



Redco™ DYNAMEX™ TORZEAL™

TECHNICAL DATA SHEET

REDCO™ DYNAMEX™ TORZEAL™ is a product family of custom molded elastomeric seals, **mainly used for dam gates and similar hydro applications**. All products are custom designed and specifically molded for unique applications. A range of standard profiles is available, such as “J” or Centre Bulb Seals with pre-designed corners and transitions are available.

At Redwood Plastics and Rubber we are convinced that it is critical for dam gates to only rely on molded seal segments, and to eliminate the use of extruded profiles, for following reasons:

- Quality and physical properties of seams and splices of extruded seals are inferior to those of molded seals and can cause premature failure.
- Dimensional tolerances of molded parts are significantly tighter than of extruded parts.
- Rubber compounds for moulding applications are available with premium grade physical properties which are hard to achieve with compounds for extrusion.

Redwood Plastics and Rubber carefully selected a premium natural rubber compound for its REDCO™ DYNAMEX™ TORZEAL™ products which is specifically tested for these applications. Performance and physical data are monitored to guarantee the required long service life, exceptional durability and functionality of the product.

Dome, bulb, “J” or “P” seals can also be provided with 1.5mm (typically) black or white REDCO™ PTFE to increase the life of the seal and reduce the energy consumption that is created by water flow friction and abrasion. REDCO™ PTFE also reduces the potential for the seal to “contact bond” to steel closure. Furthermore, steel bars can be vulcanized to the rubber seal which provides higher bond strength than cold bonding rubber to steel. In general, bond strength of our splices and vulcanized connections are in the range of the original rubber material strength.

FORMAT: Custom
COLOR: Black
DUROMETER: SHORE A



**Weather
Resistant**



UV Resistant



**Ozone
Resistant**



Fire Resistant



**Corrosion
Resistant**

Redco™ DYNAMEX™ TORZEAL™

Technical Data Sheet

PROPERTY

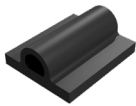
TEST METHOD

SPECIFICATION

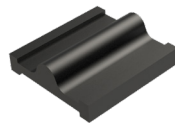
These values are intended for guidance to material selection only. As with any new application, we recommend testing in the actual application prior to specification.

Durometer (Hardness), Shore A	ASTM D 2240	60 +/-5
Specific Gravity [-]	ASTM D 792	1.14
Tensile Strength [psi]	ASTM D 412	3000 min
Tensile Elongation	ASTM D 412	450 min
Compression Set 22 hrs @ 70°C	ASTM D 395 Method B	30% max
Accelerated Aging 70 hrs @ 70°C, change in hardness	ASTM D 573	+/- 10 pts -25% max. -25% maz
change in Tensile Strength change in Elongation		
Low Temperature Brittleness @ - 40°C	ASTM D 2137	pass
Ozone Resistance	ASTM D 1149	no cracks / pass
Water Volume Swell	ASTM D 471	5% max.
Accelerated Aging, Oxygen Bomb	ASTM D 572	Retain min. 80% Tensile Strength
Tear Strength, Tear C [pli]	ASTM D 624 Method C	250 min.

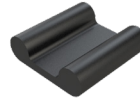
The material specification above summarizes the most relevant physical properties of our Natural Rubber compound exclusively used for REDCO™ DYNAMEX™ TORZEAL elastomeric seals for dam gates.



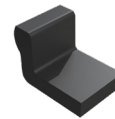
CENTER DOME BULB



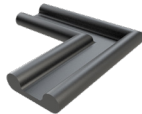
CENTER DOME SEAL



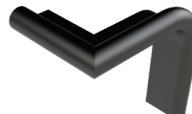
DOUBLE BULB SEAL



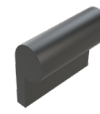
L-TYPE 3545



DOUBLE BULB SEAL
ANGLED



J-SEAL - SOLID BULB 2



J-SEAL - SOLID BULB

REDCO™ DYNAMEX™ TORZEAL™ are most often manufactured with Natural Rubber, EPDM or Neoprene. Natural Rubber has excellent mechanical properties however, for applications with extended periods of sunlight, we recommend REDCO™ EPDM, REDCO™ Neoprene or a blend with Natural Rubber.

REDCO™ DYNAMEX™ TORZEAL has high tensile strength, high tear resistance, good abrasion resistance, low water resistance, good resistance to gases or fluids and excellent weathering resistance.

ASK US about our custom cutting, stamping and fabricating services. All sheet rubber products are available in many formats, including:

- ▶ Full rolls
- ▶ Sheets
- ▶ Cut- to-size strips
- ▶ Blocks
- ▶ Custom-fabricated
- ▶ Die-cut parts

Redwood Plastics and Rubber offers a quick-ship process for in-stock sheet orders in as little as 24 hours if required.