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## ANT Lab's SX Metal Coat

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### *Technical Data Sheet*



## Product Description -

ANT Lab's SX Metal Coat™ is a abrasion & flake resistant nano coating designed for all types of metal surfaces. It is designed to protect metal surfaces from destructive forces, and provides a long lasting 12 years barrier of superior resistance to corrosion , rust, salt spray, moisture, acid rain, UV damage, oxidation, galvanic corrosion & ice adhesion .

## Characteristics -

Appearance	Colourless , Liquid
Abrasion Resistance	8.4 mg Passed
Pencil Hardness	4H Passed
Salt Spray Test	No rust, no blisters
QUV Resistance	100% Gloss Retention
Chip Resistance	7A Passed
Humidity	No Effect of humidity
Chemical Resistance 12.5 % Sodium Hydroxide 12.5 % Ammonium Hydroxide 9.5 % Sulfuric Acid 9.5% Hydrochloric Acid	No Effect in all cases
DryFilm Thickness	0.4 – 0.5 mil
Specific Gravity	0.9714
Impact Resistance	Pass ( 20 and 25 joules )
Water Vapor Transmission	0.298 gr/ft2/hr

## Types of substrates that can be coated -

Painted Surfaces	New and Old Iron (existing paint) ,Mild Steel, Stainless Steel, Aluminium, Copper, Brass ,Bronze & Powder coated metals .
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### Benefits –

ANT Lab's SX Metal Coat have several benefits ,

1. Easy-to-Clean Glossy Surface .
2. Longevity of 9 to 12 years in a single twin coat.
3. Environmental Protection for extreme gloss surface & colour retention .
4. Chemical & Corrosion Resistance Surface after coating .
5. Physical Abuse Resistance (Dynamic Abrasion & Scratch) .

### Applications -

ANT Lab's SX Metal Coat™, across industries :

1. Heavy Industrial, Engineering Equipment
2. Automobiles –Heavy, Light
3. Marine –Vessels, Infrastructure
4. Construction, Architecture

### Application Details :

ANT Lab's SX Metal Coat™, as with most final finishes, is best sprayed on to achieve optimum finish & appearance. With all the below methods of application, always cover any adjacent surfaces like glass etc to keep them free of drips or accidental coating . If applying outdoors, make certain the ambient temperature is between 40° F and 105° F, and RH is under 90%. Make certain that there is no chance of rain for a minimum of 4 hours after the estimated time of completion of the coating process

<b>Coverage</b>	25-30 sq. m./ litre
<b>Possible Equipments for application</b>	<ul style="list-style-type: none"><li>• Fine bristle brush</li><li>• Air Spray</li><li>• Airless Spray</li><li>• High Density Foam Roller</li><li>• Lint Free Fabric</li></ul>
<b>Application Equipment - Air Spray</b>	<ul style="list-style-type: none"><li>• Spray Gun –LVLP or HVLP (1.3-1.5 mm nozzle)</li><li>• Pressure at Gun –29-30 PSI</li></ul>
<b>Application Equipment - Airless Spray</b>	<ul style="list-style-type: none"><li>• Tip Size –Graco 519 or 619 orifice</li><li>• Pump –32:1 min</li><li>• Pump Pressure –56-60 PSI</li></ul>



<b>Spread Rate</b>	Wet mil - : 2.0-2.5
<b>Full Hard Cure time</b>	22 to 24 hours (@27° C, 55% R.H.)
<b>Coating Dry Time</b>	10 – 30 min (27° C, 55% R.H)
<b>DustFree Time</b>	18 mins (@27° C, 55% R.H.)

### **Application Procedure & Preparation :**

Step 1 : Equipment Clean Up - Clean equipment thoroughly with acetone or thinner

Step 2 : Surface Finish – Surface must be clean, dry, and in sound condition . Use orbital sander to sand with min 600 grit to max 2000 grit sand papers sequentially .

**IMPORTANT #1 :** When applying over Steel or Iron (that has no primer or paint) you must apply two coats of Metal Coating wet over tack no more than 15 minutes apart. This will fill micro holes that can rust if not coated properly .

**IMPORTANT #2 :** When applying over Old Steel or Iron (that has prior primer or paint) you repair by Sand blast Commercial Blast Clean SSPC-SP-6 method or abrade off any existing, peeling paints until you reach a solid base (or repair by sanding with 300 grit sandpaper or lower then re-paint as needed).

Step 3 :Test Small area - Due to the wide variety metals & the various methods of application always test ANT Lab's SX Metal Coat™, in an inconspicuous location to ensure adhesion and determine that the desired look is achieved .

**IMPORTANT #3:** ANT Lab's SX Metal Coat™, is clear, but on some white paints /white powder coats color may be (in rare cases ) altered to appear off-white or slightly yellow once the coating applied .

Step 4a : Application method by Spraying - Shake the contents of ANT Lab's SX Metal Coat™, thoroughly of to re-suspend the nanoparticles that have settled to the bottom. When surface preparation is complete and surface is dry and free of dust, begin application using a high volume, low pressure (HVLP) spray gun (refer Application details table for Tip and Pressure). If there is high wind, this will affect the quality of the finish as blowing wind can disrupt the spray pattern from your HVLP. It can also contribute to contamination of the finish with blowing dirt. Please take necessary precaution .

**IMPORTANT #4 :** On a separate piece of cardboard first spray a test pattern to achieve a 5" to 6" elongated pattern approximately 2" wide in the middle and fluid enough to cover. Once the spray pattern is achieved on the test cardboard, spray one coat in a cross-pattern; "left to right" then "up and down". This will provide sufficient coverage and will help prevent holes in coverage.

Step 4b : Application method by Foam Roller - Shake the contents of ANT Lab's SX Metal Coat™, thoroughly of to re-suspend the nanoparticles that have settled to the bottom .

Pour ANT Lab's SX Metal Coat™ into a roller pan and completely saturate a white, ultra smooth, high-density foam roller. Apply in a cross-pattern; "left to right" then "up and down" as quickly as possible as the coating dries very quickly. Avoid down pressure on the roller to provide a better looking finish .

Step 4c : Application method by Brushing - Shake the contents of ANT Lab's SX Metal Coat™, thoroughly of to re-suspend the nanoparticles that have settled to the bottom .



Select the appropriate size brush width based on the surface area being coated. Using a good quality bristle brush, apply ANT Lab's SX Metal Coat™ in a cross-pattern; "left to right" then "up and down".

To obtain best results, do not over work the coating, seeing as it dries very quickly. Use light strokes using the tip of the brush to smooth out the coating.

#### **Storage :**

Store in dry area at temperatures between 14 - 18° Celsius (15% higher temp reduces shelf life by 3%)

- Shelf Life (seal un-opened) – 6 months .
- Shelf Life (seal opened) - 15 days .

Container Cap must be closed immediately after use to avoid contamination.

Discard if liquid turns white in color . It should always remain colorless to be effective .

#### **Safety , Caution & Maintenance :**

1. Always wear DGFASLI approved Respiratory protection.
2. Fresh air and exhaust are required in the work area.
3. Wear butyl-rubber gloves and other skin protection to avoid contact.
4. Chemical safety goggles or splash shields are required.
5. Do not wear contacts without eye protection.
6. If inhaled - move to fresh air and call physician immediately if physical difficulties occur.
7. In the event of contact with skin - wash skin thoroughly with soap and water.
8. In the event of contact with eyes - Immediately flush eyes with water for 15 minutes after contact and get medical attention.
9. If accidentally swallowed - rinse mouth thoroughly and obtain immediate medical attention.

**IMPORTANT #5 :** Although ANT Lab's SX Metal Coat™ is scratch resistant, it is not scratch-proof. Do not use abrasive cleansers or abrasive scouring pads. If an area gets damaged or is mechanically



abraded, simply lightly sand the area with 300 grit sandpaper and reapply the Metal Coat. If the substrate is damaged at the same time, make the necessary repairs first, and then re-apply Metal Coating.