



# POLYUREA 209

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## PRODUCT DESCRIPTION

Polyurea 209 is a two-component aromatic polyurea formulated for a wide range of industrial and manufacturing uses. It provides a waterproof barrier and exceptional flexibility, offering excellent impact resistance. Its high elongation and flexibility result in a high coefficient of friction, making it ideal for nonskid surfaces. The product cures quickly and can be overcoated within minutes using a suitable UV-stable topcoat, if required.

## GENERAL USES

**Recommended Uses:** Containment & Secondary Fuel Containment, Coating/Lining for Floors, Walls, and Roofs, Marine Docks, Pillars, Decks, Engine Compartments Utility Vehicles, Buses, & Boats, Rehabilitation of Old Structures & Buildings

**Features:** High Impact Resistant, High Flexibility & Elongation, High Coefficient of Friction, Great Nonskid Coating, No Cracking or Warping, High Traction Protects Against Rust & Rot, Speeds Production Process vs. Paint, Reduces Sound Pollution, Sound Dampening, Waterproof, Fast Cure, Light Foot Traffic within 15 min

## TECHNICAL DATA

	UNITS	VALUES	TEST METHOD
HARDNESS	Shore A	90	ASTM D2240
DENSITY	g/cc	1.023	DIN 53479
PERCENT SOLIDS	%	100	
TENSILE	psi	3000	ASTM D412
ELONGATIONS	%	575	ASTM D412
TEAR	pli	500	ASTM D624C
TABER ABRASION (CS-17)	mg/rev. loss	35/1000	ASTM D4060
ELCOMETER ADHESION	psi	>1200 Sandblasted Steel – Glue Failure >800 Concrete – Substrate Failure	ASTM D4541
COEFFICIENT OF FRICTION		Smooth surface 2.01 – Rough surface 1.89 on James Machine with Leather	ASTM D1894
COEFFICIENT OF FRICTION		Smooth surface .083 – Rough surface 1.89 on James Machine with Leather	ASTM D2047
IMPACT RESISTANCE	in-lb	176 (passed)	ASTM D2794
MANDREL BEND	mm	2 (passed)	ASTM D522
MODULUS 300%	psi	830	ASTM D412
MODULUS 400%	psi	1050	ASTM D412
MODULUS 500%	psi	1650	ASTM D412
GEL TIME / TACK FREE	Sec	8-10 / 20-25	
HANDLING TIME	Min	20-30	
LIGHT DUTY USE	Hrs	2	
FULL SERVICE USE	Hrs	24	

NOTE: PHYSICAL PROPERTIES MAY VARY ON THE TYPE OF SPRAY EQUIPMENT USED.  
THE END USER SHOULD CHECK THE SUITABILITY OF THIS PRODUCT PRIOR TO USE

## PACKAGING

Part-A (Isocyanate) and Part-B (Resin) are supplied as a kit, with 52 gallons of each in two 55-gallon drums. 275-gallon IBC totes are also available.

## SURFACE PREPARATION

Proper surface preparation is an essential first step before applying any coating system. The performance and longevity of a coating depend largely on its adhesion to the substrate. Industry experience shows that correct surface preparation is the most important factor in achieving a durable and effective coating. Even small amounts of contaminants, such as oil, grease, oxides, or other residues, can reduce adhesion and compromise performance.

All surfaces must be clean, dry, structurally sound, and properly profiled to ensure good bonding. Remove dust, efflorescence, laitance, salts, curing compounds, dirt, oils, form release agents, and other contaminants. Perform an adhesion test before applying any coating. Metal and composite fiber substrates should be thoroughly cleaned and primed to maximize adhesion or lightly abrasive blasted to achieve a 2-3 mil surface profile. For additional guidance, consult your representative.

Concrete must be cured for at least 28 days and reach a minimum compressive strength of 3,000 psi before coating. If the concrete surface is unsuitable for direct coating, apply an appropriate primer or a primer with sand to repair defects. Once repairs have cured, prime the entire surface. Contact Rugged Coatings for help selecting the best primer for your substrate.

## EQUIPMENT CLEAN-UP

Clean equipment immediately after use with an environmentally safe solvent, in accordance with local regulations. Cured or dried material can only be removed mechanically. Be familiar with your equipment and follow recommended routine maintenance procedures.

## SPRAY MACHINE REQUIREMENTS

- Capacity minimum 20 lbs. per minute
- Static pressure 1800 - 2500psi
- Spraying pressure 2200psi
- Pressure balance 100 variance desirable
- 300 psi variance maximum
- Temperatures preheaters & hose 155°F-165°F each. Check with your local representative
- Polyurea 209 should be sprayed in a smooth pattern, to establish uniform thickness and appearance. Perform a substrate adhesion test (if required) seven days after application of Polyurea 209.

## COVERAGE RATE

One gallon (3.79 liters) of Polyurea 209 covers approximately 1,600 square feet at a thickness of 1 mil (0.025 mm). It can be applied in a single pass or multiple passes to achieve the desired thickness.

## COLOR

Available colors: Black and Neutral. Custom colors and color packs can be requested. Aromatic polyureas may yellow or darken when exposed to UV light or sunlight.

## MIXING PROCEDURES

Thoroughly mix Polyurea 209 Part-B (Resin) using air-powered tools until the color and consistency are uniform, with no streaks or variations.

## STORAGE

Polyurea 209 has a shelf life of one year from the date of manufacture when stored in factory-sealed containers. Both Part-A and Part-B should be kept at temperatures between 55°F and 95°F, avoiding freezing conditions. Ensure containers remain tightly sealed to prevent condensation, moisture, or water contamination. For partially used containers, flush with nitrogen before resealing, or use Visuron's 'Quick Burp' aerosol for convenience.

## APPLICATION

Primer is recommended for all substrates except properly prepared steel. Before application, precondition both Part-A and Part-B to 75°F-80°F (24°C-27°C). Ensure the substrate and ambient air temperatures are between 40°F and 104°F, and at least 6°F above the dew point with temperatures rising. Equip Part-A with a desiccant drying device. Apply Polyurea 209 using plural-component, high-pressure, 1:1 ratio heated spray equipment.

## WARRANTY AND DISCLAIMER

**Rugged Coatings** warrants Polyurea 209 to be free from defects in materials and manufacturing. Under this warranty, we will provide, at no charge, a quantity of Polyurea 209 sufficient to replace any Polyurea 209 proven to be defective when applied according to our written instructions and in applications recommended by us as suitable for the product. THIS LIMITED WARRANTY IS THE BUYER'S SOLE AND EXCLUSIVE REMEDY AGAINST RUGGED COATINGS REGARDING THE PRODUCT. IN NO EVENT SHALL RUGGED COATINGS BE LIABLE FOR ANY CONSEQUENTIAL, SPECIAL, INCIDENTAL, INDIRECT, PUNITIVE OR OTHER DAMAGES ARISING FROM THE USE OR PERFORMANCE OF THE PRODUCT. Since methods of application and on site conditions can affect performance, RUGGED COATINGS MAKE NO OTHER WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE REGARDING THE PRODUCT, AND RUGGED COATINGS HEREBY DISCLAIM ALL SUCH OTHER WARRANTIES. The information and recommendations set forth in this Product Data Sheet are based upon tests conducted by or on behalf of Rugged Coatings. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of the publication. Consult your Rugged Coatings Technical Representative to obtain the most recent Product Data **Information**. If further information is needed, contact Rugged Coatings Technical Service at 205-440-4996.