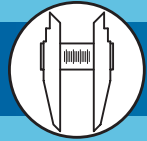


TECH TALK



Volume 27

News and Views From Hi-Tech Seals

Winter 2011

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Boucherville

1450 Rue Nobel, Suite #20
Boucherville, QC J4B 5H3
Phone: 450.655.7325



Cast Urethane

Enhance Performance and Cost Effectiveness

With the recent addition of our Winnipeg branch, Hi-Tech Seals now offers access to over 20 years of urethane-molding experience. Cast urethane has been utilized as a replacement for previously used plastic, rubber or metal components. This versatile material can allow for lighter, quieter and longer lasting products. Typical replacement parts include gears, industrial rollers, bumpers, spacers, wear components and much more.

Hi-Tech Seals' urethane components can also incorporate metal hardware or over mold previously used rubber and plastic parts. With our Canadian based operation, we can mold urethane around your components. Urethane's excellent physical characteristics can save you money by increasing wear, providing less downtime and having less product breakage.

(article continues on the next page)

(Article continued)

Polyurethane exhibits a tensile strength and wear resistance that is typically 2-3 times higher than comparable elastomers such as Nitrile.

Physical Characteristics

- Abrasion resistance
- Toughness
- Tear resistance
- Load-bearing ability
- Lightweight
- Elastomeric memory
- Better shock resistance
- and more

When working with Hi-Tech Seals' urethane division, you experience a customized solution. Our engineers will help determine the correct formulation to generate a unique compound. We can select specific profiles, durometers, colours and beneficial additives.

Durometers:

The hardness of urethane is measured on Shore A and D durometer scales. We can maintain the urethane's toughness and resilience while producing a compound as soft as 30 Shore A or as hard as 87 Shore D.

Available urethane colours:

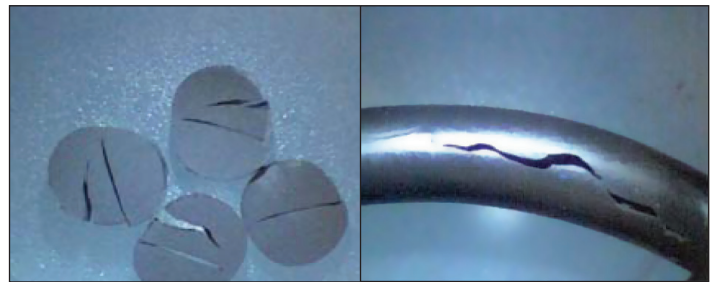
Black, red, yellow, orange, green, blue, and white.

If you are interested in learning more about our urethane molding capabilities visit www.hitechseals.com/CUP.asp.



Potentially Hazardous Seal Failure

Explosive decompression (ED), also known as rapid gas decompression (RGD), is one of the most common types of seal failures. Under high system pressure, gases such as carbon dioxide, methane and hydrogen sulphide can permeate into the seal material and become trapped. When the system pressure is rapidly reduced, the pressurized gases will expand and can rupture the elastomer. The gases released can potentially be hazardous.



Typically, explosive decompression can be identified by blisters, rips or pocks on the surface of the seal. The above images are examples of explosive decompression.

There are three common courses of action that can be taken to avoid explosive decompression. The first solution is to reduce the rate at which the system pressure is released. This will reduce the chance that the gas will explode out of the seal. Another solution is to use a higher durometer sealing material. Higher durometer materials have fewer internal voids that can trap gases. However, increasing the hardness could result in increased difficulty of installation. One final alternative is to change the sealing material to an approved ED resistant material. Common industry standards for O-ring explosive decompression testing are NORSOK M-710 and NACE TM0297-97. Hi-Tech Seals now has compounds that meet NORSOK M710 standards. Contact Hi-Tech Seals' about the ED resistant materials that we offer.

Community Involvement

At Hi-Tech Seals, our employees and we proudly support local charities. In 2010 Hi-Tech Seals has made donations to support the following charities:

- Edmonton Down Syndrome Society
- Alberta SPCA
- Ronald McDonald House
- Make-A-Wish Foundation
- Canadian Cancer Society
- The Stollery
- The Heart and Stroke Fund
- The Salvation Army

Our employees took the initiative to fundraise for:

- Breast Cancer - Run for the Cure
- Prostate Cancer - Movember
- Blood Drives - Local Group Donations



Lunch & Learn

Putting the Bite Back in Seal Training

Just like our ever-advancing world, sealing technology continues to grow in complexity. At Hi-Tech Seals we align our self with industry leading rubber, plastic and seal technology developers in order to provide the most innovative solutions. Allow us to educate you on the various facets of the sealing industry.

Hi-Tech Seals offers a lunch and learn program to educate you and your staff about sealing. We can tailor a presentation to your needs. Examples of presentations include:

- Seal Theory
- Polymer Chemistry
- Elastomer Manufacturing Techniques
- Elastomer Properties
- Basic Elastomer Theory
- Common Elastomer Sealing Materials

Let us treat you to lunch while we educate you and your colleagues. Email info@hitechseals.com about having a Lunch and Learn at your facility.

2012 Catalogue

Keep your eyes open for the upcoming 2012 catalogue. Our new catalogue will feature the addition of metric specific profiles and sizes.

If you still don't have our 2011 catalogue visit <http://www.hitechseals.com/catalogue.asp>.

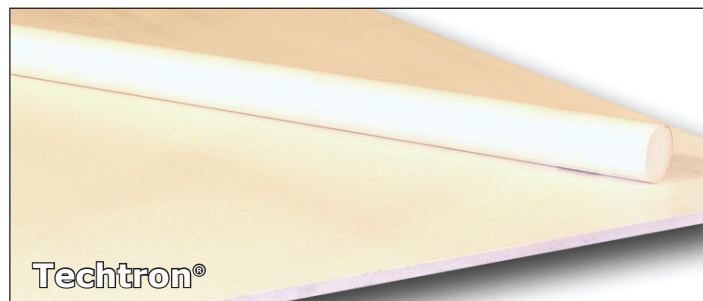
Upcoming Trade Shows:

2012 Houston Offshore Technology Conference
2012 Calgary Global Petroleum Show
2012 Lloydminster Heavy Oil Show

Come visit our booth!

Rapid Seal Winnipeg

Did you know Hi-Tech Seals also has a machining department in Winnipeg?



Low Cost Alternative to PEEK

If cost is stopping you from using PEEK, ask about Techtron® PPS (polyphenylene sulfide). Techtron® cannot meet the same high temperature operating limits as PEEK, however it does offer excellent characteristics. It also provides the broadest resistance to chemicals of any advanced engineering plastic. Techtron's® main benefits are:

- Inertness to steam, strong bases, fuels and acids
- Essentially zero moisture absorption and very low coefficient of linear thermal expansion
- No known solvents below 200°C (392°F)
- Upper operating limit of 218°C (425°F)

Contact your sales representative for more information.

Milestones

We are pleased to share with you employees achieving milestones in the recent and upcoming months.

Five years of service:

Terrie Beastall

Ten years of service:

Jarrett Bodie
Kim Tong
Danny Chu

Fifteen years of service:

Dwayne Schmidt

From all of the staff at Hi-Tech Seals, we thank you for your hard work and dedication over the years.

Hi-Tech Seals Word Search

Complete the word search and be entered to **win a digital picture frame.**

B	I	B	B	R	F	K	R	G	K	I	R	R	Z	Z	S	T	O	X	D	J	J	B	K	U
R	T	N	C	O	X	F	C	U	R	C	G	J	Y	T	I	N	U	M	M	O	C	K	Y	P
Z	Q	B	W	T	X	T	U	L	U	W	R	F	S	N	J	Q	Q	A	Q	G	Z	K	O	M
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W	Y	P	Y	O	W	F	H	C	Q	C	S	A	O	Z	S	O	J	V	U	M	D	L	R	J
N	L	Q	V	L	S	A	H	Q	Z	Y	E	I	G	N	F	C	X	L	A	L	T	P	U	U
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U	W	T	T	N	B	H	L	M	D	Y	V	X	K	V	R	X	C	T	N	Z	S	J	G	Z
F	L	V	M	N	V	K	V	N	Z	G	P	H	Q	J	D	R	T	K	A	H	J	M	H	D
A	K	W	J	E	K	Y	A	Q	T	B	H	W	P	F	K	S	U	Y	C	Z	H	K	O	F
I	B	V	I	B	L	H	I	N	V	R	J	P	M	A	V	S	R	I	H	K	N	W	W	W
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U	E	R	K	N	N	D	Z	N	S	U	S	D	J	M	M	U	T	E	X	E	W	J	A	M
C	Q	E	U	S	J	I	T	D	O	N	D	G	T	E	N	D	H	N	O	W	A	M	N	D
H	A	L	P	U	E	E	P	H	N	R	D	A	A	L	I	S	A	Y	R	G	V	K	R	S
R	T	T	V	O	N	O	F	E	V	H	D	E	O	M	S	S	N	Q	N	P	Y	R	S	A
L	Z	T	F	N	R	Y	M	F	G	T	T	S	H	B	W	B	E	W	K	U	I	R	P	N
Y	U	E	D	P	K	E	V	R	A	M	E	C	V	E	O	M	H	J	I	R	B	O	U	P
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M	H	P	I	R	E	Q	A	I	Q	P	R	S	D	J	A	X	X	V	H	G	I	G	Y	R
X	L	A	U	R	I	W	W	M	W	D	D	H	G	G	R	N	M	D	O	E	W	G	J	L
B	J	B	U	S	D	C	H	S	Y	P	T	M	R	J	T	Q	A	U	E	J	A	L	X	M

RGD
SEALTHEORY
TECHTRON
TRADESHOWS
LUNCHANDLEARN
URETHANE
WINNIPEG
COMMUNITY
DWAYNESCHMIDT

Please fax your responses to 780.409.9149 by February 1st, 2012.

Name: _____

Company: _____

Day Time Phone #: _____

Congratulations to last edition's word search winner, Javier Garcia.



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