



DATA SHEET

DESCRIPTION

Denepox Rapid Gel is a non-sagging, rapid curing, 100% solids, two component, fast setting epoxy gel used for patching, surface sealing, and bonding substrates. It is a thixotropic gel with 25% elongation that works well for port adhesion and surface patching when injecting epoxies, especially if done the same day.

Denepox Rapid Gel is moisture insensitive so it can be applied in damp or even wet conditions. This product meets ASTM C-881, Type: II, Grade: 3, Class: A, B and C. Available in side by side cartridges, 2 and 10 gallon units.

FEATURES

- ❖ Fast Setting
- ❖ No Odor – No Mercaptans
- ❖ Moisture Insensitive
- ❖ No Shrinkage
- ❖ High Strength
- ❖ 100% Solids
- ❖ Easy To Apply
- ❖ Tenacious Adhesion
- ❖ Non-Sag

PHYSICAL PROPERTIES

	<u>PART A</u>	<u>PART B</u>
Solids	100%	100%
Color	White Gel	Black Gel
Weight per gallon	13.97 lb	12.71 lb
Shelf Life	1 year	1 year
	<u>PROPERTIES</u>	<u>ASTM METHOD</u>
Blended Color	Gray Gel	Visual
Mix Ratio	1:1 by volume (A:B)	N/A
Viscosity	Non-Sagging Gel	N/A
Pot Life (3 oz.) @ 77° F	4-5 minutes	N/A
Hardness (shore) @ 77°F	75-D ±5%	D-2240
Gel Time (5 mil) @ 77°F	15 -20 minutes)	N/A
Tensile Strength	6,000 psi	D-638
Flexural Strength	4,000 psi	D-790
Compressive Strength	10,880 psi	D-695
Bond Strength (48 hours)	2,934	C-882
Elongation	1%	D-638
Water Absorption	0.35% (24hours)	N/A



GENERAL INFORMATION

Surface Preparation: Surface of application should be clean and sound. The surface must be free of any dust, oil, grease, laitance, curing compounds, or any other contaminants. It may be dry, damp, or wet, but must be free of standing water. The very best results are obtained on dry concrete. Do NOT apply on surfaces, which have been sealed with a permanent type of form oil, curing compound or release agent. Remove these substances before application. The surface temperature must be 40°F and rising. Precondition the materials to between 65°F – 85°F before using.

Mixing Procedure: Stir each component separately. Mix 1 part A with 1 part B by volume into a clean mixing container. Mix the epoxy with a slow speed drill with a mixing paddle attachment. Carefully scrape the sides and bottom of the pail during mixing with a paint stirring stick. Blend for 3 minutes. Mix only the amount of materials that can be used within the pot life. **Please note: Large batches of epoxy will cure much faster than small batches. Mixed epoxy will cure much faster in hot weather than in cold weather.**

Application: As a grout: Fill the cavity with mortar using a spatula or trowel. Tamp and strike level with the surrounding surface. When filling deep areas, limit each layer to ½ inch to avoid sagging on vertical or overhead applications. Allow cooling time before doing additional layers because of exothermic reaction.

Limitations: Application at ambient temperature below 40°F is not recommended. Exposure to temperatures exceeding 150°F for prolonged periods is not recommended.

Clean-Up: Remove uncured **Denepox Rapid Gel** from tools and equipment with a suitable solvent such as xylene or toluene immediately after use. Cured material may only be removed mechanically.

Storage & Handling:

Shelf Life: A minimum of 1 year in original, unopened container.

Storage: Store in a dry area, between 40°F and 95°F. Protect from direct sunlight.

HEALTH & SAFETY

Health Precautions: Component A - IRRITANT - Prolonged skin or eye contact may cause sensitization and irritation. Component B - IRRITANT - Contact with skin or eyes may cause severe burns.

First Aid: Skin Contact: Wash thoroughly with soap and water. **Eye Contact:** Flush immediately with clean water and contact a physician. **Respiratory Problems:** Remove affected person to fresh air immediately and contact a physician. **Hygiene:** Wash hands immediately after use. Wash clothing before reuse.

Spills: Collect with absorbent material. Remaining material may be removed with a suitable solvent.

Disposal: Dispose of in accordance with local, state and federal regulations.

WARNING:

KEEP CONTAINER CLOSED WHEN NOT IN USE. KEEP OUT OF REACH OF CHILDREN. NOT FOR INTERNAL CONSUMPTION. FOR PROFESSIONAL USE ONLY BY A QUALIFIED TECHNICIAN. Consult the Material Safety Data Sheet for further health and safety information.

Product Warranty

De Neef Construction Chemicals, Inc. products are warranted under the following policy:

All recommendations, statements and technical data contained herein are based on tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty either expressed or implied. User shall rely on his or her own information and tests to determine suitability of this product for the intended use and user assumes all risk and liability resulting from his or her use of the product. Seller's and manufacturer's sole responsibility shall be to replace that portion of the product of this manufacturer which proves to be defective. Neither seller nor manufacturer shall be liable to buyer or any third person for any injury, loss or damage directly or indirectly resulting from use or inability to use this product. Recommendations or statements other than those contained in a written agreement signed by an officer of the manufacturer shall not be binding upon the manufacturer

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EMERGENCY RESPONSE – CALL CHEMTREC 800/424-9300

 **Construction Chemicals, Inc**

PO Box 1219 • Waller, Texas 77484-1219 • Website – www.deneef.com Phone 936/372-9185 • Fax 936/372-9897 • e-mail – info@deneef



DENEPOX

Rapid Gel

TABLE I: Allowable Tension Loads for Threaded Rod Installed in Concrete using De Neef Rapid Gel Based on Bond Strength (lbs)^{*1,2,3}

Stud Diameter (inches)	Hole Diameter (inches)	Embedment Depth (inches)	3500 PSI	4000 PSI	4500 PSI	5000 PSI	5500 PSI
3/8"	7/16"	3 1/2"	1815	1813	1811	1809	1807
3/8"	7/16"	5 1/4"	2178	2179	2180	2182	2184
1/2"	9/16"	4 1/4"	3648	3665	3682	3699	3716
1/2"	9/16"	6 1/2"	4506	4541	4576	4610	4645
5/8"	3/4"	4"	3289	3311	3332	3353	3376
5/8"	3/4"	6"	5482	5518	5554	5589	5626
5/8"	3/4"	7 1/2"	6579	6622	6665	6709	6751
3/4"	7/8"	5"	4390	4422	4455	4488	4521
3/4"	7/8"	7"	7315	7370	7425	7480	7535
3/4"	7/8"	9"	8779	8844	8910	8916	9042
7/8"	1"	6"	5489	5534	5578	5623	5667
7/8"	1"	8 1/2"	9149	9223	9297	9371	9445
7/8"	1"	10"	10979	11067	11156	11245	11334
1"	1 1/8"	7 1/2"	7318	7199	7259	7320	7380
1"	1 1/8"	10"	10982	11075	11168	11261	11354
1"	1 1/8"	12 1/4"	12629	12736	12843	12950	13057

^{1.} Spacing & edge distance shall be in accordance with the requirements noted in Table IV.

^{2.} The tabulated values are for anchors installed in concrete having the designated compressive strength at the time of installation, interpolated from independent lab tests.

^{3.} The allowable load shall be the lesser of the bond or steel strength.

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TABLE II: Allowable Tension Loads for Threaded Rod Installed in Concrete using De Neef Rapid Gel Based on Steel Strength (lbs)^{1,2}

Stud Diameter (inches)	Hole Diameter (inches)	Embedment Depth (inches)	A36 Steel	A307 Steel	304SS Steel	316 SS Steel
3/8"	7/16"	2"	2100	2200	1760	1760
3/8"	7/16"	3 1/2"	2100	2200	1760	1760
3/8"	7/16"	5 1/4"	2100	2200	1760	1760
1/2"	9/16"	2 1/2"	3745	3920	3135	3135
1/2"	9/16"	4 1/2"	3745	3920	3135	3135
1/2"	9/16"	6 1/2"	3745	3920	3135	3135
5/8"	3/4"	4"	5865	6140	4910	4910
5/8"	3/4"	6"	5865	6140	4910	4910
5/8"	3/4"	7 1/2"	5865	6140	4910	4910
3/4"	7/8"	5"	8440	8840	7070	7070
3/4"	7/8"	7"	8440	8840	7070	7070
3/4"	7/8"	9"	8440	8840	7070	7070
7/8"	1"	6"	11480	12020	9615	9615
7/8"	1"	8 1/2"	11480	12020	9615	9615
7/8"	1"	10"	11480	12020	9615	9615
1"	1 1/8"	7 1/2"	14995	15700	12560	12560
1"	1 1/8"	10"	14995	15700	12560	12560
1"	1 1/8"	12 1/4"	14995	15700	12560	12560

¹ The steel strengths are based upon the allowable stresses listed in Table #27-A of the Uniform building Code and Tables #27-10-D and 27-10-P of the Uniform Building Code Standard No. 27-10.

² The allowable load shall be the lesser of the bond or steel strength.



DENEPOX

Rapid Gel

TABLE III: Allowable Shear Loads for Threaded Rod Installed in Concrete using De Neef Rapid Gel (lbs)

Stud Diameter (inches)	Hole Diameter (inches)	Embedment Depth (inches)	3500 PSI	4000 PSI	4500 PSI	5000 PSI	5500 PSI
3/8"	7/16"	2"	---	---	---	---	---
3/8"	7/16"	3 1/2"	1299	1322	1346	1369	1392
3/8"	7/16"	5 1/4"	1299	1322	1346	1369	1392
1/2"	9/16"	2 1/2"	---	---	---	---	---
1/2"	9/16"	4 1/2"	2374	2407	2440	2473	2506
1/2"	9/16"	6 1/2"	2374	2407	2440	2473	2506
5/8"	3/4"	4"	---	---	---	---	---
5/8"	3/4"	6"	3449	3492	3535	3577	3620
5/8"	3/4"	7 1/2"	3449	3492	3535	3577	3620
3/4"	7/8"	5"	---	---	---	---	---
3/4"	7/8"	7"	4523	4576	4629	4682	4735
3/4"	7/8"	9"	4523	4576	4629	4682	4735
7/8"	1"	6"	---	---	---	---	---
7/8"	1"	8 1/2"	5598	5661	5724	5786	5849
7/8"	1"	10"	5598	5661	5724	5786	5849
1"	1 1/8"	7 1/2"	---	---	---	---	---
1"	1 1/8"	10"	6673	6746	6818	6891	6963
1"	1 1/8"	12 1/4"	6673	6746	6818	6891	6963



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TABLE IV: Recommended Spacing and Edge Distances (D = Diameter) for De Neef Rapid Gel

Anchor Embedment* E	Recommended Anchor Spacing S	Minimum Anchor Spacing S Min.	Recommended Edge Distance M	Minimum Edge Distance M Min.
4.0 D - < 8.0 D	2.00 E	1.00 E	1.00 E	1.00 E
8.0 D - < 10.0 D	1.50 E	0.75 E	1.00 E	0.50 E
> 10.0 D	12 D	6.00 D	10 D	5 D

DE NEEF RAPID GEL EPOXY

Installation Instructions

Anchor stud (bolt, rebar, dowel rod or threaded rod) must be clean of any grease, oil, rust or other contaminant which would prevent direct epoxy adhesion. Annular space around bolt should not exceed 1/8". De Neef's Rapid Gel works equally well in both rotary hammer and core drilled holes.

- 1) Drill proper sized hole. Clean hole with compressed air and nylon brush.
- 2) Insert nozzle into the bottom of hole and fill hole to 1/2" the hole depth*.
- 3) Insert rod slowly by hand into the bottom of the hole using a slow twisting motion.
- 4) Allow recommended cure time to elapse before installing and tightening fixture.

Recommended Spacing and Edge Distances (D = Diameter)

Anchor Embedment** E	Recommended Anchor Spacing S	Recommended Edge Distance M	Minimum Edge Distance M Min.
4.0 D - < 8.0 D	2.00 E	1.00 E	1.00 E
8.0 D - < 10.0 D	1.50 E	1.00 E	0.50 E
> 10.0 D	12 D	10 D	5 D

* When starting a fresh cartridge, epoxy must be evenly blended before using.

** Shallower embedment depth may be used but must be job site tested.

