

## **Small vs Large Applications of Polyurea(s) Polyurea Hybrid(s):**

**Publication:** University of London; Charing Cross and Westminster with help from Penn State University Libraries and Vipul Bansal, RMIT University, Australia. By Kemal Malik, Bayer Material Science now operating under Covestro Bayer AG. Publication is provided in appreciation for/ in lieu of smaller applications (applicators)'s usual limited access of high-quality spec polyurea, application equipment information. These findings are notwithstanding decisive, technical support otherwise unavailable to said applications of under approximately 20,000 ft<sup>2</sup>; 1858 m<sup>2</sup>.

**Description-** variations of "typical" *Spray-on Lining Coatings products, application equipment, complete systems.* This study addresses higher and/or highest qualities with maximum quantities per U.S. dollar or CAD / Loonie available to, "DIY Consumer", "Small Business", DIY in-house applications by OEM pricing. Also is Spray-on Lining (type) polyurea coatings (systems) offered under dealership thereof.

### **COVERED JOB TYPES:**

**SPRAYED BED LINER** - a) Pickup Truck Bed protection, exterior/ interior, rock/chip guard, fender wells, b) Jeep exterior/ interior, rock/chip guard, fender wells, c) Trailer interior- slip-proof, seal wall to floor union, exterior rock/chip guard, fenders, frame; d) Marine/Boat hull exterior protective finish, run-a-ground protection, interior/ deck slip-proof seal wall to floor union, e) All Vehicles Substrates painted, steel, alloys, aluminum, fiberglass, wood.

**TANK LINING** - liquid containment of any/ all substrates.

**POND, FISH POND, DECORATIVE WATERSCAPE, FOUNTAIN, CASCADE, ETC** - Substrates including cement/ block, brick, stone types, wood, gunite, fiberglass, metals. Over unfinished ground with geotextile and/or EPDM or without these.

**SPECIALIZED HIGH STRENGTH PROTECTIVE FLOORING** - Slip-proof low / high flex to anti-stick

**AGRICULTURAL LINING AND COATINGS** - a) Slip-Proof/ Livestock accident prevention b) Anti-Stick coating, chutes, bins, hoppers, feeders; easy sliding, cleaning, sanitary facilities c) Manure Pit, HcL protection: 1- poultry 2- hog 3- dairy 4- zoological 5- horse/ exotic animals

**SPECIALIZED POLYUREA UNDERCOATING** - Truck, Trailer, Jeep, Boat, Racing

**POLYUREA INSULATION OVER FOAM OR IN PLACE OF FOAM** - Slip-Proof vs Anti-Stick - Polyurea, Polyurethane, Hybrids.

### **SYNOPSIS:**

Statement and reviewed: Polyurea and/or hybrids of such requiring Low Pressure or High Pressure, fusion types application equipment clarified herein has logical "brand" comparison with absence of such, "allegedly specified" or required or mandatory equipment for its application.

**FACT 1:** LP or HP fusion based pump to spray gun accelerates times for dry-to-touch (in seconds), dry, full cure, ready for service. Usually being highly automated these systems retain highest cost notwithstanding regular maintenance.

**FACT 2:** Manual mixed, cartridge system with static mixing tube, general air driven or airless systems bear lower rate of polyurea cure; dry-to-touch < 6 hours (known as "DIY Kits" sold retail, via net), <60 seconds with "Cartridge System" (known as DIY or "Startup" System), < 60 seconds with air, airless or "Backpack System" (Flexible Lining Systems only; known as OEM, dealer-grade, Startup or DIY System). Polyaspartic polyurea is an exception, manually mixed and curing in seconds (flooring mainly), via squeegee application.

**FACT 3:** No Polyurethane, Urethane, Epoxy or other types provide tensile or tear strength, elasticity, elongation, hardness control or adhesion of Polyurea, spray-lining hybrids of such. Ergo no one or two part, single or two stage formula as above should benefit from this title of, "Spray-on Bedliner" or Bedliner, truck bed liner or General Polyurea. While these are categorized as strong paints, can appear slip-proof or durable, this category falls well below, for example the minimum tensile of 1,100 psi and surpassed 5,400 psi indeed, of actual polyurea.

→ Withholding HP/LP fusion equipment produced mainly by Graco with close to its monopoly and PMC (Polyurea Machinery Corp), within North America and Wiwa of Germany. Others sold by some brands of truck bed liner, "Dealership" are proprietary to only those vendors whose attempts at controlling its dealers via contract appear to prevent seeking better pricing with competing spray-on lining and coatings vendors. Contracts, agreements printed with receipts or franchises here are less than fair or constitutional. Withholding of warranties or refusal to ship required parts were verified upon creating this publication.

→ Air assisted, airless or roll-on Bedliner type polyurea is limited to: 1- Polyaspartic for flooring only, 2- Do It Yourself one & two part brands of inferior urethane or epoxies, Rhino Pro cartridges, other bedliner brands with highest resulting prices, maximum waste and most failure at static mixing tube during spraying, 4- SLC Spray-Lining & Coatings, all Polyurea types, lowest resulting prices, smallest containers, most pails, drum sets, 220 gallon totes, all cartridge types, small to large hopper sprayers, medium to large Graco, PMC with rebuilt rigs. Apparently SLC manufactures for several Lining & Coatings Services, 5- Als Liner, air hopper only DBA Scorpion, also hopper including proprietary or unconventional (not Graco or PMC), HP pump.

### **CONCLUSION:**

→ Vendor(s) herewith limited to 5 (five) ratings where priority, i.e. highest qualities, lowest prices, simplest equipment (roll-on available), fair to superior support services, notwithstanding highest credibility and/or best "reputation" of vendor became lowest number and where number 5 resulted inadvisable:

1- If only cartridge's suffice:

- [RhinoPro seems best on eBay or shop](#)
- [Cartridge Based Products and Recommendations](#)

2- [SLC - Generic polyurea small to large systems](#)

3- [SPI - Generic polyurea large systems only](#)

4- [ALS - Small DIY jobs only](#)

5- **INADVISABLE**- (false claims, misrepresentation) 1 part polyurethanes, urethanes, epoxies: Herculiner, Dupli-Color, Hippo, Raptor, Rust-Oleum, Monstaliner, Durabak, Bed Armor, SEM, Whataliner, Grizzly Grip, Defender, Gator Guard, Apollo; false claims as "bedliner" do not address general "look" as if these are cured polyurea.

Summary: These can "appear" to function under low stress or decorative use.

**Disclaimer:** Report method(s), technique(s), strategy (ies) herewith above were/are designated for the, "small" business/ "small applicator" and/or "smaller applications" of polyurea type product not limited to under 20,000 ft<sup>2</sup>; 1858 m<sup>2</sup>. By virtue of polyurea industry growth, and/or consideration of recorded disenchantment, unfulfillment, or bafflement upon said, "startup clientele", new and less experienced prospects *Small verses Large Applications of Polyurea(s) Polyurea Hybrid(s), The Publication*, herein is hence displayed. No attempt herewith has been made and/or was intended for purpose(s) of promotion(s), sale(s), marketing or advertising as such.

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