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ESTTA Tracking number: **ESTTA187957**

Filing date: **01/22/2008**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

Notice of Opposition

Notice is hereby given that the following party opposes registration of the indicated application.

Opposer Information

Name	Rockwood Clay Addivities GmbH
Granted to Date of previous extension	01/19/2008
Address	Stadtwaldstr 44 Moosburg, 85368 GERMANY

Attorney information	Eric B. Meyertons Meyertons, Hood, Kivlin, Kowert & Goetzel, P.C. P. O. Box 398 Austin, TX 78767-0398 UNITED STATES ebmpto@intprop.com Phone:512-853-8800

Applicant Information

Application No	77197379	Publication date	11/20/2007
Opposition Filing Date	01/22/2008	Opposition Period Ends	01/19/2008
Applicant	NanoMist Systems, LLC Suite 199 151 Osigian Blvd. Warner Robins, GA 31088 UNITED STATES		

Goods/Services Affected by Opposition

Class 001. All goods and services in the class are opposed, namely: Fire extinguishing compositions; Flame retarding compositions

Grounds for Opposition

Priority and likelihood of confusion	Trademark Act section 2(d)

Mark Cited by Opposer as Basis for Opposition

U.S. Registration No.	2616231	Application Date	08/12/1999
Registration Date	09/10/2002	Foreign Priority Date	NONE
Word Mark	NANOFIL		
Design Mark			
Description of	NONE		

Mark	
Goods/Services	Class 001. First use: CHEMICAL PRODUCTS FOR INDUSTRIAL USE, NAMELY ADDITIVES IN PIGMENT FORM USED IN THE MANUFACTURE OF PLASTICS

Attachments	75774492#TMSN.gif (1 page)(bytes) Notice of Opposition.pdf (14 pages)(767412 bytes)

Certificate of Service

The undersigned hereby certifies that a copy of this paper has been served upon all parties, at their address record by Overnight Courier on this date.

Signature	/Eric B. Meyertons/
Name	Eric B. Meyertons
Date	01/22/2008

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

In the Matter of the Trademark Application Serial No. 77/197,379 for
the mark "NANOFOG" filed by NanoMist Systems, LLC and Published in the Official Gazette
on November 20, 2007

ROCKWOOD CLAY ADDITIVES, GMBH Opposer	)	
v.	)	Opposition No. _____
NANOMIST SYSTEMS, LLC Applicant	)	

NOTICE OF OPPOSITION

Rockwood Clay Additives, GmbH, a Fed Rep Germany Corp. (Opposer), having a business address of Stadtwaldstr 44, Moosburg, 85368 GERMANY, believes that it will be damaged by registration of the mark NANOFOG that is the subject of application Serial No. 77/197,379, published in the *Official Gazette* on November 20, 2007, and therefore requests that registration to Applicant be refused.

As grounds in support of its opposition, Opposer asserts as follows:

1. Applicant filed an application on June 4, 2007, seeking to register NANOFOG ("Applicant's Mark") as a trademark in International Class 001 for the following goods: Fire extinguishing compositions; flame retarding compositions.

2. Applicant's application was filed as an intent-to-use application, and presumably Applicant has made no use yet of Applicant's Mark.

3. Among other things, Opposer purchased the NANOFIL mark, including the goodwill associated therewith, from SUD-CHEMIE AG. Opposer (by itself and through its

predecessor–in-interest, and through a related company, Southern Clay Products Inc.) has used the NANOFIL mark since well prior to Applicant's filing date. ***See*** **Exhibit A**, Registration No. 2,616,231.

4. Opposer's Mark is used in connection with, *e.g.*, flame retardant goods and/or additives that enhance flame retardence. ***See*** **Exhibit B**.

5. The filing date of Applicant's application is well after the first use of the NANOFIL mark by Opposer.

6. Opposer has dedicated time, money and effort in advertising, promoting and popularizing Opposer's Mark and in preserving the good will associated therewith. The trade and purchasing public has come to know Opposer's Mark and recognize that any goods so marked originate with Opposer.

7. The Patent and Trademark Office should refuse to register Applicant's Mark in light of Opposer's prior use date, and the potential for confusion between the respective marks.

8. The registration of Applicant's Mark will cause irreparable damage and injury to Opposer, such as by the loss of revenue and sales of its products or services marketed under Opposer's Mark. Opposer will suffer other potential injuries such as damage to its reputation.

9. If the Applicant is granted the registration herein opposed, it would thereby obtain at least a *prima facie* exclusive right to the use of Applicant's Mark in connection with the specified goods. Such registration would be a source of damage and injury to the Opposer, for the reasons set forth above.

WHEREFORE, Opposer prays that application Serial No. 77/197,379 be rejected, and that the mark therein sought for the goods therein specified in International Class 001 be denied and refused.

Respectfully submitted,

Eric B. Meyertons
Texas State Bar No. 14004400
MEYERTONS, HOOD, KIVLIN,
KOWERT & GOETZEL, P.C.
700 Lavaca, Suite 800
Austin, Texas 78701
(512) 853-8888 (telephone)
(512) 853-8801 (facsimile)

ATTORNEYS FOR ROCKWOOD CLAY ADDITIVES, GMBH

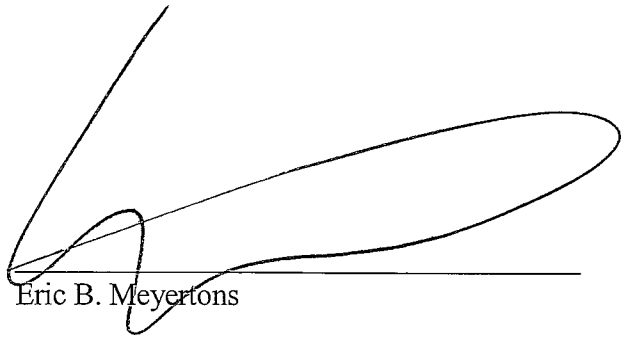
Date: January 22, 2008

CERTIFICATE OF SERVICE

This certifies that a true and correct copy of Opposer's *Notice of Opposition* has been sent by overnight delivery, to Applicant's attorney of record as follows:

Brian D. Bellamy
Clark & Bellamy, P.C.
P.O. Box 1997
Thomasville, GA 31799-1997

on this 22nd day of January 2008.



Eric B. Meyertons

EXHIBIT A

Int. Cl.: 1

Prior U.S. Cls.: 1, 5, 6, 10, 26 and 46

United States Patent and Trademark Office

Reg. No. 2,616,231

Registered Sep. 10, 2002

TRADEMARK
PRINCIPAL REGISTER

NANOFIL

SUD-CHEMIE AG (FED REP GERMANY CORPORATION)
LENBACHPLATZ 6
D-80333 MUENCHEN, FED REP GERMANY

FOR: CHEMICAL PRODUCTS FOR INDUSTRIAL USE, NAMELY ADDITIVES IN PIGMENT FORM USED IN THE MANUFACTURE OF PLASTICS, IN CLASS 1 (U.S. CLS. 1, 5, 6, 10, 26 AND 46).

OWNER OF FED REP GERMANY REG. NO. 39869606, DATED 3-2-1999, EXPIRES 12-31-2008.

SER. NO. 75-774,492, FILED 8-12-1999.

TONI HICKEY, EXAMINING ATTORNEY

EXHIBIT B

Süd-Chemie Nanofil® 5 Flame Retardant

Categories: Other Engineering Material; Additive/Filler for Polymer; Polymer

Material Notes: Standard grades for inorganic flame retardant cable formulations with good pre-dispersibility.

Application:

- PE/EVA
- Grafted PP Cable formulation
- Automotive
- Technical Parts

Improves: Abrasion/Scratch Resistance

Key Words: Sud-Chemie

Vendors:

Available Properties
• Additive Loading
• Melt Flow
• Elongation at Break
• Flammability, UL94

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Feature Article

Chasing Nanocomposites

Nano-sized particles have mega-potential in plastics because just a pinch does so much more than heavy loadings of other additives. Three recent conferences presented almost 200 papers on the feverish pace of 'nano' R&D on boosting plastics' mechanical and barrier properties, flame retardancy, and electrical conductivity.

By Lilli Manolis Sherman, Senior Editor

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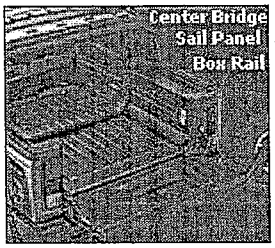
They are still in their infancy, but if the forecasts are right, nanocomposites could turn out to be the biggest little thing to hit plastics in decades. Polymers reinforced with as little as 2% to 5% of these particles via melt compounding or in-situ polymerization exhibit dramatic improvements in thermo-mechanical properties, barrier properties, and flame retardancy. They also can outperform standard fillers and fibers in raising heat resistance, dimensional stability, and electrical conductivity.



GM's 2005 Hummer H2 cargo bed uses about7 lb of molded-in-color TPO nanocomposite parts.

Dispersions of nano-scale reinforcements in polymers are already entering the marketplace in automotive and packaging applications, albeit in a low-profile manner and slower than had been anticipated. But that pace is expected to speed up dramatically, as indicated by the enthusiasm of researchers and marketers shown in roughly 200 papers delivered at three technical conferences. These were Nanocomposites 2004 in San Francisco, the SPE Antec 2004 in Chicago, and Nanocomposites 2004 in Brussels, Belgium (see box for details).

A report from market-research firm Business Communications Co., Inc., Norwalk, Conn., pegs the total worldwide market for polymer nanocomposites at 24.5 million lb in 2003, valued at $90.8 million. It also projects the market to grow at an average annual rate of 18.4% to reach $211.1 million by 2008. Even if nano developments hit some snags, BCC says some applications will grow faster than 20% per year.

The leading nano-scale fillers in R&D and commercial projects are layered silicate nanoclays and nano-talcs, plus carbon nanotubes and graphite platelets. But other candidates are being actively investigated, such as synthetic clays, polyhedral oligomeric silsesquioxane (POSS), and even natural fibers like flax and hemp.

The top contenders

The two types of nano-fillers that have been most widely discussed and the first to break into commercial use are nanoclays and carbon nanotubes. Both must be chemically modified with surface treatments in order to achieve the fine dispersion and resin coupling that are required to derive maximum benefit.

Both of these nano-fillers have demonstrated improvements in structural, thermal, barrier, and flame-retardant properties of plastics. Carbon nanotubes also enhance electrical conductivity.

So far, nanoclays have shown the broadest commercial viability due to their lower cost—$2.25 to $3.25/lb—and their utility in common thermoplastics like PP, TPO, PET, PE, PS, and nylon.

The leading nanoclay is montmorillonite, a layered alumino-silicate whose individual platelets measure around 1 micron diam., giving them an aspect ratio of 1000:1. The two major domestic producers are Nanocor with its Nanomer line and Southern Clay Products with its Cloisite line. Both companies have

Learn More

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For More on the Conference:
2004 Nanocomposites
March 17 & 18, 2004, Brussels, Belgium
Sponsor: European Plastics News and Plastics & Rubber Weekly, Croydon, U.K.+44 20 8277 5505, www.prw.com

ANTEC 2004
May 16-30, Chicago
Sponsor: Society of Plastics Engineers, Brookfield, Conn. (203) 775-0471, www.4spe.org

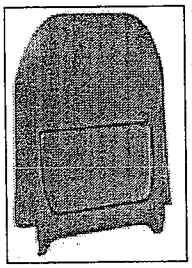
Nanocomposites 2004
September 1-3, 2004, San Francisco
Sponsor: Executive Conference Management, Plymouth, Mich.(734) 737-0507, www.executive-conference.com

Company Info

Basell North America Inc.
Elkton, Md.
(800) 678-8010

Foster Corp.
Putnam, Conn.
(860) 928-4102

Honeywell Specialty Polymers
Morristown, N.J.
800-446-3022



Noble Polymers' Forte PP nanocomposite is used in the seat backs of the 2004 Acura TL and will be used for the center console of a 2006 light truck.

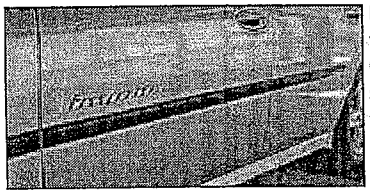
formed alliances with suppliers of resins and surfactants, plus compounders and automotive OEMs and packaging firms. While much of their work is proprietary, they have disclosed several commercial successes.

General Motors has taken the lead in putting nanocomposites on the road. GM launched the first commercial auto exterior use of a nanocomposite in the step assist on the 2002 GMC Safari and Chevrolet Astro van. The part also appears on 2003 and 2004 models. More recently, a PP/nanoclay composite appeared on the body side molding of General Motors' highest-volume car, the 2004 Chevrolet Impala. The compound was developed by GM's R&D Center in Warren, Mich., in cooperation with Basell North America and Southern Clay Products.

The latest application is on the 2005 GM Hummer H2 SUT. The vehicle's cargo bed uses about seven pounds of molded-in-color nanocomposite parts for its center bridge, sail panel, and box-rail protector. The material is Basell's Profax CX-284 reactor TPO with nanoclay.

While nanoclay adds muscle to plastics, carbon nanotubes impart electrical and thermal conductivity. Nanotubes' commercial potential has been limited by their high price tags—reportedly in the range of $100/gram, although they are available in masterbatches for $50/lb and up. Still, nearly every car produced in the U.S. since the late 1990s contains some carbon nanotubes, typically blended into nylon to protect against static electricity in the fuel system. Static-dissipative compounds containing nanotubes are also protecting computer read/write heads.

Carbon nanotubes include both single-and multi-walled structures. The former have a typical outside diameter of 1 to 2 nm while the latter have an OD of 8 to 12 nm. They can range in length from the typical 10 microns to as much as 100 microns and have at least a 1000:1 aspect ratio. Carbon nanotubes have 50 times the tensile strength of stainless steel (100 GPa vs. 2 GPa) and five times the thermal conductivity of copper. When incorporated into a polymer matrix, they have the potential to boost electrical or thermal conductivity by orders of magnitude over the performance possible with traditional fillers such as carbon black or metal powders.



TPO nanocomposite in the body side molding of GM's highest-volume car, the 2004 Chevrolet Impala, was developed by GM in conjunction with Basell North America and Southern Clay Products.

Domestic suppliers of nanotubes include Hyperion Catalysis with its Fibril multi-walled nanotubes and newcomer Zyvex Corp. with its NanoSolve single- or multi-walled tubes. Both suppliers now offer their products in masterbatches that typically contain 15% to 20% nanotubes.

A different but related category is vapor-grown carbon nano-fibers from Pyrograf Products, a spin-off from Applied Sciences. Its Pyrograf III nano-fibers reportedly can compete with nano-tubes in providing thermal and electrical conductivity and dramatically enhancing mechanical properties and fire resistance (char formation). What's more, nano-fibers cost significantly less—around $100 to $150/lb. Evaluations are under way in nylon, PP, and polyurethanes.

Nanoclay compound sources

Alliances between Nanocor and two specialty compounders, have resulted in commercial-scale nanocomposite concentrates and compounds for structural and barrier applications.

Noble Polymers new Forte PP nanocomposite compound made its commercial debut in the seat backs of the Honda Acura TL 2004 car. Forte replaced glass-filled PP, which caused processing difficulties, visual defects, and warping. Forte has a low density of 0.928 g/cc, superior mechanical properties, and improved surface quality and recyclability.

Noble reports that the Forte nanocomposite will also be used to produce the center console for a 2006 model light truck. Other applications in the works include office furniture—replacing 20% glass-filled PP—and appliance parts, where Forte reduces weight and possibly material cost.

PolyOne recently introduced the Maxxam LST line of PP homopolymer/nanoclay compounds that boast high stiffness and impact resistance. Through a patent-pending process, PolyOne reports that it has been able to overcome previous problems of incomplete exfoliation and dispersion of the nanoclay, resulting in performance that meets or exceeds many engineering thermoplastics. Lighter weight, aesthetic and processing advantages, and lower cost are also claimed.

Hyperion Catalysis International
Cambridge, Mass.
(617) 354-9678

Mitsubishi Gas Chemical America, Inc.
N.Y.C.
(212) 752-4620

Nanocor Inc.
Arlington Heights, Ill.
(847) 394-8844

Noble Polymers
Grand Rapids, Mich.
(616) 975-4972

PolyOne Corp.
Avon Lake, Ohio
(440) 930-1000

Pyrograf Products
Cedarville, Ohio
(937) 766-2020

Southern Clay Products, Inc.
Austin, Texas
(800) 334-6101

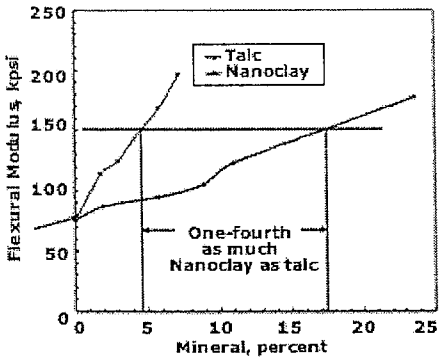
Sud-Chemie, Inc.
Louisville, Ky.
(800) 468-7210

Zyvex Corp.
Richardson, Texas
(972) 235-7881

PolyOne also offers Nanoblend concentrates of up to 40% nanoclay in homopolymer PP, modified PP, LLDPE, LDPE, HDPE, or an ethylene copolymer. Some grades are tailored specifically for barrier enhancement.

PolyOne reports that applications nearing commercialization include pallets and dunnage, where Maxxam LST compounds are specified as alternatives to engineering resins due to their improved dimensional control, which is critical for robotic assembly. In addition, they boast good impact strength and lighter weight. Maxxam LST is also being considered for consumer disposable applications due to a combination of chemical resistance and stiffness, as well as dramatic cycle-time improvements.

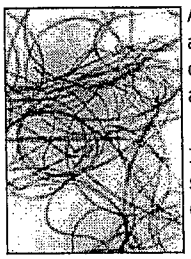
Meanwhile, the Nanoblend concentrates are being considered for auto interior and exterior TPO parts. Key drivers are dimensional stability, lighter weight, and stiffness without loss of impact. Nanoblend concentrates are being evaluated in films for enhancing barrier, stiffness, HDT, and controlled release or migration of additives such as biocides and dyes. In blow molded packaging, Nanoblend is being considered for improved barrier and the potential for thinwalling and faster cycles. Thin-walling and faster cycles are also attractions in injection molded containers and totes. Some industry sectors are evaluating the concentrates for improving flame retardancy.



MODULUS VS. MINERAL LOADING
For optimized flexural modulus in the Chevy Impala TPO body side molding, 75% less nanoclay was required than standard talc. (Source: Southern Clay Products)

More muscular TPOs

Papers presented by General Motors and Southern Clay Products discussed numerous enhancements to automotive TPOs obtained with nanoclays. Those advances did not come easily: Early processing problems caused by clay agglomeration were ultimately resolved by optimizing the clay infeed position at the extruder, the screw design, screw speed, temperature, and pressure. Once processing issues were resolved, nanocomposite TPOs outperformed conventional talc-filled TPOs in consistency of properties, retention of low-temperature ductility, elimination of "tiger striping," reduced paint delamination, and improved knit-line appearance, colorability, grain patterns, scratch and mar resistance, and recyclability. What's more, the lower filler level means 3% to 21% lower density (0.92 vs. 0.96 to 1.13 g/cc). Lighter weight requires less adhesive for attachment, which cuts cost.



Among the many auto exterior, interior, and under-hood applications for which nanocomposites appear suited are fascias, rocker covers, side trim, grilles, hood louvers, instrument panels, seat/IP foams, door inners, pillar covers, vertical and horizontal body and closure panels, engine shrouds, fan shrouds, air intakes, fuel tanks, and fuel lines.

In addition to TPO/nanoclay composites, GM has explored using carbon nanotubes to replace current thermoset structural composites. GM is interested in reducing reinforcement levels in Class A applications by replacing continuous carbon fibers with nanotubes or short nano-fibers. Nanotubes also have the potential to reduce plastics' coefficient of thermal expansion more effectively.

Carbon nanotubes, such as the multi-walled Fibrils from Hyperion Catalysis, have 50 times the tensile strength of stainless steel and five times the thermal conductivity of copper.

Better barriers

Polymer barrier technology is also getting a boost from nanoclays. Mitsubishi Gas Chemical (MGC) and Honeywell Specialty Polymers both are using Nanocor's nanoclays in nylons as barrier layers in multi-layer PET bottles and films for food packaging. MGC's MXD6 nylon nanocomposite, called Imperm N, is used commercially in Europe in multi-layer PET bottles for beer and other alcoholic beverages. It is also being evaluated for small carbonated soft-drink bottles. Other Imperm applications that will debut in the next six months are multi-layer thermoformed containers for deli meats and cheeses and flexible multi-layer films for potato chips and ketchup.

Honeywell has aimed its Aegis nylon 6 nanocomposites initially at PET beer bottles. In late 2003, a version containing an oxygen scavenger made a commercial splash with the introduction of the 1.6-liter Hite Pitcher beer bottle from Hite Brewery Co. in South Korea. Aegis is the barrier layer in this three-layer structure, which is said to provide a 26-week shelf life.

Honeywell is aiming other Aegis nanocomposite grades (without oxygen scavenger) as replacements for EVOH in films and pouches. Such grades reportedly are lower in cost than EVOH, provide a better barrier that allows for lightweighting, and also have better puncture resistance and good clarity. (Because of their size, nano-particles do not interfere with light transmission.)

The U.S. military and NASA, in conjunction with Triton Systems, Inc., Chelmsford, Mass., are looking into nanoclay as a barrier enhancer for EVOH in long-shelf-life packaging. An experimental thermoformed food tray was made from EVOH plus 3% of Southern Clay's Cloisite in a layer sandwiched between two PP layers. It reportedly imparts three- to five-year shelf life without refrigeration, plus good clarity, processability, and recyclability.

Alcoa CSI, Crawfordsville, Ind., is seeking a patent on coextruded barrier liners for plastic bottle caps for beer, juice, or carbonated soft drinks. The liners include a layer of nylon 6/nanoclay composite plus one or two EVA layers with oxygen scavengers. This liner is said to outperform other barrier materials at very high humidity (95% to 96% RH).

LG Chem Ltd. of South Korea has developed high-barrier, monolayer blow molded containers of HDPE with 3% to 5% nanoclay for handling toluene and light hydrocarbon fluids. LG reports that permeation of the hydrocarbon solvents is cut by a factor of 40 to 200 compared with neat HDPE.

Versatile nanocarbons

Since the early 1990s, automotive fuel-line components such as quick connectors and filters have used inner barrier layers consisting of nylon 12 and carbon nanotubes. Hyperion Catalysis now aims to introduce nanotubes into other resins used in auto fuel systems, such modified nylons and fluoropolymers. A new fluoropolymer/nanotube compound is being used to make O-rings for automotive fuel connectors.

In electronics, polycarbonate and polyetherimide (GE's Ultem) components of computer hard drives have been reinforced with nanotubes to render them conductive and very smooth.

Over the last three years, a major automotive OEM in Europe has been using carbon nanotubes in GE's Noryl GTX nylon/PPO alloy to mold exterior fenders. This conductive nanocomposite allows for electrostatic painting.

Michigan State University's Composite Materials and Structures Center in East Lansing developed a new surface-treated graphite nano-platelet. Graphite has a modulus several times that of clay and also has excellent electrical and thermal properties. When incorporated into an epoxy, it results in superior mechanical properties and excellent electrical conductivity compared with standard carbon fibers and nano-sized carbon black. MSU sees potential in ESD protection and EMI shielding. Plastic nano-graphite compounds are expected to sell for up to $5/lb, significantly less than compounds based on nanotubes or vapor-grown carbon fibers.

Carbon nanotubes have more going for them than just conductivity. Researchers at the National Institute of Standards and Technology (NIST), Gaithersburg, Md., report that carbon nanotubes in PP not only enhance the material's strength and properties, but also dramatically change how the molten polymer flows, virtually eliminating die swell.

Nano flame retardants

Extensive research at NIST has established nanoclays' effectiveness as flame-retardant synergists. Nanoclay levels of 2% and 5% in nylon 6 reduced the rate of heat release by 32% and 63%, respectively, NIST found.

Specialty compounder Foster Corp. recently demonstrated that higher levels (13.9%) of nanoclay can be added to nylon 12 elastomers to achieve UL 94V-0 rating at 1/8-in. thickness. Used as a char former, the nanoclay allows the typical 50% loading of halogen/antimony oxide flame-retardant system to be cut in half, which significantly reduces detrimental effects on physical properties. The company first introduced nylon 12/nanoclay compounds for tubing and film in 2001.

Germany's Sud-Chemie (U.S. office in Louisville, Ky.) offers modified nanoclays called Nanofil as flame retardants. It recently developed halogen-free EVA/PE wire and cable compounds containing 3% to 5% of new Nanofil SE 3000 plus 52% to 55% alumina trihydrate or magnesium hydroxide (typically used at 65% levels). The result is said to be improved mechanical properties, smoother cable, and higher extrusion speeds.

According to Hyperion Catalysis, two recent studies show that multi-walled carbon nanotubes may act as a flame retardant without use of halogen. In both EVA and maleic-anhydride-modified PP, 2.4% to 4.8% loadings of nanotubes show heat-release rates comparable to or better than those obtained with nanoclays.

Nano-nucleators

Among its many virtues, nanoclay can work as a nucleating agent to control foam cell structure and enhance properties of polymeric foams for applications from insulation to packaging. The University of Toronto's Dept. of Mechanical and Industrial Engineering studied extrusion of chemically foamed LDPE/wood-fiber compounds. Addition of 5% nanoclay to the mix decreased the cell size, increased the cell density and facilitated foam expansion. When burned, the foam showed good char formation. Similar results were obtained in LDPE/nanoclay foam blown with CO2 gas.

Researchers at Ohio State University's Dept. of Chemical Engineering (Columbus) found that small amounts of nanoclay surface-grafted with PMMA can reduce cell size and increase cell density in microcellular PS foamed with CO2. Another OSU study showed that smaller cell size and higher density can be achieved with 5% nanoclay in polyurethane foams blown with pentane or water.

Louisiana State University's Mechanical Engineering Dept. (Baton Rouge) reports that 4% to 5% nanoclay increases the flexural strength and elongation of epoxy syntactic foams used as core materials for sandwich composites in structural applications.

CLOISITE® AND NANOFIL® ADDITIVES
Nano-scale Additives for Reinforced Plastics

ISO 9001 Certified

WHY CLOISITE® AND NANOFIL® ADDITIVES?

Cloisite® and Nanofil® additives consist of organically modified nanometer scale, layered magnesium aluminum silicate platelets. The silicate platelets that the additives are derived from are 1 nanometer thick and 70 – 150 nanometers across. The platelets are surface modified with an organic chemistry to allow complete dispersion into and provide miscibility with the thermoplastic systems for which they were designed to improve. The additives have been proven to reinforce thermoplastics by enhancing flexural and tensile modulus while lowering CLTE. The additives have also been proven to be effective at improving gas barrier properties of thermoplastic systems. The surface char formation and flame retardance of thermoplastic systems have also been improved by incorporating the nanoparticles into the structure. There are some unique application areas where the additives have been proven to improve the physical properties of the plastic products. Cloisite® and Nanofil® additives have been shown to improve the properties of injection molded pieces for the automotive industry, of flexible and rigid packaging such as films, bottles, trays, and blister packs, and also of electronics plastics such as wire and cable coatings.

PRODUCT SPOTLIGHT
NEW TECHNOLOGY REVIEW

Cloisite® 30B
Cloisite® 30B is one of the more versatile members of the growing family of Cloisite® nanoclays targeted for a range of thermoplastic, thermoset and rubber formulations. Nano-izing different polymer types with Cloisite® 30B can result in a variety of performance enhancements including mechanical strength, FR and barrier.

>Product Bulletin

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