

NanoSlic[®] NS 200 Coating

INTRODUCTION

NanoSlic is a revolutionary hydrophobic and oleophobic permanent Nano Coating technology that can be applied to metal and other surfaces to impart a unique range of properties. NS 200 is a more flexible alternative to NS 110.

ATTRIBUTES

- Outstanding Hydrophobic and Oleophobic Properties
- Will Repel Most Materials
- Imparts "Easy-To-Clean" Property
- Superior Adhesion
- High Film Hardness, Significantly Harder than other Polymer Films
- Flexible
- Superior Temperature Resistance
- Clear

TECHNOLOGY

NanoSlic coating is based on FCT's revolutionary **Hybrid-T Technology**. The advanced chemistry chemically bonds to the surface while forming a hydrophobic/oleophobic nano-layer at the air interface. NanoSlic has a robust, abrasion resistant surface that stands up to repeat cleaning.

PRE-CLEAN

Metallic surfaces should be cleaned well with NanoSlic PreClean Solution and then rinsed well with DI water. Glass should be cleaned with Isopropyl Alcohol (IPA) and lint free wipes. 99% grade (very little water) is preferred to leave the surface absolutely dry. Be sure that no lint, dust or other contamination remains prior to application of the coating.

APPLICATION

NanoSlic Coating can be spray applied; dip coated or wiped on with a lint free cloth, depending on specific design considerations. Coating should be done in a dust free area. In all cases, a consistent thickness and streak free layer should be achieved. NanoSlic will obtain properties in the range of 1-4 microns dry film.

CURING

NanoSlic coating will dry to tack free in 30 minutes. Do not disturb the coating or re-coat during this time. The coating will fully cure in 48 hours at room temperature. With this schedule a 9H hardness will be achieved. Curing can be accelerated by drying in an oven with added humidity. Additional data on cure schedules is available. In all cases the coating should not be put into an oven until drying at room temperature for 30 minutes.

Typical schedule is as follows:

1. Application
2. Room temperature dry 30 minutes
3. Oven, 1 hour @ 50-100C and 50-75% RH
 - a. Hardness: 7H
4. Overnight Cure
 - a. Hardness 9H

TEST RESULTS

Physical Properties	Values
Appearance	Clear High Gloss
Specific Gravity @ 23°C	1.02 g/cm ³
Viscosity @ 23°C	1.96 cP
Nonvolatile content	28%
Static contact angle, water	105 Degrees
Static contact angle, n-hexadecane	64 Degrees
Abrasion resistance, ASTM D2486, Isopropyl Alcohol	>2000
Abrasion resistance, ASTM D2486, IPA Based Flux	>2000
Pencil Hardness	9H

ENVIRONMENTAL

NanoSlic coating solvents are not classified as VOCs and have been determined not to add to global warming. They use no Perfluorooctanoic acid (PFOA), a toxic substance currently being investigated by the EPA.

