

# NRW-37

## Nuclear Grade Mixed Bed Resin

(For the production of high purity water)

### Technical Data

#### PRODUCT DESCRIPTION

**Purolite's** nuclear resins are processed under the most exacting specifications. These resins are specially purified with high percent conversions to their regenerated form and closely controlled particle sizes. Bead hardness averages over 400 grams in the regenerated forms. All of **Purolite's** nuclear products have whole perfect beads over 95%.

**Purolite's** nuclear products are used in ultra-pure water, radiation waste, pharmaceuticals, semiconductors, and condensate polishing. Our mixed bed resins may be used in polishers following other types of water processing. Our high grade of nuclear resins insure that the water processed is in fact the highest quality 18.3 megohm (0.055  $\mu\text{S cm}^{-1}$ )\*.

**Purolite NRW-37** consists of **Purolite NRW-400** (strong base type 1 anion) and **Purolite NRW-100** (strong acid cation) both in the regenerated form mixed to a 1:1 chemical equivalent. Other ratios are available upon request. Our mixed bed resins can be used for regenerative or non-regenerative (cartridge) systems.

**Purolite** mixed bed nuclear resins are processed without declumping agents to insure that the quality obtained is nothing less than the best.

\*Depends upon water analysis and equipment used.

Typical Physical & Chemical Characteristics		
	Cation Portion	Anion Portion
Functional Group	R-SO <sub>3</sub> H <sup>+</sup>	R <sub>4</sub> N <sup>+</sup> OH <sup>-</sup>
Ionic Form, as shipped	H <sup>+</sup>	OH <sup>-</sup>
Total Exchange Capacity (Volumetric)	1.8 meq/ml min. H <sup>+</sup> form	1.0 meq/ml min. OH <sup>-</sup> form
Percent Conversion to Ionic Form	99.9% min. H <sup>+</sup> form *	95% OH <sup>-</sup> form * 5% max. in CO <sub>3</sub> from Cl <sup>-</sup> 0.4% max. **
Volume Ratio	1.0 part <b>NRW-100</b>	1.5 parts <b>NRW-400</b>
Particle Size Range	5% max. > 1.2 mm (16 mesh); 2% < 0.4 mm (40 mesh)	
Physical Appearance	Amber spherical beads (Black cation available)	
Column Capacity	0.58 meq/l (29g CaCO <sub>3</sub> /l) min. (12.7 Kgr/ft <sup>3</sup> ) min.	
Heavy Metals Content as ppm by weight of dry resin		
Sodium and Potassium	40 ppm max.	
Iron	100 ppm max.	
Heavy Metals	50 ppm max.	
Moisture Content as shipped	65% max.	
pH Range, Stability	0 - 14	
Shipping weight (approx.)	740 g/l (46 lb/ft <sup>3</sup> )	
Operating temperature	Non-regenerative bed	100°C (212°F) max.
	Regenerative bed	60°C (140°F) max.
Operating Flow Rate	12 - 17 m/h (5 - 7 gpm/ft <sup>3</sup> ) (higher rates for polishing)	
Purity of Deionized Water:	> 10 megohm (0.1 $\mu\text{S cm}$ ), ranging up to 18.3 megohm (0.055 $\mu\text{S cm}$ ) depending on pretreatment	
*or as requested. ** <b>NRW-37-LC</b> with 0.1% chloride is available upon request.		

**U.S.A.**

The Purolite Company  
150 Monument Road  
Bala Cynwyd, PA 19004  
Phone: (1) 610-668-9090  
Toll Free: 800-343-1500  
Telefax: (1) 610-668-8139  
Email: [sales@puroliteUSA.com](mailto:sales@puroliteUSA.com)

**TEXAS**

The Purolite Company  
1700 West Loop South  
Suite 740  
Houston, TX 77027  
Toll Free: 800-562-6488  
Telefax: (1) 713-627-7890

**CANADA**

The Purolite Company  
625 Wabanaki Drive  
Unit #2  
Kitchener, Ontario N2C 2G3  
Toll Free: 800-461-1500  
or (1) 519-896-6674  
Telefax: (1) 519-896-6679

**UNITED KINGDOM**

Purolite International Limited  
Kershaw House  
Great West Road  
Junction with Lampton Road  
Hounslow, TW5 OBU  
Sales Phone: (44) 181-570-4454  
Telefax: (44) 181-572-7726  
  
European Marketing  
Phone: (44) 181-577-1222  
Telefax: (44) 181-577-1136

**GERMANY**

Purolite Deutschland GmbH  
Harkort Strasse 25  
40880 Ratingen  
Phone: (49) 2102-46033  
Telefax: (49) 2102-443663

**FRANCE**

Purolite International SARL  
34 Avenue Matignon  
75008 Paris  
Phone: (33) 1-4256-4563  
Telex: 648856  
Telefax: (33) 1-4563-3826

**SPAIN**

Purolite Iberica S.A.  
Parc Tecnologic del Valles  
Centre Empreses Noves Technologies  
08290 Cerdanyola del Valles (Barcelona)  
Phone: (34) 3-582-0266  
Telefax: (34) 3-582-0268

**EGYPT**

Purolite International Middle East  
Cairo Liaison Office  
12 Obour Gardens  
Fifth Floor, App. No. 55  
Salah Salem Street  
Nasr City, Cairo  
Phone: (20) 2-4021477  
Telefax: (20) 2-4021478

**ITALY**

Purolite International S.r.l.  
Viale Coni Zugna 29  
20144 Milan  
Phone: (39) 02-481-8145  
Telefax: (39) 02-4801-2359

**ROMANIA**

Purolite Romania  
International Business Center Modern  
B-dul Carol I No. 34-36  
5th Floor  
Bucharest, Sector 2  
Phone: (40) 1-250-5053/5028  
Telefax: (40) 1-250-5999

**POLAND**

Head Office  
Radus Spolka z o.o.  
ul Przebendowskich 33  
81-543 Gdynia  
Phone/Fax: (48) 58-6248118

**GLIWICE**

Radus Spolka z o.o.  
ul Górnych Wałów 25  
44-100 Gliwice  
Phone: (48) 32-315-931  
Telefax: (48) 32-315-931

**SLASK**

Radus Spolka z o.o.  
ul 3 Maja 3/33  
32-600 Oswiecim  
Phone: (48) 33-425-603  
Telefax: (48) 33-425-603

**CZECH & SLOVAK REPUBLICS**

Purolite International  
Nad Mazankou 17  
182 00 Prague 8  
Phone: (420) 2-688-1086  
Telefax: (420) 2-688-1086

**RUSSIA**

Head Office  
Purolite International  
10th Floor  
36 Lyusinovskaya Street  
Moscow  
Phone: (7) 095-564-8120  
Telefax: (7) 095-564-8121

**ST. PETERSBURG**

Purolite International Limited  
12 Building A Tambovskaya St.  
St. Petersburg  
192007 Russian Federation  
Phone: (7) 812-327-8530  
Telefax: (7) 812-327-9079

**KAZAKHSTAN**

Purolite RH Limited  
Office 205  
240 Dostyk AV.  
Almaty 480051  
Phone: (7) 3272-641-234  
Telefax: (7) 3272-641-234

**SINGAPORE**

Purolite International (Singapore)  
PTE Limited  
32-04 The Concourse  
300 Beach Road, 199555  
Phone: (65) 297-0889  
297-1453  
Telefax: (65) 297-1986

**CHINA**

Head office  
Purolite (China) Company, Ltd.  
Chengguan Town  
Deqing County  
Zhejiang Province 313200  
Phone: (86) 572-842-2908  
Telefax: (86) 572-842-3954

**TAIWAN**

Purolite International  
16F-2, No. 191  
Fu-hsing N. Road, Taipei  
Phone: (886) 2-546-7078  
Telefax: (886) 2-546-7069

**MEXICO**

Purolite International, S.A. De C.V.  
World Trade Center  
Montecito 38, Piso 33, Oficina-19  
Mexico D.F. 03810  
Phone: (52) 5-488-0904  
Telefax: (52) 5-488-0906

**UKRAINE**

Purolite International Limited  
2 Korolenko Street.  
Dnepropetrovsk 320070  
Phone: (38) 0562-320-065  
0562-320-066  
Telefax: (38) 0562-320-067

**KOREA**

Purolite International (Korea) LLC  
Dae Yeon Bldg., Suite 403  
943-30 Daechi-dong  
Kangnam-gu, Seoul  
Phone: (82) 2-3453-7062/7063  
Telefax: (82) 2-3453-7064