

PIPEDREAM INDUSTRIES - PRODUCT OVERVIEW

Super Hydrophobic Additive for Cellulose Substrates



Wood:
Left = Uncoated. Right = Coated with Pipedream Additive



Paper:
Coated with Additive



Cardboard:
Cardboard With v Without Coating



OVERVIEW:



Super Hydrophobic



Ultra Light Weight



Easy To Apply/Reycle



Food Safe

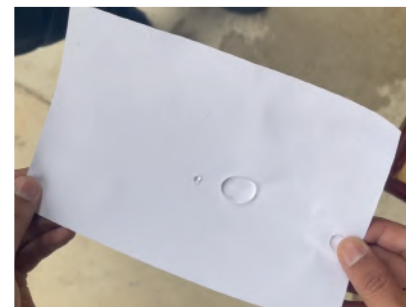
WHAT IS IT:

The powder coating is made of charged amorphous silica monopoles which allows it to electrostatically attach to substrates. The results are cellulose based substrates being easily coated with 1 particle thick layer by powder coating.

- The coating prevents any water based liquids including milk, water, coca-cola, ketchup.
- The coating creates a moisture barrier preventing mold and fungus growth on substrates.
- The coating protects against UV and infrared radiation.

CONTACT ANGLE:

The powder coating is super hydrophobic and has a contact angle of +150 degrees. The roll of angle is <30 degrees.



Paper:
Paper coated with additive is now super hydrophobic

HOW TO APPLY:

- Spray application
- Knife coat
- Powder coat
- Sand blast
- Rubbing
- Brush application

HOW TO REMOVE/RECYCLE: IS IT SAFE:

- Can be removed by grinding down the surface area

- Materials are FDA approved

FAQS

1. What form does the coating come in?

The coating is in a powder form. It is powder coated onto cellulose based surfaces. Such as wood, paper, pulp and cardboard.

2. How many square feet can 1 kg cover?

1 kilogram can cover about 3000-10000 sq ft depending on application method and recycling of unused powder.

3. Is this also oleophobic?

No; the powder is only hydrophobic.

4. How can you apply it?

The powder can be applied using spray coat, brush coat, knife coat, or simply rubbing it in.

5. How is it attached?

The powder attaches electrostatically. With ideal application, It will create a 1 particle thick layer on top of the substrate to protect it against water damage.

6. Can it come off easily during use?

No. Unless the surface is grinded down or chemically treated to remove the powder, the coating will remain attached to the substrate.

7. Can it be removed?

Yes, simply sanding the surface will remove the coating.

8. How can products applied with this be recycled?

The product can be grinded using conventional recycling methods and will be removed from the surface. Unlike, other products that use conventional plastic and wax based coatings for waterproofing which require large amounts of processing to recycle, as a result, substrates are sent to the landfill.

9. Is this powder food safe?

Yes, The FDA has already approved the product as safe to use as an additive inside food products.

10. What color is it when applied?

The coating is transparent when applied.

11. Does humidity affect the powder?

The coating is superhydrophobic leading to humidity having no effect on the substrate.

12. How much does it weigh per sq ft coverage?

The coating weight 0.005 micrograms per sqft of coverage using ideal application methods.

13. What liquids does it protect against?

The coating protects against any liquids that are water based. This includes: ketchup, water, gatorade, coca-cola, milk, etc.

14. How hydrophobic is it?

Most waterproof coats are not superhydrophobic. This means that the contact angle with the substrate and the water is above 90 degrees but below 150 degrees. Our coating has a contact angle of 150+ degrees making it super hydrophobic.

15. How can a powdered additive be applied as a spray coat, isn't that only for liquids?

Since the additive electrostatically binds, the powder can be pressure sprayed through conventional spraying means. The powdered additive behaves like a fluid allowing for easy use in spray and piping systems.