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Technical Data Sheet

Permatex® Black Rubber Toughened Gel Adhesive

INDUSTRIAL

PRODUCT DESCRIPTION

S.I.N.: 834-300

Permatex® Black Rubber Toughened Gel Adhesive is a black, single component, cyanoacrylate gel adhesive that is toughened with elastomers for impact, peel and moisture resistance. The Black Rubber Toughened Gel Adhesive resists thermal shock and can be used in temperatures up to 99°C.

TYPICAL APPLICATIONS

- For use on most plastic, rubber or metal surfaces
- For parts subjected to thermal shock and vibration
- Humid or damp environments
- For slower fixture times than standard adhesives

DIRECTIONS FOR USE

1. Protect the work surface against accidental spills, as cyanoacrylates can mark finishes and fabrics.
2. To ensure a good, lasting bond, the surface must be clean and free of rust inhibitors, mold release agents, grease and oil. Bond strength on painted parts will be determined by how well the paint adheres to its substrate.
3. Apply the glue to one of the surfaces. Use sparingly, one square inch of surface area requires only one drop of glue.
4. Hold the surfaces to be bonded together for 15 to 30 seconds. No clamping is required. **DO NOT REPOSITION THE PARTS.**
5. Replace the cap, and store the glue in a cool spot.
6. Allow the parts to cure overnight.

Adhesive Application

Optimum results with cyanoacrylate adhesives are obtained with the minimum quantity of adhesive needed to fill the joint. In general, one free falling drop spreads over one square inch. Apply firm pressure to mated surfaces until the adhesive sets.

Bond Durability

Bond durability is affected by surface conditions, bond areas, service temperature, environment and stress. Each application must be evaluated individually. Moisture and temperature resistance are dependent on the surfaces bonded.

For Cleanup

1. To remove Super Glue, use Super Glue Remover, acetone or nail polish remover that contains acetone.
2. To remove from hard surfaces such as Formica®, saturate a soft cloth or paper towel with the acetone and allow to rest on the spot for about 10 – 15 minutes. After the Super Glue is removed, a white or light colored spot may be left which is easily removed by applying

mineral oil to the spot to restore the color.

3. Clean hands with acetone then use Permatex® brand hand cleaners.

PROPERTIES OF UNCURED MATERIAL

	Typical Value
Chemical Type	Modified ethyl cyanoacrylate
Appearance	Black gel
Odor	Sharp
Specific Gravity	1.06
Viscosity, Brookfield RVT, Spindle 3, cP (20rpm)	Gel
Flash Point, (TCC) °C	>65

TYPICAL CURING PERFORMANCE

Under normal conditions, the surface moisture initiates the hardening process. Although full functional strength is developed in a relatively short time, curing continues for at least 24 hours before full chemical/solvent resistance is developed.

Cure Speed vs. Substrate

The rate of cure will depend on the substrate used. The table below shows the fixture time achieved in different materials at 22°C, 50% relative humidity. This is defined as the time to develop a shear strength of 0.1 N/mm² (14.5 psi) tested on specimens per ASTM D1002.

Substrate	Fixture Time, seconds
Steel	80 to 120
Aluminum	10 to 30
Neoprene	15 to 25
Nitrile Rubber	15 to 25
ABS	20 to 50
PVC	50 to 100
Polycarbonate	30 to 90
Phenolic	20 to 60

Cure Speed vs. Bond Gap

The rate of cure will depend on the bondline gap. High cure speed is favored by thin bond lines. Increasing the bond gap will slow down the rate of cure.

TYPICAL ENVIRONMENTAL RESISTANCE

Temperature Resistance	Typical Values
Continuous, °C (°F)	-54 to 99 (-65 to 210)

Tensile Strength, psi	2000 - 3500
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Chemical / Solvent Resistance

The product retains effective properties when in contact with most solvents.

NOT FOR PRODUCT SPECIFICATIONS.

THE TECHNICAL DATA CONTAINED HEREIN ARE INTENDED AS REFERENCE ONLY.

PLEASE CONTACT PERMATEX, INC., TECHNICAL SERVICE DEPARTMENT FOR ASSISTANCE AND RECOMMENDATIONS FOR YOUR SPECIFIC APPLICATION.
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GENERAL INFORMATION

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

For safe handling information on this product, consult the Material Safety Data Sheet, (MSDS).

ORDERING INFORMATION

Part Number	Container Size
42640	20 gm. tube

STORAGE

Products shall be ideally stored in a cool, dry location in unopened containers at a temperature between 8° to 28°C (46° to 82°F) unless otherwise labeled. Optimal storage is at the lower half of this temperature range. To prevent contamination of unused product, do not return any material to its original container.

NOTE

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