



**What's New at 3D**

- ◇ New Molding Machine
- ◇ ISO 9001:2008
- ◇ 3D Printing

"You should never be proud of doing what's right. You should just do what's right."

—Dean Smith—

**April Birthday's**

- 10th - Glenda DeVorss
- 11th - Casandra Escatel
- 22nd - Brendan Henderson
- 27th - Ray Blake

**Join Our Mailing List**

2701 E. 2nd St.  
Newberg, Oregon 97132  
Ph. 503-537-0979  
Fx. 503-537-0953  
info@3d-plastics.com



In This Issue

- ◇ Effect of Oil Prices on Plastic Resin
- ◇ Announcements
- ◇ Reverse Engineering
- ◇ Injectable Plastic?

**Effect of Oil Prices on Plastic Resin**

Lower oil prices will continue to affect North American markets for polyethylene (PE) and polypropylene (PP) resin in the months ahead. That's the expectation of resin market pros, Mike Burns and Kevin Roberson, both of whom are with Fort Worth, Texas-based Resin Technology Inc.

Burns — who covers PE for RTi - said that based on oil's drop of more than 50 percent since mid-2014, regional PE prices should have fallen more through January. Prices are down 11 cents per pound through January, with Burns saying a few more cents should come out of the market in March.

"Wal-Mart isn't going to order from a North American supplier if their products cost 10 cents more," he said.

Roberson addressed the more volatile PP market, where prices have fallen a total of 20 cents per pound — 10 cents coming out in both December and January.

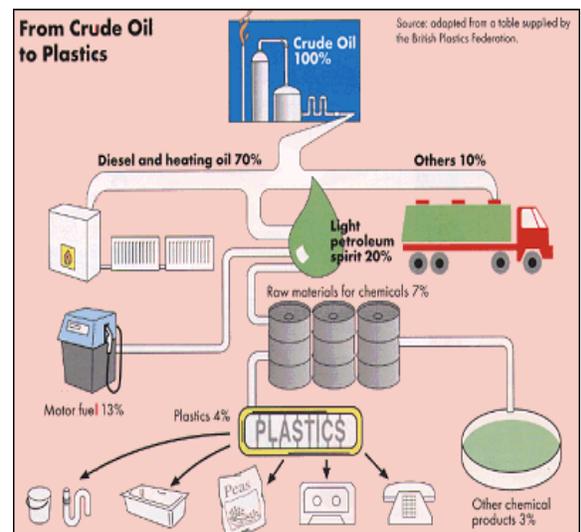
"Price volatility in North America is more than in other parts of the world," Roberson said.

In spite of some recent growth,

North American PP sales remain 15 percent below peak levels seen in 2007.

The delay of "aggressive price decreases" is having an impact on North American resin processors by making their products less competitive vs. PE goods from SE Asia. If North American PE prices don't see further drops, this North America/SE Asia price gap "will undo benefits from reshoring," Burns added.

**Plastics News — Frank Esposito**



## Announcements

- ◇ 3D Plastics is now on Facebook and LinkedIn, take some time to connect with us on each site. Relevant pictures, videos, and content are communicated daily for engagement
- ◇ 3D Plastics has a new 100 ton Sumitomo press. We hope to increase our reliability, speed, and accuracy.
- ◇ Happy Anniversary to Ray Blake and Kurt Cosner. Ray has been with us for 10 years and Kurt has been with us for 11 years

## Injectable Plastic?

A new injectable polymer developed by researchers at the University of Washington, could strengthen blood clots and save countless lives on the battlefield, in rural areas, and anywhere else where immediate medical treatment may not be available.

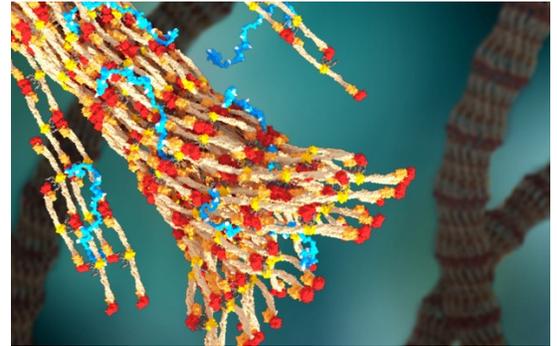
Following an injury, PolySTAT, could only be injected into the patient on site to staunch bleeding until he/she can receive proper medical care. Unlike other clotting treatments that require refrigerated or frozen blood products, a syringe loaded with the polymer could be carried inside a backpack for emergency use.

“Most of the patients who die from bleeding die quickly,” said Dr. Nathan White, an assistant professor of emergency medicine who teamed with UW bioengineers and chemical engineers to develop the macromolecule.

In an initial study conducted with rats, 100% of animals injected with PolySTAT survived a typically lethal injury to the femoral artery. Only 20% of rats treated with a natural protein that helps blood clots survived. Researchers say that the material could reach human clinical trials in 5 years.

The polymer was inspired by factor XIII, a natural protein found in the body that helps strengthen blood clots. Following an injury, platelets in the blood begin to congregate at the wound and form an initial barrier. Then a network of specialized fibers—called fibrins—start weaving themselves throughout the clot to reinforce it, writes UW reporter Jennifer Langston. If the scaffolding can’t withstand the pressure of

blood pushing against it, the clot breaks apart and the patient keeps bleeding. Both PolySTAT and factor XIII strengthen clots by cross linking fibrin strands.



PolySTAT has other advantages. Enzymes that typically cut fibrin strands don’t target synthetic PolySTAT bonds that are integrated into the clot, keeping blood clots intact during critical hours of an injury.

Research indicates that PolySTAT works to strengthen clots even in cases where fibrin building blocks are critically low

The UW team also used a highly specific peptide that only binds to fibrin at the wound site. It does not bind to a precursor of fibrin that circulates throughout the body. That means PolySTAT shouldn’t form dangerous clots that can lead to a stroke or embolism.

**Plastics Today — Norbert Sparrow**

### Fact of the Month

In 2010, 191 million barrels of Liquid Petroleum Gases (LPG) and Natural Gas Liquids (NGL), were used to make plastic products in the plastic material and resin industry.

## Reverse Engineering

Virtually anything can be reconstructed and improved. Throughout the history of manufacturing, innovation has hinged on the ability to make adjustments here and there until you have a newer, better product. In 2015, expect more manufacturers to apply this type of thinking to plastics. By “reverse engineering,” manufacturers are able to build on existing bodies of knowledge by looking at a completed product, breaking it down, learning how it works and ultimately, making improvements. It’s a common practice for parts and products that are no longer in production or ones that must be evaluated for potential weaknesses or defects that need to be designed out.

The benefit of reverse engineering is that manufacturers need not reinvent the wheel every time; rather, they look at what is working and make adjustments to either make a part perform even better or invent an entirely new one.

Manufacturing.net — By: David Nelson

**Let 3D Plastics be your full service supplier for all your plastics needs, from concept to final product**