

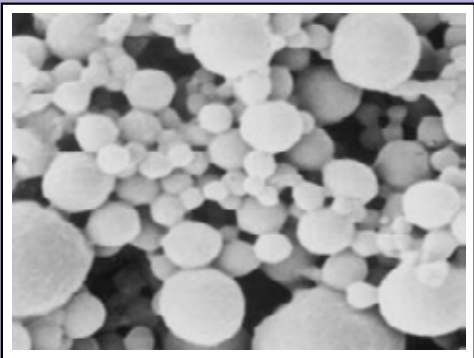
COATINGS THAT REVEAL IMPACT OR CONTACT

Damage Indicating Paints

Do you have a need to determine if an object has been touched, scraped or impacted?

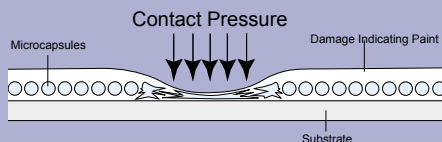
Sensor Products introduces DIP®, Damage Indicating Paint. DIP® is designed to be coated or sprayed onto your product, part or component. DIP® is designed to serve as a visual (or non-visible ultraviolet) indicator revealing both the location as well as degree of contact that an object has sustained or been exposed to.

1



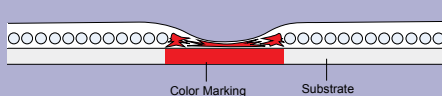
Damage indicating paint is a liquid with microcapsules suspended in it.

2



When the surface that has been painted is subjected to contact, the microcapsules rupture.

3



Upon rupturing they cause a permanent and irreversible color marking that indicated the location and intensity* of the contact.

*only available for some applications.



Damage Indicating Paint coated onto a copper ring (before compression or impact)



After compression or impact

How it works:

Tiny microcapsules (from 1 to 100 microns), are suspended in the liquid paint. When the surface that has been painted has been subject to some sort of minimal contact, the microcapsules rupture (see step 2) causing an instantaneous and permanent color marking (see step 3). These capsules contain what is called a colorformer material, and when it's released it interacts with a catalyst material to produce this color change. We can also encapsulate non visible (ultraviolet) color changing agents that would only be visible upon exposure to certain lighting conditions.

What it is:

DIP is a microcapsule based liquid paint. This paint is coated onto a surface and dries within 6 to 12 hours. Generally the color starts as a neutral white; however any color could theoretically be formulated. Resultant, or after-impact color, can be selected from 10 standard color offerings (formulated to your specifications). Our scientist and chemist tailor DIP to precisely match your requirements. Given the vast permutations of substrate type, texture, environmental exposure conditions and pressure all our DIP coatings are custom produced.

How they are delivered:

Our DIP's can be delivered in dry, powder, or slurry form for application by the user. Alternatively Sensor Products could assist in identifying an appropriate contractor who can apply the coating.