



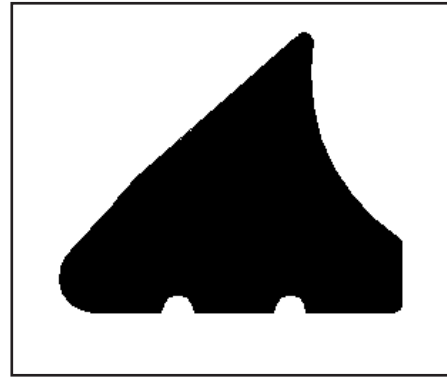
NITRILE 4G



OIL-RESISTANT GASKETS for CONCRETE PIPE

What They Are

NITRILE 4G GASKETS are high-performance gaskets for concrete pipe which combine watertight sealing performance with the ability to resist common underground contaminants.



How They Work

NITRILE 4G GASKETS are manufactured from a custom-blended rubber compound which uses a synthetic rubber copolymer of acrylonitrile (ACN) and butadiene. The resulting synthetic rubber polymer, NBR (nitrile-butadiene rubber), is blended with other ingredients to create a thermoset rubber which is highly resistant to a variety of petroleum-based fluids, as well as many mixed chemistries.

Typical Applications

NITRILE 4G offers hydrocarbon resistance for applications where there are (known, suspected, or potential) contaminated soils or effluent streams, such as:

- Service Stations
- Convenience Stores
- Petroleum Storage Terminals
- Pipeline Terminals
- Refineries
- Auto Dealerships
- Truckstops
- Car/Truck Washes
- Airport Ramps or Deicing Facilities
- Other areas where risk of contamination requires preventive engineering

NITRILE 4G GASKETS
*meet or exceed all requirements
of the following Specifications
and/or Test Methods:*

**- ASTM C 1619 Class D for
Oil-Resistant Gaskets**

**- ASTM C443-04 for
Oil-Resistant Gaskets**

**- CSA 257.3-03 for
Oil-Resistant Gaskets**

In addition to resistance to common hydrocarbons, NITRILE 4G also offers improved resistance to mixed contaminated chemistries. This is especially important where contaminants and their concentrations cannot be accurately predicted or determined. This can result in interactions among the contaminants which are difficult to anticipate and define.

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Submittal Specification

An oil-resistant watertight rubber gasket shall be employed in the connections of concrete pipe for sanitary, stormwater, drainage, or other applications where contaminants are known or suspected.

The gasket shall be NITRILE 4G as manufactured by Press-Seal Gasket Corporation, Fort Wayne, Indiana, or approved equal.

The gasket shall be the sole element relied on to assure a flexible watertight seal between pipe connections. The gasket shall consist of a single wedge-shaped rubber element. The rubber compound used shall consist of synthetic nitrile butadiene rubber polymer and shall conform with the sealing and oil-resistance requirements of ASTM

C 1619, Class D, ASTM C 443-04 for Oil-Resistant Gaskets, and CSA 257.3-03 for Oil-Resistant Gaskets.

Each gasket shall be individually identified with a continuous blue or green stripe toward the leading edge of the gasket. This stripe shall be used to positively identify that the gasket is NITRILE 4G and to confirm its proper orientation on the spigot of the pipe.

Selection of the proper size gasket for the pipe requirement, and installation thereof, shall be in strict conformance with the recommendations of the gasket manufacturer. Any testing also shall be conducted in strict conformance with the requirements of the gasket manufacturer..

NITRILE 4G PROFILE	GASKET SPACE
158-4G	0.326
210-4G	0.446
288-4G	0.500

Special Notes Regarding NITRILE 4G GASKETS

Due to inherent properties of nitrile gaskets, special considerations are noted:

1. Nitrile gaskets are non-stock items, and they will require 4-8 weeks lead time for production and testing.
2. Nitrile gaskets are higher durometer (harder), increasing pipe insertion forces. This hardness increases rapidly at lower temperatures, requiring special care in low-temperature installations (<40F/4C)
3. Nitrile rubber may occasionally have slight internal porosity. This is not a defect as long as the material meets all other specification requirements.
4. Required splice testing strain may result in occasional splice breakage when the gasket is installed on the pipe. It is recommended that an additional quantity of gaskets (5-10%) be ordered and supplied to compensate. In any event, Press-Seal will not be responsible for any consequent delays or damages related to this.
5. Nitrile rubber hardens rapidly with age. Gaskets older than 12 months should be retested before use to ensure their continued suitability.

TEST REQUIREMENTS and RESULTS for NITRILE 4G GASKETS as in ASTM C1619 Class D, and ASTM C 443-04 and CSA 257.3-03 for Oil-Resistant Gaskets			
Test	ASTM Test Method	Test Requirements	Typical Result
TENSILE STRENGTH	D 412	1200 PSI, MIN.	1403 PSI
ELONGATION AT BREAK	D 412	350%, MIN.	563%
HARDNESS	D 2240 (SHORE A DUROMETER)	±5 FROM THE MANUFACTURER'S SPECIFIED HARDNESS	<2
ACCELERATED OVEN-AGING	D 573, 70± 1°C FOR 7 DAYS	DECREASE OF 15%, MAX. OF ORIGINAL TENSILE STRENGTH, DECREASE OF 20%, MAX. OF ELONGATION	-3% TENSILE CHANGE, -10% ELONGATION CHANGE
COMPRESSION TEST	D 395, METHOD B, AT 70°C FOR 22 HRS	DECREASE OF 25%, MAX. OF ORIGINAL DEFLECTION	10%
WATER ABSORPTION	D 471 IMMERSE 0.75 BY 2-IN. SPECIMEN IN DISTILLED WATER AT 70°C FOR 48 hrs	INCREASE OF 10%, MAX. OR ORIGINAL BY WEIGHT	2.70%
OZONE RESISTANCE	D 1171	RATING 0	PASS
LOW-TEMP, BRITTLE POINT	D 746	NO FRACTURE AT -40°C	PASS
OIL RESISTANCE	D 471; ASTM IRM 903 AT 100°C FOR 70HRS	80% MAX VOL. CHANGE	-1.9%

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