CARPENTER

tirefill

The Ultimate puncture protection

American Rental Association

TIA Tire Industry Association

Rely® Flat Proofing Polymer

www.carpenter.com

tirefill

The Ultimate puncture protection

"We dedicate ourselves to the leading edge of technology associated with our products and manufacturing processes"




Founded in 1948 by E. Rhodes Carpenter, Carpenter is the world's largest manufacturer of polyurethane foam. The company has over twenty years' experience in the global flat proofing polymer, or "Tirefill" business. Carpenter is a byword for quality and our guiding principles include innovation and superior quality.

Carpenter was born of the entrepreneurial spirit shaped by a sharp focus on what we do best and nurtured by a passion for quality.

Long before such terms became fashionable, we established our "core business", practiced "total quality management" and made "continuous improvement" our daily routine.

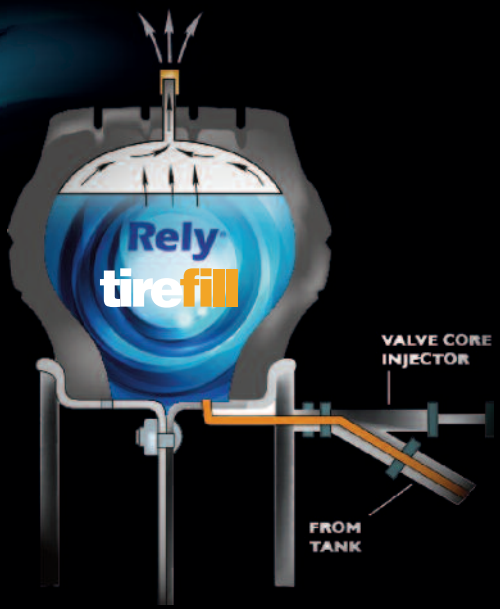
Carpenter's Tirefill production sites across the United States and Europe offer a global supply that ensures our customer can expect the highest standards of quality and service.

Technology working from the inside ...

Rely®

Flat Proofing Polymer

Underground Mining
Quarrying
Front End Loaders
Excavators
Aerial Access Platforms
Fork Lift Trucks
Compactors
Slag Carriers
Mobile Cranes
Tunnel Borers
Skid Steer
Granulating Drums
Agricultural
Sea \ Air Port



Rely® Tire Fill is supplied as a liquid. It is a 2 part chemical which is mixed 50\50 to cause the reaction that will cure the product inside the tire. The material is pumped into the tire through the valve of the tire and replaces the air inside. A vent hole is drilled into the top of the tire to release the air and once the tire is full of liquid this hole is plugged. The tire is then pressurised as it would be with air by pumping more liquid into the tire and then left for 48 hours to cure. This effectively makes the tire "solid" although as opposed to solid rubber, performs and rides similar to air.

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Rely® T-15

Mid-Purpose

Rely® Tire Fill is designed to offer cost savings and safety features to any pneumatic tire. Rely® will ensure that the full working life of the tire is achieved by enabling it to run to its maximum specification, which cannot be changed by ambient temperature or punctures as pressures are maintained.
With the added security of knowing that the tire cannot have a blowout or puncture, this ensures the safest working environment whilst saving downtime costs.
Rely® T-15 is specially formulated to provide a soft durable material to meet the needs of applications where a softer ride is preferred or required. Even though the T-15 is 40% softer than our standard product, don't be fooled, this product will stand up to cuts and punctures – providing excellent durability.

Features:-

- Improved footprint for traction and drive
- Softer ride for operator
- Will run at 35mph continuously
- Can be used for additional ballast
- Excellent stability and safety

Typical Applications:

- Lawn and Garden
- Agricultural Equipment
- Wheelbarrows
- Ground Support Vehicles
- Personnel Vehicles
- Skid Steers
- Material Handling Equipment

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The Ultimate puncture protection

Dedicated to you.

At Carpenter we consider research and development as key to maintaining our reputation for innovation. Construction of the 50,000 sq.ft. Reinhart Technical Center was completed in 1989. It is a true sign of Carpenter's commitment to customer service and product development.

The Technical Center is named for M.H. 'Bud" Reinhart, a former President and 30-year employee of Carpenter Co. The Reinhart Technical Center performs state-of-the-art research and development as well as customer application support to all the product lines within Carpenter Co.

Additionally, the Reinhart Technical Center has extensive analytical and physical testing capabilities with over one million dollars invested in testing equipment. The Center has a staff of over 40 chemists, engineers, technicians and administrative support staff.

Polyol is an integral part of the production of tire fill by all manufacturers, however Carpenter Co. is unique in that it has its own production facility of polyol in Pasadena, Texas.

The six production units occupy 35 acres, and account for over 1 billion lbs. in annual production capacity. There are currently over 100 personnel employed at the plant, which operates 24 hours per day, 365 days per year.

The Facts . . .

Rely® Tire Fill is supplied as a liquid, it is a 2 part chemical which is mixed at a 50:50 ratio to cause the reaction that will cure the product inside the tire. It is supplied in kit form (A+B) in containers: the A side is an isocyanate and the B side is the catalyst.

The material is pumped into the tire through the valve of the tire and replaces the air inside the tire. A small vent hole is drilled into the top of the tire to release the air and once the tire is full of liquid this hole is plugged with a screw. The tire is then pressurised as it would be with air by pumping more liquid into the tire and then left in a heated room for 48 hours to cure. This effectively makes the tire "solid" although as opposed to solid rubber, performs and rides similar to air.

Tire fill does not "stick to" or damage the wheel and therefore when the tire is changed, it can be cut off and the wheel reused easily with air or tire fill again. There are no modifications required to the wheel or tire.

Rely® Tire Fill offers 100% protection to the tread and sidewall area of the tire.

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The Ultimate puncture protection

Rely® T-25

All-Purpose

Rely® Tire Fill is designed to offer cost savings and safety features to any pneumatic tire. Rely® will ensure that the full working life of the tire is achieved by enabling it to run to its maximum specification, which cannot be changed by ambient temperature or punctures as pressures are maintained.
With the added security of knowing that the tire cannot have a blowout or puncture, this ensures the safest working environment whilst saving downtime costs.
Rely® T-25 is suitable for the vast majority of applications. It has a soft resilient inner core, giving a similar ride and performance of an air filled tire. Rely® T-25 gives less lateral and vertical deflection whilst still allowing the tire to perform in the toughest applications.

Features:-

- Suitable for majority of applications
- Excellent heat resistance
- Comparable ride to air filled tires
- Will run at 35mph continuously
- Will run at 55mph for up to 4 hours
- Can be used for additional ballast
- Excellent stability and safety

Typical Applications:

- Ground Support Vehicles
- Personnel Vehicles
- Skid Steers
- Material Handling Equipment
- Graders, Earthmover and Construction Equipment
- Cranes
- Tele-handlers, Boom Lifts & Access Platform Equipment
- Airport & Seaport Equipment
- Underground Mining Equipment


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Rely® T-32

All-Purpose PLUS

Rely® Tire Fill is designed to offer cost savings and safety features to any pneumatic tire. Rely® will ensure that the full working life of the tire is achieved by enabling it to run to its maximum specification, which cannot be changed by ambient temperature or punctures as pressures are maintained.
With the added security of knowing that the tire cannot have a blowout or puncture, this ensures the safest working environment whilst saving downtime costs
Rely® T-32 is designed for those applications where less deflection of the tire is required and more rigid product assists the tire in extreme applications. The T-32 offers a higher Shore A hardness and improved tear strength and is especially suited to high load or high reach applications.

Features:-

- Excellent heat resistance
- Less tire deflection
- Improved tear strength
- Will run at 35mph continuously
- Will run at 55mph for up to 4 hours
- Can be used for additional ballast
- Excellent stability and safety
- Suitable for extreme load applications

Typical Applications:

- High Load Forklift Trucks & Container Handlers
- Graders, Earthmover and Construction Equipment
- Cranes
- Tele-handlers, Boom Lifts & Access Platform Equipment
- Airport & Seaport Equipment
- Underground Mining Equipment

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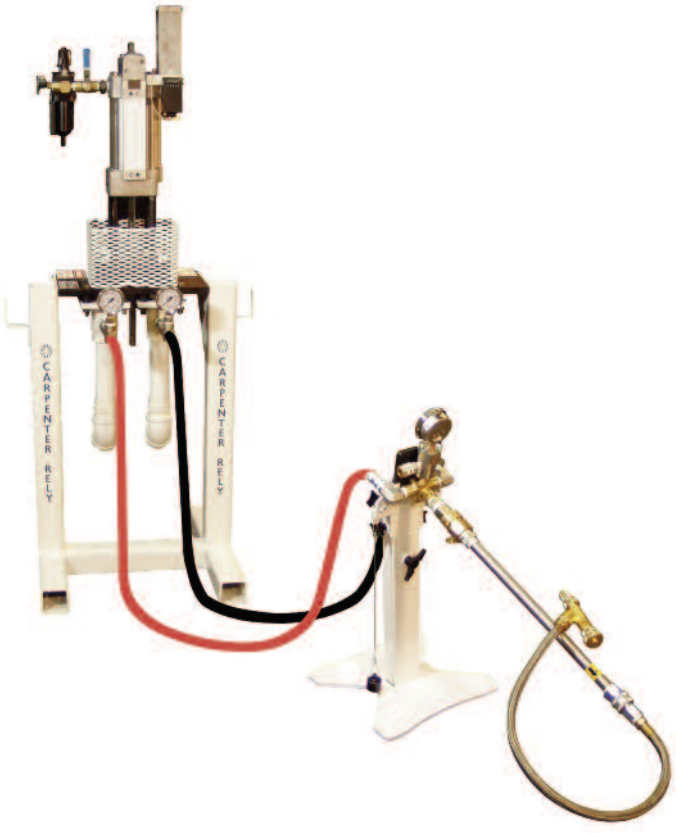
Powerfil™ Pneumatic Pump

The Powerfil™ pneumatic processing equipment was designed by Carpenter engineers specifically for the processing of Rely® Tire Fill.
With a pumping ratio of 6:1 it is both the fastest and most reliable tire filling equipment in its class.
The equipment requires no electrical input and operates solely off an air compressor.



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INTELLI-PUMP™

INTELLI-PUMP™ makes flat-proofing tires with Rely® Tire Fill simple and easy.
This computer-controlled operation can fill tires at 28 kilos per minute (62lbs), making it ideal for high volume users. Its automatic safety features reduce the risks of over-pressurisation and accidental off-ratio processing.
The INTELLI-PUMP™ is the easy, safe and economical way to process tires.

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Our Protocol

Audits of the processing area and equipment
Audits are conducted as per our Protocol practices. Certification is issued and a star rating given.

Air monitor Tests and Reports
Monitors carried out for both the room and processors.A full report is issued along with guidance relating to the occupational exposure limits.

Gauge / Pressure Transmitter Calibration and Certification
Gauges will be tested and if necessary re-calibrated. Calibration certification will be issued.

Risk Assessments
Assessment and reports are issued with regards to individual customer locations.

Processor Training and Certification
Initial training and continuous processor reviews are conducted. Operator certification is issued.

Chemical Handling
Training is offered with regards to maintain safe conditions, storage, handling and COMAH drills.

Solvent Safety
Carpenter offers a Non-Hazardous alternative to standard Isopropanol Solvent.

Global Technical Support

- Dedicated Technical Support Team
- Stockists of all tire filling processing parts
- Service scheduling
- Breakdown support
- Dedicates Chemists and Laboratory
- Technical Diagnostics on all equipment
- On-Site analysis and training
- Full Turn Key Package Available

Carpenter is ISO 9001 : 2008