (impact properties superior to other equivalent PVDF on the market, preserved until -10°C) while meeting the requirements for water contact. One of the main advantages of Kynar® is that no plasticiser is used in its synthesis, which drastically lowers the level of migration of chemical substances and thus making it one of the best plastic to be used. Moreover Kynar® avoids the formation of a biofilm on the surface of the fittings or pipes.

This product range contains grades which can be processed by injection moulding to produce water fittings, as well as grades which can be produced by extrusion to produce water pipes.
Many of the products of the Specialty Polyamides activity are ranked among the market leaders. Its success is based on strong brands, high-performance products, and innovative and dynamic R&D.

**A unique polyamide range offering incomparable value to the market**

Arkema is the only chemicals manufacturer to offer expertise spanning over 60 years in the chemistry of castor oil, the raw material for its Rilsan® polyamide 11. This position was bolstered in 2012 by the acquisition of Chinese companies Casda, the world leader in sebacic acid derived from castor oil, and Hipro Polymers, which produces polyamides also from castor oil (Hiprolon® PA6.10, PA6.12, PA10.10, PA10.12).

Arkema is proud to confirm that it has successfully increased capacity at Hipro polymers, tripling PA6.10, PA6.12, PA10.10 and PA10.12 capacities, therefore unquestionably reinforcing its long-chain polyamide manufacturing leadership.

The recent purchase of a stake in Ihsedu Agrochem, a subsidiary of Jayant Agro in India which specialises in the production of castor oil, builds on its unique integration which secures feedstock over the long term for the above biobased products from a reliable and competitive source.

Furthermore, Arkema has recently enhanced its product range with Rilsan® T, a new and innovative PA10.10 product range processed from castor oil, thereby broadening its already unrivalled product offering, from flexible and rigid long-chain polyamides (PA6.10, PA6.12, PA10.10, PA10.12, PA12 and PA11), Plamatid® hotmelt adhesives (CoPA), polyphthalamide (PPA) based materials (Rilsan® HT), high-rigidity materials (Rilsan® XD) and transparent polyamides (Rilsan® Clear) to thermoplastic elastomers (Pebax®).

Some of these are unique products offering incomparable value to the market: Rilsan®, the most high-performance long-chain polyamide, 100% derived from castor oil, Rilsan® HT, the first and unique flexible PPA, partially biobased, Rilsan® T, the only polyamide to rank between PA6.10, PA6.12 and PA10.12, PA12, PA11 consisting of up to 100% renewable carbon.

**Pebax® offers the highest performance among TPEs**

Pebax®, Pebax® Rnew, the first biobased thermoplastic elastomer (TPE) that does not compromise on high performance, and Pebax® Clear, its transparent variant, have been the world reference in sports and healthcare applications for many years. Pebax® offers the highest and widest range of performances among TPEs, recently enhanced by new grades with improved features that allow the production of very thin parts while maintaining extreme high impact and mechanical resistance.

Pebax® is also widely used in industrial applications, ensuring higher performance and better processability than other TPEs.
Rilsan® Clear: unique transparency and glossy finish

Rilsan® Clear, which includes a range of biobased grades, is a high performance transparent polyamide, widely used in Electronic & Electric and Optical applications. Its main features are excellent transparency and glossy finish, flexibility, light weight and high chemical resistance, all providing a BPA-free solution for applications where this is a critical issue. Recently MED grades were introduced for the healthcare market.

Engine Cooling and SCR (Selective Catalytic Reduction): successful new metal & rubber replacement with Rilsan® HT

Rilsan® HT, the first flexible thermoplastic from the polyphthalamide (PPA) family available on the market, combines high temperature resistance with flexibility. These characteristics make it aptly suited to replace metal and rubber in under-the-hood tubing applications. Six times lighter than steel and three times lighter than aluminium, it therefore helps reduce the weight of vehicles, their fuel consumption and their overall emission output (CO2, CO, NOx, HC) – at reduced cost compared to classic metal tubing or rubber hose assemblies.

Rilsan® HT is already being used successfully to replace metal in flexible tubing applications such as oil transport, blow-by, and control of exhaust gas recirculation.

Thanks to its excellent hydrolysis resistance, Rilsan® HT is also fully adapted to the most challenging applications for polyamides (aqueous medium management) in the engine: Cooling and Selective Catalytic Reduction (SCR) circuits, where the material needs to withstand attack from hydrolysis.

Cooling lines, until now, have been limited to the use of metal and rubber due to the lack of flexible thermoplastic materials with sufficient hydrolysis resistance at high temperatures. Rilsan® HT has already been chosen successfully for engine cooling lines, providing significant weight reduction versus metal-rubber assemblies.

Selective catalytic reduction becomes a crucial part of diesel engines and therefore Adblue® tubing for SCR in the context of the new Euro 6 emission regulation which will come into force next year. The combination of resistance to Adblue® aqueous solution with thermal ageing tubing when close to the engine, is a challenge that Rilsan® HT has shown it can meet.

For these applications, when temperature demands are extreme, Arkema has developed a new Rilsan® HT grade specially designed for excellent hydrolysis stability at even higher temperatures.

Rilsan® HT allows the cost-effective manufacturing of lightweight tubing for the most challenging under-the-hood tubing applications.
Applications/Markets
- Impact modifiers
- Tie layer Adhesives for all types of packaging
- Automotive fuel tanks
- Heating pipes
- Impact modifiers for polyamides (automotive parts)
- Tie layer for Oil & Gas pipes
- Processability agent for HFFR compounds (cables and wires)

Arkema offers its customers the broadest range of specialty polyolefin solutions for high performance packaging and industrial applications requiring high barrier properties. Arkema has become the one-stop supplier offering the full range of tie layers (Orevac® PE, Orevac® PP and Lotader®), sealing layers (Lotryl® BestPeel and Evatane®) and ethylene vinyl alcohol (Evasin® EVOH) barrier materials for packaging and industrial applications requiring oxygen barrier properties. The Group constantly expands its range with new innovative and more efficient grades.

Arkema extends its Ethylene acrylate copolymer range with Lotryl® with modified structure

Building on its experience in high pressure tubular and autoclave technologies, Arkema has developed a Lotryl® grade with a specific molecular structure. Thanks to their structure, these new Lotryl® grades offer excellent compatibility with polar and non-polar matrices. They represent an innovative solution for flexible packaging, masterbatches, or the impact modification of a wide range of matrices.

They bring major improvement in the dispersion of fillers, i.e. more homogeneous, in masterbatches. For flexible packaging, Lotryl® imparts outstanding adhesion on a large number of supports and is very easy to process.

Lotryl® Bestpeel 2012: optimised clarity and temperature resistance
Lotryl® Bestpeel is a “ready to use” tie resin specially designed for lidding applications. This adhesive is particularly versatile. It can be sealed onto and peeled off miscellaneous substrates like APET, CPET, PP, PS and even PVC. Thanks to its fine-tuned formula, it features good clarity, which helps enhance the packaged goods or food products.
Lotryl® Bestpeel can be processed by several conventional co-extrusion processes like extrusion coating, blown and cast co-extrusion. Lotryl® Bestpeel is based on Ethylene Methyl Acrylate copolymer, hence it is thermally stable and can be extruded across a wide range of temperatures, from 210°C to 310°C. It complies with EU regulations and will soon comply with FDA regulations.

Evasin® EVOH: very high barrier properties to gas
Thanks to its partnership with Chang Chun Petrochemicals Co Ltd and the extension of its Orevac® tie layer resin ranges, Arkema recently enhanced its specialty polyolefins range with Evasin® EVOH (Ethylene vinyl alcohol). This specialty Evasin® EVOH displays very high barrier properties to gas (oxygen, carbon dioxide), aromatics and hydrocarbons. These characteristics, together with excellent transparency and good processability, have made it the reference product among barrier polymers, in particular for the multilayer food packaging, automotive fuel tank, and heating pipe markets.
**Orevac® OE825: new concentrate with high power of adhesion**

In order to meet the needs of customers for higher performance tie layers, Arkema recently introduced Orevac® OE825, a new concentrate with a high power of adhesion. Orevac® concentrate offers customers the flexibility to adjust the cost/performance/processability of their tie layers to each of their packaging applications.

The Orevac® product range offers solutions for all multilayer packaging technologies as well as for all plastic resins used by our customers, including PE, PP, PS, PA, EVOH and Polysters. Orevac® resins are available in “ready to use” grades or concentrate grades.

**Lotader® terpolymer impact modifiers: improving the resistance of polyamides**

To reduce the fuel consumption of new car models, carmakers seek to replace metal parts with polymers, lighter than steel or aluminium.

Through its Lotader® MAH product line, Arkema participates in the replacement of metal with plastic materials, such as polyamides. The Lotader® ethylene acrylate terpolymer product line is used for the impact modification of polyamide 6 (PA6) and polyamide 6,6 (PA6,6). This range has been enhanced with a new family, called Orevac® IM, that further improves the impact resistance of the final polyamide compounds. This new family has retained the same processability as the existing grades, Lotader 3210, Lotader 4700 and Lotader 4720.

Lotader® resins are also widely used for the recycling of polyesters and polyamides resins.

**Orevac® 18410 in tie layer for oil and natural gas piping systems**

The Orevac® tie layer product line is regularly used in major pipeline projects for the transportation of crude oil and natural gas in Europe, Russia and the Middle East.

Orevac® 18410 is the newest high performance HDPE-based tie layer for piping systems. It is used as a thinner layer than previous grades, with higher temperature resistance in usage. Arkema is offering to the market a high performance package combining its Orevac® adhesive combined with bi-Modal HDPE 4206B Top coat produced by Total Petrochemicals.

**Orevac® 18340 enables excellent processability of HFFR compounds for cables and wires**

Orevac® is also used by many major cable and wire producers as a coupling agent for crosslinked Halogen-Free Flame Retardant (HFFR) compounds. These materials are the alternatives to PVC as they do not contain halogenated compounds and release very low smoke and low acid in case of a fire. Arkema has developed a new grade, Orevac®18340, with optimised reactivity and fluidity to enable excellent processability of the HFFR compounds.

Orevac®18340 high performance PE coupling agent is recommended for polyethylene based crosslinked HFFR compounds where high mechanical properties as well as good chemical and abrasion resistance are required at high temperature. This new addition to the range is complementary to high density PE based Orevac®18507 and PP based Orevac® CA100, and enables Arkema to offer one of the broadest coupling agent portfolios for HFFR applications.
**Evatane® 28-25PV: meeting the most stringent requirements in photovoltaic solar panel encapsulation**

Arkema, the European leader in HC EVA (High Content Ethylene – Vinyl Acetate copolymers), has developed Evatane® 28-25PV, an HC EVA designed to meet the most stringent requirements in photovoltaic solar panel encapsulation.

Evatane® 28-25PV features unique EVA pellets with well-balanced high performance properties. Its improved high clarity ensures high panel efficiency, and its superior electrical insulation increases photovoltaic module durability and efficiency (lower PID sensitivity). Evatane® 28-25PV maintains unmatched excellent crosslinking ability and superior processability thanks to Arkema’s proprietary Evatane® production process that delivers high productivity for its customers.
Markets/applications
- PVC window profiles
- PVC windows sills
- PVC wall panels and siding
- ABS/PC applications in construction, automotive
- Organic peroxide for EVA soles in sports shoes applications (automotive)

Arkema expands its range of processing aids and impact modifiers with new high performance grades & launches a new odourless organic peroxide

Arkema is one of the main global producers of organic peroxides for the production of commodity plastics such as polystyrene, PVC and acrylcs. Its expertise also extends to additives for PVC to improve the processing of PVC resins and their properties (impact modifiers), catalysts for synthesis in fine chemicals, polyester resins and specialty epoxides.

♦ Two new Impact Modifiers for PVC

With Durastrength® D362, Arkema introduces a new patented, unmatched cost-efficient Composite Acrylic Impact Modifier solution for PVC window profiles and siding. The innovative technology of Durastrength® D362 helps achieve normal impact and gloss properties at an extremely attractive cost.

Durastrength® 382, based on Arkema’s high rubber technology, provides a unique combination of very high impact resistance, high surface gloss, and strong plate-out resistance for PVC window profiles, thereby helping fulfill the most demanding European standard requirements.

♦ Four new Processing aids for PVC

Plastistrength® 564 is the latest (meth)acrylic processing aid for rigid PVC extrusion. It is based on our unique and patented technology. Plastistrength® 564 helps control PVC fusion and melt elasticity, while ensuring good filler dispersion and in a very cost-attractive way. It is used successfully for window sills, wall panels and siding.

Plastistrength® 559 is a new (meth)acrylic processing aid for rigid PVC. It has improved powder properties, and is specially designed to provide optimised fusion and melt elasticity to PVC sheets and profiles with Calcium/Zinc formulations.

Plastistrength® 560 and Plastistrength® 566 have been designed to perfectly control PVC foaming extrusion processes by helping generate low density articles with very fine and regular cellular microstructures and a nice surface finish. Both processing aids are used at a lower dosage and allow significantly lower production scrap rates. Plastistrength® 560 is particularly recommended for PVC foam sheets, whereas Plastistrength® 566 is dedicated to PVC foam profiles and foam core pipes.

♦ Two new core/shell modifiers to boost the impact properties of Engineering Polymer compounds

Clearstrength® E950 is a high performance Methacrylate-Butadiene-Styrene (MBS) core-shell impact modifier. Specifically designed to strengthen modified PC such as glass-reinforced PC or PC/polyester blends, it is specially used for very low temperature applications as it can maintain good ductile impact properties at temperatures below -40°C.

Durastrength® 480 is a novel acrylic impact modifier that can be used in PC and PC/ABS blends. It improves impact strength at low temperatures, and, thanks to its outstanding stability, impact resistance as well as aesthetic performance will be maintained upon ageing. Thanks to its specific design, Durastrength® 480 maintains melt viscosity to facilitate the injection moulding process.
Luperox® FreeO makes malodorous synthetic rubber soles a thing of the past!

With Luperox® FreeO, Arkema offers footwear manufacturers an alternative to current technologies commonly used in the synthetic rubber crosslinking industry. Luperox® FreeO organic peroxide releases no malodorous or persistent VOCs (Volatile Organic Compounds).

Sports shoes and some outdoor shoe types with soles made of synthetic rubber, namely expanded EVA, are known for releasing a strong and persistent odor in footwear manufacturing plants as well as in retail outlets. This smell is due to the crosslinking agents extensively used today in the footwear industry releasing VOCs (Volatile Organic Compounds), in particular acetophenone which has a very strong and persistent odor, even in finished goods several months after manufacture.

In order to avoid this inconvenience, Arkema offers an odorless alternative, namely Luperox® FreeO organic peroxide characterized by low odor-free VOC levels. This product features outstanding crosslinking performance (typically 40% lower dosage than other crosslinking agents) and ease of use (available as solid « flakes », it is fully miscible with EVA). But above all, Luperox® FreeO releases only very small VOC amounts and, what's more, no unpleasant odor.

A number of world-renowned shoe brands have already successfully opted for Luperox® FreeO. Luperox® FreeO is a bis isopropyl benzene peroxide, for which Arkema has world-scale production capacities in Europe and the United States.
Applications/Markets
- Signage
- Lighting
- Transport (car and bus bodies)
- Automotive (windows and roofs)
- Sailing boat cockpit
- Aircraft cockpit
- Biopolymers
- Modern design
- Medical devices

Altuglas® International, the PMMA expert brand brings creativity, innovation and sustainable solutions

Altuglas®, the LED specialist

♦ A new resin range for LED lighting: Altuglas® Diffuse

Altuglas® Diffuse acrylic resins are materials with a unique light management characteristic. The light transmission is maximised while conversely affording the best hiding power possible. Altuglas® Diffuse is designed to provide LED luminaire OEM and optics suppliers with the best of both worlds i.e. excellent efficiency and ideal aesthetics.

Altuglas® Diffuse conceals the individual points of light while maintaining overall high transmission.

♦ Special Sign: a new generation of coloured Altuglas® acrylic sheet optimised for LEDs

Altuglas International recently launched its new generation of Altuglas® acrylic sheet optimised for LEDs (Light Emitting Diodes): Altuglas® LED system and Altuglas® Night & Day. The formulation of the acrylic glass is optimised for uniform and maximised light distribution associated with LEDs.

The result: coloured acrylic sheet with high light transmission which reduces energy consumption and the number of LEDs used by up to 20% compared to standard acrylic sheet. 14 standard colours are available and could also be offered in Corporate Identity Colours. The applications of this new generation acrylic sheet vary from sign, signage to architecture and design (interior and exterior).

♦ Special Sign: introduction of coloured Altuglas® acrylic blocks optimised for LEDs

Altuglas International launches in the autumn of 2013 its new generation of Altuglas® acrylic blocks optimised for LEDs (Light Emitting Diodes): Altuglas® Blocks LED system. 6 colours are available in addition to opal. Corporate Identity Colours can also be developed. Applications vary from signage to architecture and design (interior and exterior).
Altuglas®, a weight “optimiser” in transport

♦ Altuglas® Composite, the first thermoplastic resin that processes like thermosets

Altuglas® Composite is the first new thermoplastic resin which enables the manufacture of composite parts using the same equipment and processes as thermoset composites. The resulting composite parts exhibit mechanical properties similar to those of thermoset parts, but their thermoplastic nature brings the added advantages of thermoformability and recyclability. With this major innovation, Arkema and its partners have won a JEC Award in the “Thermoplastics” category.

Properties are similar to those of thermoset composites, but in addition this resin is also thermoformable, recyclable, weldable and styrene-free! The innovation is validated by a successful partnership with MVC, a leading Brazilian industrial company. The range of properties has been optimized through partnerships with additional industry leaders.

♦ A fully transparent limousine

Altuglas® is a partner of the film Mood Indigo showing in theatres in December 2013 around the world. This is the film adaptation of the eponymous book by French author Boris Vian published in 1947. With famous Director Michel Gondry, the film teems with futuristic and surreal ideas. Altuglas International brought its personal touch by providing nanostructured Altuglas® ShieldUp produced in Avold (57) for LimoVian, the fully transparent limousine.

“The Peugeot LimoVian” – fully transparent.

♦ An ultra-resistant boat cockpit window made of Altuglas®

The Arkema-Région Aquitaine multihull, a unique boat building project in Europe, benefits from major innovations developed by the Arkema Group, among them the Altuglas® ShieldUp nanostructured acrylic sheet. The cockpit window and the glazing shielding the two helms are made of Altuglas® ShieldUp, a nanostructured acrylic sheet developed by the subsidiary Altuglas International’s R&D.

Lalou Roucayrol, skipper of the Arkema Region Aquitaine – seated on the cockpit window in Altuglas® ShieldUp.

♦ An ultra-resistant aircraft cockpit window in Altuglas®

Altuglas International, a subsidiary of the Arkema Group, recently reintroduced Altuglas® II UVA and Altuglas® P55 acrylic sheets to the aerospace market. Both acrylic sheets are preshrunk and specially designed for use in a wide variety of aircraft components including military canopies, aircraft windshields, wing tip lights, instrument clusters, helicopter bubbles, aircraft side windows, and other transparent aerospace enclosures.
Biopolymers: a sustainable recognized innovation

♦ Altuglas® Rnew resins allow major brands to meet their sustainability targets

Altuglas International and NatureWorks, a leader in the bio-plastics market with its Ingeo™ biopolymers derived from plants, signed a global co-marketing agreement in 2012 for the supply of a range of newly formulated bio-based, high performance alloys based on polymethyl methacrylate and Ingeo™.

This unique range of resins affords customisable formulating latitude providing exceptional impact- and chemical-resistance properties. The products are designed for durable applications such as signage, lighting, consumer products, transportation, cosmetic packaging, and large and small appliances.

Altuglas International received the R&D magazine’s 2012 R&D100 Award for its Altuglas® Rnew. This award recognises the 100 most technologically significant products introduced into the marketplace over the past year.

Bringing added value to medical devices:
Altuglas® Luctor alloy

♦ New Altuglas® Luctor medical grade acrylic alloy designed to reduce processing costs

Altuglas International’s Luctor polymethyl methacrylate (PMMA) alloy flows twice as far as conventional transparent medical polymers in thin-wall injection mould cavities. With this new material, devices such as intravenous (IV) line components can be moulded with thinner wall sections, using multi-cavity moulds to reduce material and processing costs. Altuglas® Luctor PMMA is free of bisphenol A (BPA).

Altuglas® Luctor PMMA alloy is a chemically resistant, transparent polymer that offers a step-wise improvement in flow over traditional transparent polymers, such as PMMA and polycarbonate.

Introducing new colours in autumn 2013
for design specialists

♦ New colours are being introduced this autumn within the acrylic sheet portfolio

Altuglas® acrylic sheet introduce 16 new colours for Altuglas® Silverstar with a bright metallic glitter for POS, furnishing and fittings, and industrial applications.

Altuglas® acrylic sheet launches 9 new colours for Altuglas® Granite. Voluptuous to the touch, it is the perfect material to impart movement to your displays, store designs, offices, balconies, etc. The range comes in transparent colourless, pastel and deeper colours.