

Versus Rubber,
Polyurethane has

Better:

Abrasion Resistance
Cut and Tear Resistance
Load-Bearing Capability
Wear Life

Potential For:

Complex Shapes
Colorability
Broader Hardness Range
Lower Cost, Low-Pressure Tooling
Lower Cost Molding vs. Metal Machining
Noise Reduction
Lower Product Cost

Versus Metal,
Polyurethane has

Better:

Abrasion Resistance
Impact Resistance
Flexibility
Resilience
Corrosion Resistance

Potential For:

Weight Reduction
Non-Conductive
Non-Sparking
Noise Reduction
Lower Cost vs. Machining
Lower Product Cost
Lower Cost, Low-Pressure Tooling

Versus Plastic,
Polyurethane has

Better:

Abrasion Resistance
Load-Bearing Capability
Impact Resistance
Elastic Memory
Resilience
Compression Set Resistance
Low Operating Temperature

Potential For:

Complex Shapes
Thin & Thick Sections
A Variable Coefficient of Friction
Noise Reduction
Lower Cost, Low-Pressure Tooling
Lower Cost Molding vs. Metal Machining
Lower Product Cost
Lower Cost, Low-Pressure Tooling



MAKE. CREATE. INNOVATE

FABRICATION AND MACHINING SERVICES IN EVERY LOCATION

Our custom plastic and rubber fabrication shops are fully equipped and we have trained and experienced machinists to produce quality parts from many types of plastic and rubber materials.

From intricate parts to simple cut-to-size projects, we can help you select the most optimal material for your application and produce the final parts in a timely manner.

We can design, mold, machine, weld, route, and drill to produce prototypes, short runs, production runs or maintenance parts. Save time and money by utilizing our experienced fabricators and plastic and rubber specialists.



REDCO™
POLYURETHANE

One of the most unique materials available with a very broad hardness range and infinite possibilities for part design.

Redco™ Polyurethane combines the toughness of metal with the elasticity of rubber and has the ability to withstand the most severe abuse.

DECREASED DOWNTIME

ABRASION RESISTANT

REDUCE NOISE

ABSORBS IMPACT

MINIMIZE MAINTENANCE

OUTSTANDING DURABILITY



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Redco™ Polyurethane offers strength and durability far beyond the range of most rubbers and plastics, combining the toughness of metal with the elasticity of rubber. It has the ability to withstand severe abuse which saves downtime, replacement costs and minimizes maintenance.

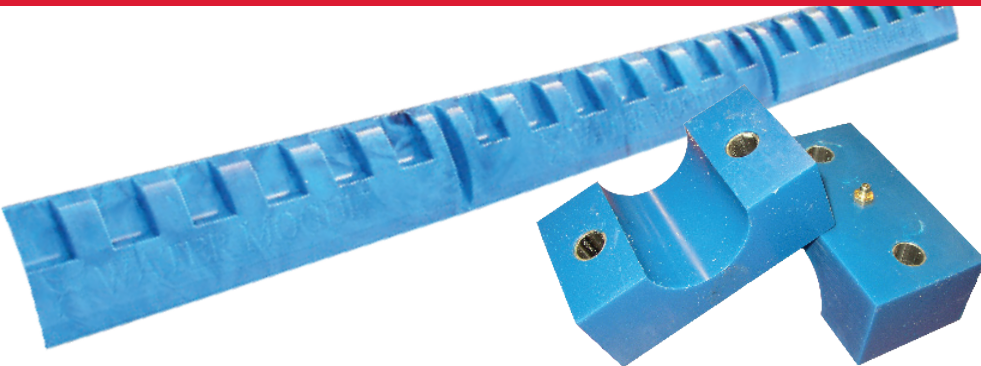
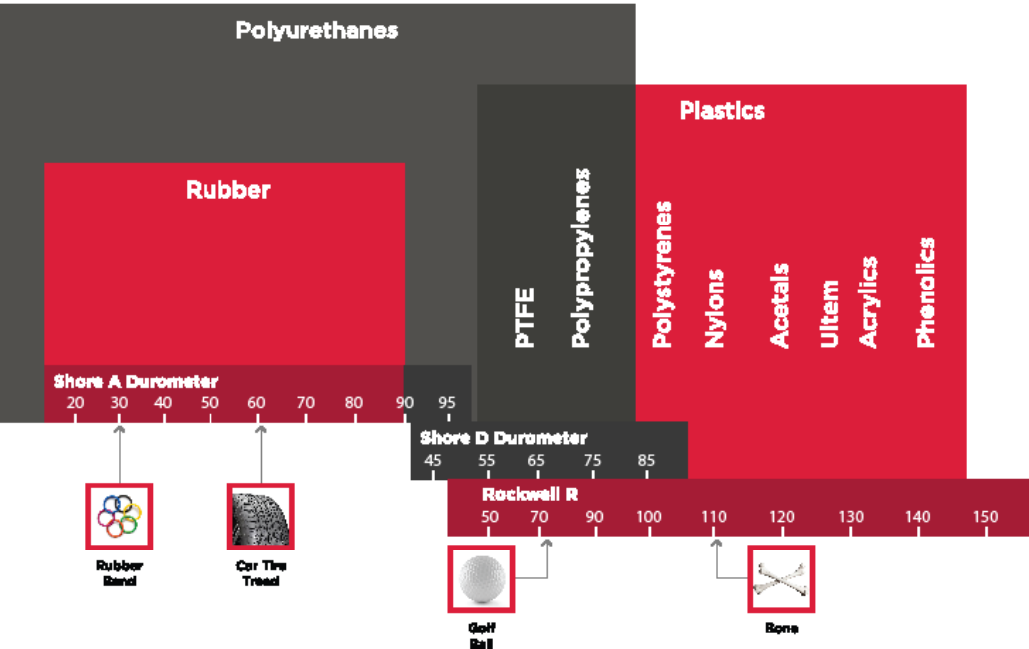
Redco™ Polyurethane is available in a broad range of hardnesses, from eraser soft to bowling ball hard. We customize the material to specific applications without fillers or plasticizers.

We can mold, machine and fabricate a wide range of high quality, custom components that meet high tolerances and strict specifications. With our extensive experience we can solve many application frustrations related to wear, noise, impact and shock.

Cast polyurethanes are tough, strong rubber-like polymers that can retain their original shape and properties for a long service life. Cost effective and dependable, these elastomers combine some of the performance advantages of engineered plastics and metals along with the resiliency and flexibility of rubber.

- Unlimited Custom Molded Shapes
- Outstanding Abrasion Resistance
- High Load Bearing Capability
- Exceptional Impact Strength
- Low Coefficient of Friction
- High Flexural Properties
- Oil & Solvent Resistant
- Resistant to Cold
- Heat Stabilized
- UV Stabilized
- Non Marking
- FDA Compliant Formulations

HARDNESS COMPARISON CHART



REDCO™ DEADPLATE

Redco™ Deadplate is a high performance, energy dissipative grade of polyurethane designed for applications where extreme impact absorption is required. Redco™ Deadplate converts up to 90% of impact energy into heat, which dissipates through the material.

DUROMETER HARDNESS RATING: 55-60A STANDARD COLOR: Light Blue

FEATURES: Strong, Exceptional Bond to Metal, Energy Dissipative, Impact Resistant

TYPICAL APPLICATIONS:
Impact and shock pads, transfer plates, load-bars, cushion pads, dissipator channel, etc.

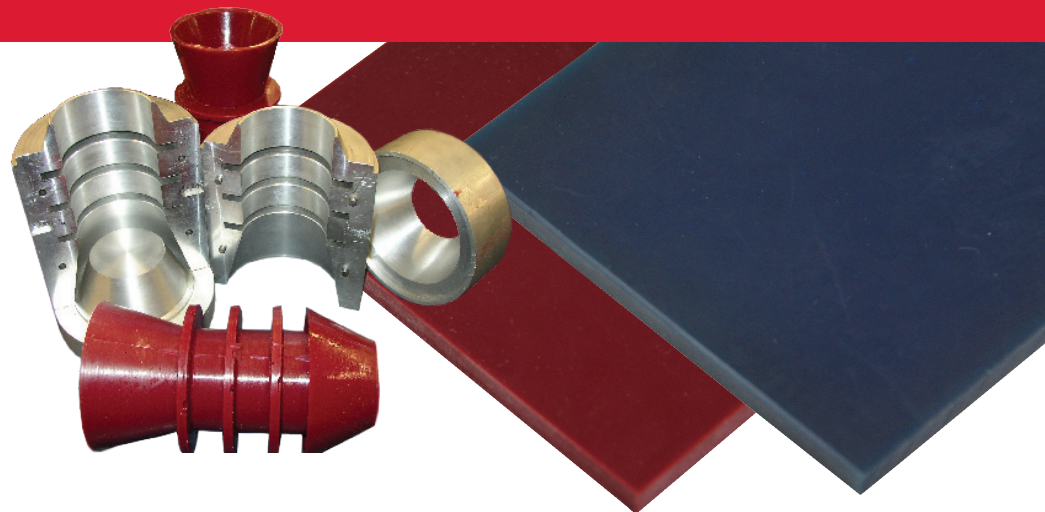
REDCO™ 5500

Redco™ 55A is a pliable urethane similar to a soft rubber, but more resilient, with a balanced range of properties including excellent gripping characteristics.

DUROMETER HARDNESS RATING: 55A STANDARD COLOR: Dark Red

FEATURES: Strong, Oil Resistant, Abrasion Resistant, Impact Resistant

TYPICAL APPLICATIONS:
Dolly wheel tires, carry over tires, feed wheels, roll covers, shock and vibration pads, rollers, carry over wheels, bumpers, wheels, flexible parts, impact pads, anti-vibration parts, wipers, etc.



REDCO™ 6000

This unique formulation stands up to abrasion and is resistant to deterioration in impingement applications. Redco™ 60A also performs well as a shock and vibration buffer while maintaining flexibility.

DUROMETER HARDNESS RATING: 60A STANDARD COLOR: Black

FEATURES: Strong, Oil Resistant, Abrasion Resistant, Impact Resistant

TYPICAL APPLICATIONS:

Impact wear liners, wear liners, roll covers, shock and vibration pads, rollers, carry over wheels, bumpers, wheels, flexible parts, impact pads, anti-vibration parts, wipers, etc.

REDCO™ ULTRA 66

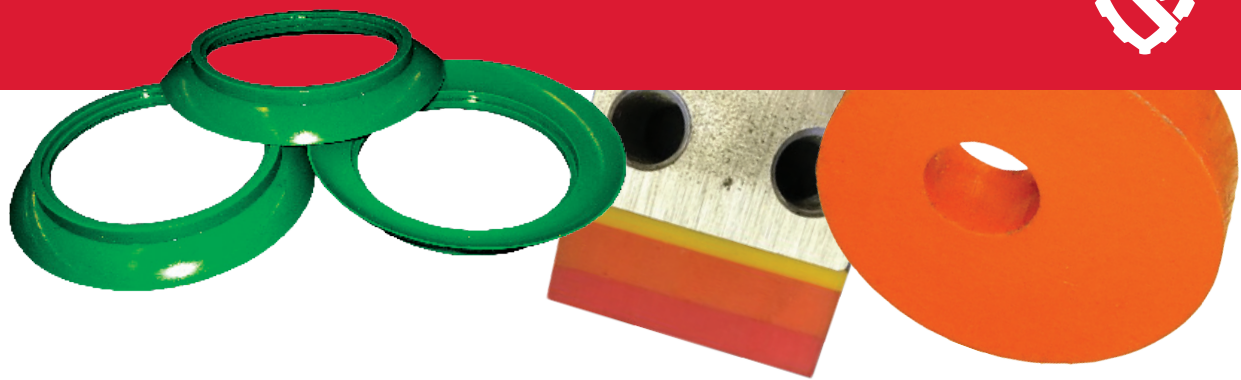
An engineered elastomer grade of polyurethane, Redco™ Ultra 66 is designed for applications where very soft, elastic, rubber-like properties are required in combination with a low-compression set and extreme toughness. Redco™ Ultra 66 also has outstanding solvent and oil resistance.

DUROMETER HARDNESS RATING: 60-65A STANDARD COLOR: Black

FEATURES: Cut & Tear Resistant, Corrosion Resistant, Strong, Impact Resistant, Elasticity, Oil Resistant

TYPICAL APPLICATIONS:

Shaft seals, transmission gaskets, bumpers, pulley & roll covers, impact pads, wipers & squeegees, sorter parts, etc.



REDCO™ 7000

Redco™ 70A offers high compression resistance and withstands heavier loads while maintaining gripping characteristics. Redco™ 70A excels when bonded to steel as an impact pad or wheel cover.

DUROMETER HARDNESS RATING: 70A STANDARD COLOR: Green

FEATURES: Strong, Oil Resistant, Abrasion Resistant, Impact Resistant

TYPICAL APPLICATIONS:

Packaging system parts, feed system parts, shock pads, springs, seals, shock and vibration pads, washers, roll covers, rollers, carry over wheels, bumpers, wheels, flexible parts, impact pads, anti-vibration parts, wipers, etc.

REDCO™ 8000

The workhorse of the Redco™ Polyurethane line. More pliable than harder urethanes, Redco™ 80A possesses high shock and vibration tolerances resulting in a material that is effective in a variety of applications where overall toughness and resiliency is desired. Redco™ 80A has the most balanced range of properties in the polyurethane family.

DUROMETER HARDNESS RATING: 80A STANDARD COLOR: Orange

FEATURES: Strong, Oil Resistant, Abrasion Resistant, Impact Resistant

TYPICAL APPLICATIONS:

Shock and vibration pads, roll covers, flex couplings, wear parts, impellers, gate valves, flotation cell parts, valve seals, cable sheave liners, deflector plates, belt scrapers, seals, couplings, washers, impact wear pads, liner plates, pump liners, stabilizers, carry over wheels, feed wheels, roll covers, rollers, bumpers, wheels, flexible parts, impact pads, anti-vibration parts, wipers, etc.

NEED HELP CHOOSING WHICH MATERIAL IS OPTIMAL FOR YOUR APPLICATION? CALL US:

CUSTOM DESIGN AND TOOLING · CNC MACHINING · PLASTIC FABRICATION · WELDING · CUSTOM MOLDING



REDCO™ 430

Our most commonly used material, ideal for environments where high abrasion resistance is the primary concern. Redco™ 430 (90A) also offers superior impingement resistance.

DUROMETER HARDNESS RATING: 43D, 90A STANDARD COLOR: Yellow

FEATURES: Weather Resistant, Cut & Tear Resistant, Impact Resistant, Elasticity

TYPICAL APPLICATIONS:

Shock and vibration pads, roll covers, springs, cylinder cushions, carriage bumpers, cable sheave liners, deflector plates, impact wear liners, belt scrapers, seals, couplings, washers, cones, impellers, liner plates, pump liners, valve gates, stabilizers, desilter cones, cleaner cones, wear slides, wheels & pulley lagging, protective chute liners, impact pads, slurry-parts, spouts, wear liners, springs, etc.

REDCO™ ULTRA 99

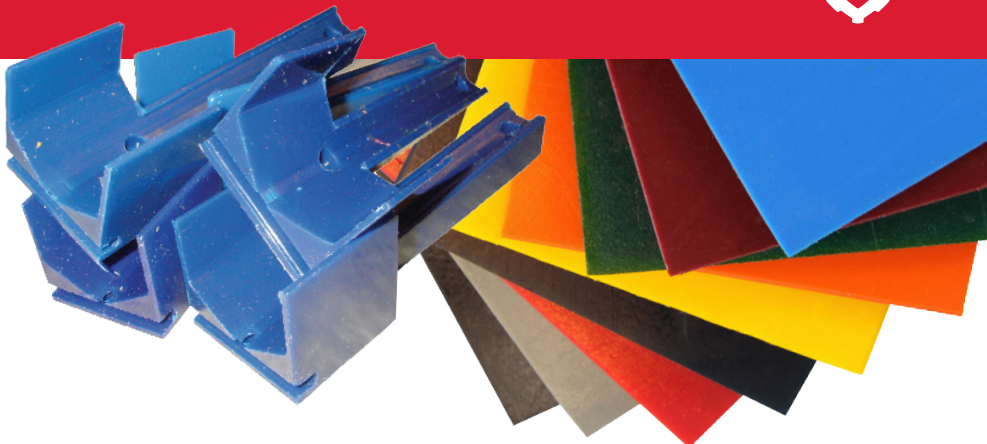
A premium material that performs exceptionally well in high-speed, highly abrasive applications. With its high durability, flexibility, and superior resistance to abrasion, Redco™ Ultra 99 can provide enhanced performance in extreme conditions.

DUROMETER HARDNESS RATING: 95A STANDARD COLOR: Black

FEATURES: Strong, Elasticity, Weather Resistant, Abrasion Resistant

TYPICAL APPLICATIONS:

Wheels, shock absorber pads, impact wear pads, anti-vibration parts



REDCO™ 500

An excellent shock absorber, Redco™ 500 combines the qualities of hard and softer urethanes with resistance to impact and wear. Redco™ 500 is able to provide strength and rigidity for angular profiles where softer urethanes would not hold up and it also has one of the best compression-sets for load bearing applications.

DUROMETER HARDNESS RATING: 50D, 95A STANDARD COLOR: Dark Blue

FEATURES: Weather Resistant, Cut & Tear Resistant, Impact Resistant, Elasticity

TYPICAL APPLICATIONS:

Shock pads, isolation pads, drive couplings and discs, wear plate, belt scrapers, deflector plates, roll covers, seals, rollers, couplings, washers, impact wear pads, liner plates, pump liners, valve gates, cleaner cones, sorter hooks, abrasion protectors, cutting anvils, rolls covers, load pads, seals & gaskets, wheels, mechanical parts, etc.

REDCO™ 600

A high-performance material for wear applications in extreme cold weather. Redco™ 600 is able to hold its form under load and stress in structural applications. A strong choice where mechanical properties are required to be coupled with urethane's exceptional impact, wear and abrasion resistance.

DUROMETER HARDNESS RATING: 60D, 60R STANDARD COLOR: Black

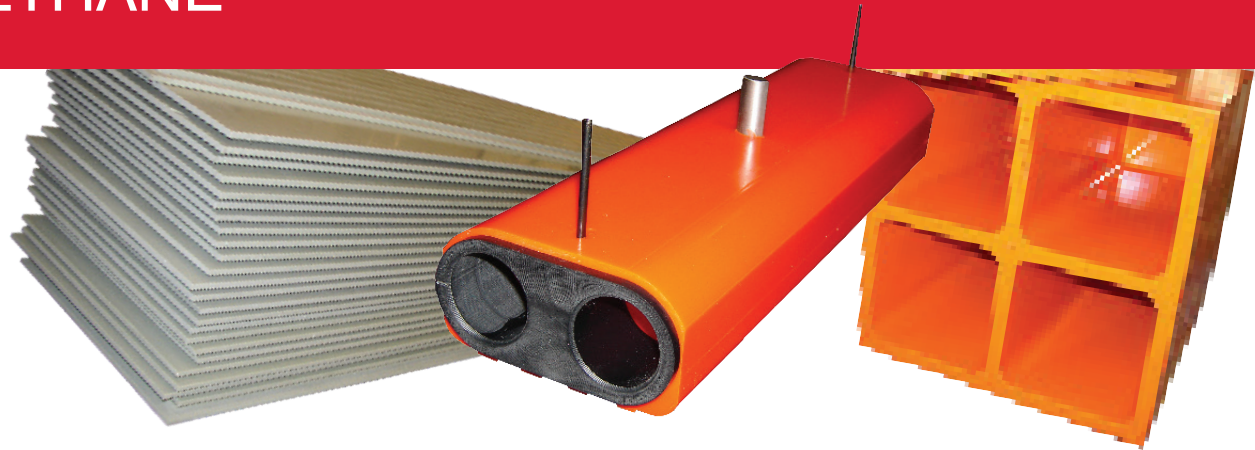
FEATURES: Strong, Weather Resistant, Light, Impact Resistant

TYPICAL APPLICATIONS:

Forklift tires, dolly wheel tires, washers, wear slides, high impact/low temperature parts, slide pads, svi pads, wheels, etc.

NEED HELP CHOOSING WHICH MATERIAL IS OPTIMAL FOR YOUR APPLICATION? CALL US:

CUSTOM DESIGN AND TOOLING · CNC MACHINING · PLASTIC FABRICATION · WELDING · CUSTOM MOLDING



REDCO™ VYPUR FRAS

Premium fire retardant and anti-static formulation designed for applications where exceptional wear and abrasion resistance is required due to shock, vibration and impact. Certified in accordance with MSHA IC-297.

DUROMETER HARDNESS RATING: Available from 85A - 75D STANDARD COLOR: Orange

FEATURES: Strong, Weather Resistant, Light, Impact Resistant

TYPICAL APPLICATIONS:
Pulleys, belt scrapers and wipers, skirtboards, transfer chute liners, bearings, bumpers, chain flights, sprockets, cable crossover pads, etc.

REDCO™ SPS-2000

This material was developed to address the plastic contamination concerns of Kraft Pulp Mills. Redco™ SPS-2000 is a PULP SAFE polyurethane wear material that was specially developed for sawmills and planer mills that are supplying fiber to kraft pulp mills.

Redco™ SPS-2000 completely dissolves in the kraft cooking process with no possibility of pulp fiber contamination. Redco™ SPS-2000 possesses good wear characteristics, the lowest coefficient of friction of all urethanes, high dimensional stability, abrasion resistance, load and impact strength and is unaffected by most oils, greases and solvents. SPS-2000 can solve contamination concerns as well as wear.

DUROMETER HARDNESS RATING: 75D, 90R STANDARD COLOR: Grey

FEATURES: Increased Dimensional Stability, Abrasion Resistant, Impact Resistance, Oil & Solvent Resistant

TYPICAL APPLICATIONS:
Used in hundreds of applications in sawmills, planer mills, kraft pulp & paper mills.



REDCO™ 750

Redco™ 750 provides a long-lasting replacement for brass or bronze with molding capabilities that give precise results without machining. It is a proven solution for bearings. Redco™ 750 is a superior grade of polyurethane designed for applications where durable, strong properties are required along with exceptional impact, wear and abrasion resistance.

DUROMETER HARDNESS RATING: 75D, 90R STANDARD COLOR: Red

FEATURES: Strong, Weather Resistant, Light, Impact Resistant

TYPICAL APPLICATIONS:
Bearings, bushings, wear plates, channel, liners, seals, hanger bearings, sprockets, rollers, drive wheels, washers, flotation cell parts, carry over wheels, feed wheels, sorter hooks, wear slides, etc.



REDCO™ 750 SXL

Designed for use in shock, sliding, low temperature and gritty environments. Redco™ 750 SXL has excellent self lubricating characteristics which make it ideal for applications which may experience dry running periods. Serves very well as a low-maintenance bearing solution.

DUROMETER HARDNESS RATING: 75D, 90R STANDARD COLOR: Black

FEATURES: Strong, Weather Resistant, Light, Impact Resistant

TYPICAL APPLICATIONS:
Bearings, bushings, wear plates, channel, liners, seals, hanger bearings, washers, liners, flotation cell parts, retainers, idler bearings, etc.



Harder Durometer → Softer Durometer

Tradename	ASTM	Redco 750 (75D)	Redco 600 (60D)	Redco 500 (50D/95A)	Redco Ultra99	Redco 430 (90A)	Redco 8000 (80A)	Redco 7000 (70A)	Redco Ultra66	Redco 6000 (60A)	Redco 5500 (55A)	Redco Deadplate
Durometer	D2240	75 ± 5	60 ± 5	95 ± 5	95± 5	90 ± 5	80 ± 5	70 ± 5	62± 5	60 ± 5	55A ± 5	52 ± 5
Standard Color		Red	Black	Blue	Red	Yellow	Orange	Green	Black	Black	Red	Light blue
Tensile Strength (PSI)	D412	8500	7800	5700	7395	5150	3800	5600	4400	3700	3300	3185
100% Modulus (PSI)	D412	5900	3400	1800	1420	1100	800	490	300	250	220	177
200% Modulus (PSI)	D412	6500	5200	-	-	-	-	-	-	-	-	-
300% Modulus (PSI)	D412	-	-	3800	1715	1950	1600	940	500	410	320	288
Elongation (%)	D412	200	285	360	600	460	420	510	480	630	720	660
Tear Strength, Die C (pli)	D624	1000	750	630	595	500	400	310	190	210	180	133
Split Tear (pli)	D-470	120	117	120	141	85	60	50	22	55	40	28
Bayshore Rebound Resillience (%)	D2632	63	46	34	71	33	30	34	30	43	54	4
DIN Abrasion (mm³ loss)	D5963	-	-	-	32	-	66.7	72.7	-	53.4	62.1	-
Compression Set (%)	D395	1.8 (Method A)	4.8 (Method A)	30 (Method B)	46 (Method B)	28 (Method B)	29 (Method B)	25.5 (Method B)	6 (Method B)	39.6 (Method B)	31.6 (Method B)	6.3 (Method B)

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Users are advised to make their own tests to determine the safety and suitability of each such product or product combination for their own purposes. Unless otherwise agreed in writing, we sell the products without warranty, and buyers and users assume all responsibility and liability for loss or damage arising from the handling and use of our products, whether used alone or in combination with other products. For most recent technical information, call one of our USA or in Canada offices.



OIL, GREASE AND CHEMICAL RESISTANCE
Resistant to a wide variety of chemicals and solvents.



FLEX PROPERTIES
Exceptional strength and toughness that will resist cracking under repeated flex despite cuts or nicks.



CONTROLLABLE REBOUND OR RESILIENCE
Unlike rubber, Redco™ Polyurethane is available with a very wide range of hardnesses to control or eliminate rebound.



COEFFICIENT OF FRICTION
Higher durometer grades have the lowest coefficient of friction, ideal for applications requiring a slick surface.



LOW TEMPERATURE PROPERTIES
Redco™ Polyurethane remains remarkably flexible in cold environments.



HEAT RESISTANCE
Resistant to dry intermittent temperatures of up to 250°F.



ELECTRICAL PROPERTIES
Excellent insulating properties.

WATER RESISTANCE
Very low absorption rate of .3 to 1% of weight. Resistant to the swelling and deteriorating effects of water.

OXYGEN AND OZONE RESISTANCE
Virtually immune to several hundred hours of attack by normal atmospheric concentrations.

MOLD, MILDEW, FUNGUS RESISTANCE
Highly resistant to fungus, mold and mildew growth.

FLAME RESISTANCE
Many grades are ASTM D-635 compliant and are self-extinguishing. Special compounds are available where a completely non-burning material is required.

MACHINABILITY
Harder urethanes grades can be machined, drilled and tapped.

BONDING TO OTHER MATERIALS
Redco™ Polyurethane can be bonded to a wide variety of materials. High strength bonds can be obtained to most metals, wood and many plastics including; PVC, Nylon and PTFE.

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