

FAQ's about Warrior Coatings

Q.) Which Types of coatings do you have?

A.) We have several types of **antimicrobial coatings**, which not only have antimicrobial action, but their antimicrobial action can be scaled depending upon the need or the situation. For e.g. , coatings in a hospital ICU need strong antimicrobial action, whereas coatings at homes need only slight antimicrobial action .This need based variation helps us in optimizing the cost, maintaining the quality and the efficacy of the product as per the desired need. We can also custom make antimicrobial coatings for specific needs.

Q.) What kind of surfaces can Warrior coatings cover?

A.) Reinste can provide durable Our antimicrobial coatings to cover almost every kind of surface.

Coatings are divided into categories: -

- **For non-absorbent surfaces, such as glass, ceramics, metals, plastics, polished natural stone**
- **For absorbent surfaces such as textiles.**
- **For other surfaces such as terracotta, concrete, natural stone, bricks etc.**

Q.) What are the benefits of Warrior coatings? Why Warrior coatings?

A.) The main benefit of Reinste made Warrior Coatings is that they are broad spectrum Anti-microbial and do not lose their effectiveness over time, even when they are exposed to cleaning with water or detergents. These coatings retain their efficiency even after prolonged exposure to UV.

Based on the type, some coatings exhibit strong antimicrobial action whereas some exhibit slight. They are also UV resistant, Chemical Resistant, Water repellent, Scratch resistant, 100% Transparent, easy to use, DIY (Do it yourself) feature, and exhibit long life.

Q.) Why are Warrior coatings better than existing Coatings?

A.) Warrior Coatings are far superior than the existing coatings as they are made using superior nanotechnology. The Antimicrobial action is because of Active Silver present in the coatings which keeps on releasing silver ions on the surface of coatings which hampers the propagation and growth of microbes over the coating surface for a very long (several months) as compared to existing coatings which have antimicrobial effect for a few days only.

The coverage of some Warrior Coatings is very high and retain excellent adhesion and other coating properties. Glass and ceramic nano coatings are almost 100% transparent and have about 1500-2000 sq. ft. coverage per liter.

Q.) Where these Warrior Antimicrobial coatings can be used?

A.) Due to the very versatile nature of Warrior Antimicrobial coatings they are not only used where antimicrobial action is required but they also have so many additional features like Anti corrosion, water repellency, UV resistance, Scratch resistance, easy cleaning, DIY (Do it yourself) feature, quick drying that they are preferred modern coatings.

Q.) Are these coatings Safe for human use?

A.) The Ingredients used in the Warrior Coatings are safe for human use, like the Active silver used is tested to be safe on human skin. It is also safe for the environment as the leaching of Active Silver is minimized from the coating surface. All other ingredients of the coatings are well chosen for handling and transportation. Reinste advises to follow the application instructions before usage and recommend to consult the technical experts before application, if required. Proper application manual, storage and handling instructions are provided with the coatings.

Q.) What is the cost of these coatings?

A.) Each Warrior Coating is different and fulfills different objectives like strength, aberration, UV and Dirt resistance, and water repellence etc., Based on the properties these coating bring to the surface their cost also differs.

Some of specialized warrior Coating may seem very expensive compared to the current available coatings but due diligence and comparison on all the parameters will show that actually specialized warrior coatings are eventually cheaper or have less cost of total ownership.

Q: What is the coverage of the Warrior coatings?

A.) Please check [table 1](#) given at the end of the document.

Q: How long these Warrior Antimicrobial coatings last?

A.): Life of these Coatings is very high. But it depends upon the conditions in which coating are used or kept. Technically life of coatings is the life till the coatings are there, but due to external circumstances and conditions the coatings can be eroded or depleted like from effect of UV, Cleaning due to harsh Chemicals, wear due to scratch and aberration, effect of water, oil, dirt, temperature and several other factors decides the life of coatings. One important factor about the warrior Coatings is that they are Top surface coatings on any surface, so they take all the temperature, pressure and harsh action over them, but if the coating(s) below them or the surface below them is weak and/or gets detached, our coatings may also get off along with them. Reinsten recommend using best quality and techniques for base coats or follow the surface preparation instructions carefully to have best results of Warrior coatings. Warrior Coatings are designed in such a way that they last more than the conventional coatings and fulfill our commitment.

Q: How long the Antimicrobial effect will remain on the coatings?

A.): Antimicrobial effect in coatings depends upon few variables, most important variable is the life of coating itself, The Silver in the coating is metal and don't evaporate or disintegrate due to heat or UV light as silver is metal, it only releases ions. Till the time these ions are released over the surface of coating surface the coating remains antimicrobial, as the coating can degrade or disintegrate due to several factors and also because of dirt/oil and other environment pollutants the silver ion release can be hampered over period of time, but it can be safely assumed that in most conditions antimicrobial action last over 12 months time, without decrease in efficiency.

Q: What is the per Sq. ft cost of Coatings?

A.) Please check [table 1](#) given at the end of the document.

Q.) Can you take the coating as a project/ service in our organization?

OR

Q.) Can you coat your Warrior coating on our surface?

A.) Reinste is a manufacturer of coatings and other nanotechnology related products, we are not a service organization, but most of the coatings can be handled by using the detailed application manuals.

We recommend you to read all the documents along with the product literature, FAQ's, Application manuals, storage and handling guidelines, and if required take the help of technical consultants of Reinste over phone or email.

Q.) What is the difference between Sanitizers, Disinfectants and Surface Cleaners?

A.) **Sanitizer** is a substance or fluid designed to kill germs on skin and objects.

Sanitizers also refers to household products (especially hand **sanitizer**) that are used to prevent the spread of disease by killing germs on surfaces and skin.

Disinfectants are chemical agents designed to inactivate or destroy microorganisms on inert surfaces. Disinfection does not necessarily kill all microorganisms, especially resistant bacterial spores; it is less effective than sterilization, which is an extreme physical or chemical process that kills all types of life.

Surface cleaners are great for **cleaning** sidewalks, driveways, garage floors, parking lots, decks, warehouses, pool decks, outdoor basketball courts, and many other hard, flat **surfaces**. Each **surface cleaner** connects directly to your high-pressure hose and pressure washer via quick-connect couplers.

Q.) How Are Warrior Coatings Different from Sanitizers, Disinfectants and other Cleaners?

A.) Most of the Sanitizers / Disinfectants and Cleaners are made of Alcohols, Acids, Bleach and QA Salts, and have short life to disinfect the surface, i.e. the surface becomes again susceptible for microbes after few minutes, hours or days once the VOC content or the chemical disintegrates .

The Antimicrobial action of Warrior Coatings is based on Solid Active Particles which keeps on releasing the Silver Ions for very long time effectively over one year period , so the antimicrobial action is undiminished for long as compared to Sanitizers, Disinfectants and Cleaners, and the surface cleans itself for long.

Q.) Are Warrior Coatings Costly as compared to other available Sanitizers, Disinfectants and Cleaners?

A.) Actually all Warrior Coatings are more cost effective than other Sanitizers, Disinfectants and Cleaners as they are extremely long lasting and saves not only

material cost, labor cost, downtime cost due to sensitization but also saves opportunity cost and provide confidence and sense of security.

Q.) Should I use Alcohol / Bleach / Acid based Sanitizers/ Disinfectants/ Surface Cleaners?

A.) Alcohol, bleach and acids/ base based products are harmful for our hands and skin, they also can severely damage the existing protective coatings on all types of products including fabrics, wood, painted metals etc.

We must use only pH neutral product i.e. products who's pH is equivalent to water or are water based, this is the safest way to ensure your skin is safe and the surface on which you are using the product does not get degraded, color faded, peeled off or tarnished over time.

Q.) How does this coating act against bacteria and fungus?

A.) There are however various theories on the action of silver nanoparticles on microbes to cause the microbicidal effect.

Silver nanoparticles can anchor to the bacterial cell wall and subsequently penetrate it, thereby causing structural changes in the cell membrane like the permeability of the cell membrane and death of the cell. There is formation of 'pits' on the cell surface, and there is accumulation of the nanoparticles on the cell surface. The formation of free radicals by the silver nanoparticles may be another mechanism by which the cells die. There have been electron spin resonance spectroscopy studies that suggested that there is formation of free radicals by the silver nanoparticles when in contact with the bacteria, and these free radicals have the ability to damage the cell membrane and make it porous which can ultimately lead to cell death.

It has also been proposed that there can be release of silver ions by the nanoparticles, and these ions can interact with the thiol groups of many vital enzymes and inactivate them. The bacterial cells in contact with silver take in silver ions, which inhibit several functions in the cell and damage the cells. Then, there is the generation of reactive oxygen species, which are produced possibly through the inhibition of a respiratory enzyme by silver ions and attack the cell itself.

<https://link.springer.com/article/10.1186/2228-5326-2-32>

Q.) How does this coating act against bacteria and fungus?

A.) The antiviral activity of silver nanoparticles results from their inhibition of the interaction between viral cell and the target cell membrane receptors. According to the

report, this mode of anti-viral action allows silver nanoparticles to inhibit viral infection regardless of viral tropism or resistance profile, to bind to virus in a manner that prevents virion binding, fusion, and infectivity, and to block virus cell-free and cell-associated infection, acting as a viricidal agent. In conclusion, silver nanoparticles are effective virucides as they inactivate virus particles in a short period of time, exerting their activity at an early stage of viral replication (entry or fusion) and at post-entry stages.

https://www.researchgate.net/publication/41420128_Mode_of_antiviral_action_of_silver_nanoparticles_against_HIV-1 J Nanobiotechnol 8 1-10

Q. What is the best coating for metal surfaces?

	Durability	Ease of application	Gloss	hydrophobicity	Dirt repellent	Scratch resistance	Chemical Resistance
Warrior Dura Ag ⁺ Shield	*****	*****	*****	*****	*****	*****	*****
Warrior Universal Surface Shield	*****	*****	*****	*****	*****	*****	*****
Warrior Micro Surface Shield	*****	***	*****	*****	*****	*****	*****
Warrior Microbial Ag ⁺ Shield	***	*****	*****	*****	*****	***	*****
Warrior Clear Coat Ag ⁺ Shield	***	*****	****	*****	*****	**	**

These are relative comparison of different coatings for metal surface

Q.) What is the best coating for plastic surfaces?

	Durability	Ease of application	Gloss	hydrophobicity	Dirt repellent	Scratch resistance	Chemical Resistance
Warrior Universal Surface Shield	*****	*****	*****	*****	*****	*****	*****
Warrior Micro Surface Shield	*****	***	*****	*****	*****	*****	*****
Warrior Clear Coat Ag ⁺ Shield	***	*****	*****	*****	*****	**	**

These are relative comparison of different coatings for plastic surface

Q.) What is the best coating for wood surfaces?

	Durability	Ease of application	Gloss	hydrophobicity	Dirt repellent	Scratch resistance	Chemical Resistance
Warrior Micro Surface Shield	*****	***	*****	*****	*****	*****	*****
Warrior Microbial Ag ⁺ Shield	***	*****	*****	*****	*****	***	*****

These are relative comparison of different coatings for wooden surface

Q.) What is the best coating for ceramic surfaces?

	Durability	Ease of application	Gloss	hydrophobicity	Dirt repellent	Scratch resistance	Chemical Resistance
Warrior Dura Ag ⁺ Shield	*****	*****	*****	*****	*****	*****	*****
Warrior Universal Surface Shield	****	*****	*****	*****	*****	*****	*****
Warrior Micro Surface Shield	*****	***	*****	*****	*****	*****	*****
Warrior Aquaperl surface shield	****	*****	*****	*****	*****	**	***
Warrior Microbial Ag ⁺ Shield	***	*****	*****	****	*****	***	*****
Warrior Clear Coat Ag ⁺ Shield	***	*****	*****	****	*****	**	**
Warrior silver surface shield	*****	*****	*****	*****	*****	**	***

These are relative comparison of different coatings for ceramic surface

Q.) What is the best coating for glass surfaces?

	Durability	Ease of application	Gloss	hydrophobicity	Dirt repellent	Scratch resistance	Chemical Resistance
Warrior Dura Ag ⁺ Shield	*****	*****	*****	*****	*****	*****	*****
Warrior Universal Surface Shield	*****	*****	*****	*****	*****	*****	*****
Warrior Micro Surface Shield	*****	***	*****	*****	*****	*****	*****
Warrior Microbial Ag ⁺ Shield	***	*****	*****	*****	*****	***	*****
Warrior Clear Coat Ag ⁺ Shield	***	*****	*****	*****	*****	**	**
Warrior Aquaperl surface shield	*****	*****	*****	*****	*****	**	***
Warrior silver surface shield	*****	*****	*****	*****	*****	**	***

These are relative comparison of different coatings for glass surface

Q. What is the best coating for stone surfaces?

	Durability	Ease of application	Gloss	hydrophobicity	Dirt repellent	Scratch resistance	Chemical Resistance
Warrior Dura Ag ⁺ Shield	*****	*****	*****	*****	*****	*****	*****
Warrior Universal Surface Shield	*****	*****	*****	*****	*****	*****	*****

Warrior Micro Surface Shield	*****	***	*****	*****	*****	*****	*****
Warrior Microbial Ag ⁺ Shield	***	*****	*****	****	*****	***	*****
Warrior Clear Coat Ag ⁺ Shield	***	*****	****	*****	*****	**	**
Warrior Aquaperl surface shield	****	*****	*****	*****	*****	**	***
Warrior silver surface shield	*****	*****	*****	*****	*****	**	***

These are relative comparison of different coatings for stone surface

Q.) What is the best coating for fabric surfaces?

	Durability	Ease of application	Color Change	hydrophobicity	Dirt repellent	Coverage	Spill Resistance
Warrior LTex Ag ⁺ Shield	*****	*****	*****	*****	*****	*****	*****
Warrior ADTL Ag ⁺ Shield	*****	*****	***	*****	*****	*****	*****

These are relative comparison of different coatings for fabric surface. Color of light color fabrics may change on application of coating. Please test the product beforehand on test surface. Better to use Warrior ADTL Ag⁺ shield if color change is an issue.

Q.) What is the best coating for leather surfaces?

	Durability	Ease of application	Color Change	hydrophobicity	Dirt repellent	Coverage	Spill Resistance
Warrior LTex Ag ⁺ Shield	*****	*****	*****	*****	*****	*****	*****
Warrior ADTL Ag ⁺ Shield	*****	*****	***	*****	*****	*****	*****

These are relative comparison of different coatings for leather surface. Color of light color fabrics may change on application of coating. Please test the product beforehand on test surface. Better to use Warrior ADTL Ag⁺ shield if color change is an issue.

Q.) How can I know which Warrior Coatings are for which Surface , where they can be applied ?

A.) Following steps needs to be followed.

1. Determine your needs
2. Read product literature available on our website carefully
3. Read Product Application manual
4. Consult our technical team about the product

PRODUCT : AREA COVERAGE : COSTING

Table 1:

Product	Catalog Number	Application per sq. ft./L	Avg. Cost/ sq. ft. (discount available on quantity basis)
Warrior Germi Shield Cleaner	RN-NCI	1500-2000 Sq. ft. / Lt.	Rs. 0.65-0.87/ sq. ft.
Warrior Clear Coat Ag ⁺ Shield	RN-Nco	1500-2000 Sq. ft. / Lt.	Rs. 4.95-6.60/ sq. ft.
Warrior Universal Surface Shield	RN-PW3-L	150- 200 Sq. ft. / Lt.	Rs. 50.40-67.20/ sq. ft.
	RN-PW3-M		Rs. 75.60-100.80/ sq. ft.
	RN-PW3-H		Rs. 100.80-134.40/ sq. ft.
Warrior Micro Surface Shield	RN-EW3-L	150- 200 Sq. ft. / Lt.	Rs. 63.00-84.00/ sq. ft.
	RN-EW3-M		Rs. 88.20-117.60/ sq. ft.
	RN-EW3-H		Rs. 113.40-151.20/ sq. ft.
Warrior Microbial Ag ⁺ Shield	RN-AW3-L	150- 200 Sq. ft. / Lt.	Rs. 37.80-50.40/ sq. ft.
	RN-AW3-M		Rs. 63.00-84.00/ sq. ft.
	RN-AW3-H		Rs. 88.20-117.60/ sq. ft.
Warrior AquaPerl Surface Shield	RN-EPW3-L	1500-2000 Sq. ft. / Lt.	Rs. 10.08-13.44/ sq. ft.
	RN-EPW3-M		Rs. 13.23-17.64/ sq. ft.
	RN-EPW3-H		Rs. 15.12-20.16/ sq. ft.
Warrior Silver Surface Shield	RN-VW3-L	1500-2000 Sq. ft. / Lt.	Rs. 10.08-13.44/ sq. ft.
	RN-VW3-M		Rs. 12.60-16.80/ sq. ft.
	RN-VW3-H		Rs. 15.12-20.16/ sq. ft.
Warrior LTex Ag ⁺ Shield	RN-FW10-L	200- 300 Sq. ft. / Lt.	Rs. 67.20-100.80/ sq. ft.
	RN-FW10-M		Rs. 84.00-126.00/ sq. ft.
	RN-FW10-H		Rs. 100.80-151.20 sq. ft.

Warrior ADTL Ag ⁺ Shield	RN-ADW3-L	60-200 Sq. ft./ Lt. (depending on surface, for more info, check TDS)	Rs. 115.20 – 384.00/ sq. ft.
	RN-ADW3-M		Rs. 144.00-480.00/ sq. ft.
	RN-ADW3-H		Rs. 172.80-576.00 sq. ft.
Warrior Dura Ag ⁺ Shield	RN-DW3-L	1500-2000 sq. ft. / Lt.	Rs. 56.00-74.67/ sq. ft.
	RN-DW3-M		Rs. 58.52-78.03/ sq. ft.
	RN-DW3-H		Rs. 61.04-81.39/ sq. ft.

Table 1. Cleaner/Coatings and their application surface area covered

*** Avg. Cost per square feet calculated on basis of highest pack size costing.*

Table 2:

Surface	Product (Best to average)
Plastics	Warrior Universal Surface Shield ; Warrior Micro Surface Shield ; Warrior Clear Coat Ag ⁺ Shield ; Warrior Germi Shield Cleaner
Metals	Warrior Dura Ag ⁺ Shield ; Warrior Universal Surface Shield ; Warrior Micro Surface Shield ; Warrior Microbial Ag ⁺ Shield ; Warrior Clear Coat Ag ⁺ Shield ; Warrior Germi Shield Cleaner
Ceramics	Warrior Dura Ag ⁺ Shield ; Warrior Silver Surface Shield; Warrior AquaPerl Surface Shield ; Warrior Micro Surface Shield ; Warrior Universal Surface Shield; Warrior Microbial Ag ⁺ Shield ; Warrior Clear Coat Ag ⁺ Shield; Warrior Germi Shield Cleaner
Glass	Warrior Dura Ag ⁺ Shield ; Warrior Silver Surface Shield ; Warrior AquaPerl Surface Shield ; Warrior Micro Surface Shield ; Warrior Universal Surface Shield ; Warrior Microbial Ag ⁺ Shield ; Warrior Clear Coat Ag ⁺ Shield; Warrior Germi Shield Cleaner
Wood	Warrior Micro Surface Shield ; Warrior Microbial Ag ⁺ Shield
Stone	Warrior Dura Ag ⁺ Shield ; Warrior Silver Surface Shield ; Warrior AquaPerl Surface Shield ; Warrior Micro Surface Shield ; Warrior Universal Surface Shield ; Warrior AquaPerl Surface Shield ; ; Warrior Clear Coat Ag ⁺ Shield; Warrior Germi Shield Cleaner
Leather	Warrior LTex Ag ⁺ Shield ; Warrior ADTL Ag ⁺ Shield ; Warrior Germi Shield Cleaner
Fabrics	Warrior LTex Ag ⁺ Shield ; Warrior ADTL Ag ⁺ Shield ; Warrior Germi Shield Cleaner

Table 2. Cleaner/Coatings and best surfaces for their applications

Table 3:

Product	Catalog Number	Application per sq. ft./L	Avg. Cost/ sq. ft./day
Warrior Germi Shield Cleaner	RN-NCI	1500-2000 Sq. ft. / Lt.	Rs. 0.225-0.3/ sq. ft./day
Warrior Clear Coat Ag ⁺ Shield	RN-Nco	1500-2000 Sq. ft. / Lt.	Rs. 0.06-0.08/ sq. ft./day
Warrior Universal Surface Shield	RN-PW3-L	150- 200 Sq. ft. / Lt.	Rs. 0.16-0.21/ sq. ft./day
	RN-PW3-M		Rs. 0.24-0.32/ sq. ft./day
	RN-PW3-H		Rs. 0.32-0.42/ sq. ft./day
Warrior Micro Surface Shield	RN-EW3-L	150- 200 Sq. ft. / Lt.	Rs. 0.20-0.26/ sq. ft./day
	RN-EW3-M		Rs. 0.28-0.37/ sq. ft./day
	RN-EW3-H		Rs. 0.36-0.47/ sq. ft./day
Warrior Microbial Ag ⁺ Shield	RN-AW3-L	150- 200 Sq. ft. / Lt.	Rs. 0.12-0.16/ sq. ft./day
	RN-AW3-M		Rs. 0.20-0.26/ sq. ft./day
	RN-AW3-H		Rs. 0.28-0.37/ sq. ft./day
Warrior AquaPerl Surface Shield	RN-EPW3-L	1500-2000 Sq. ft. / Lt.	Rs. 0.03-0.04/ sq. ft./day
	RN-EPW3-M		Rs. 0.04-0.05/ sq. ft./day
	RN-EPW3-H		Rs. 0.05-0.06/ sq. ft./day
Warrior Silver Surface Shield	RN-VW3-L	1500-2000 Sq. ft. / Lt.	Rs. 0.03-0.04/ sq. ft./day
	RN-VW3-M		Rs. 0.04-0.05/ sq. ft./day
	RN-VW3-H		Rs. 0.05-0.06/ sq. ft./day
Warrior LTex Ag ⁺ Shield	RN-FW10-L	200- 300 Sq. ft. / Lt.	Rs. 0.21-0.32/ sq. ft./day
	RN-FW10-M		Rs. 0.26-0.39/ sq. ft./day
	RN-FW10-H		Rs. 0.32-0.47/ sq. ft./day
Warrior ADTL Ag ⁺ Shield	RN-ADW3-L	900- 1000 Sq. ft./ Lt.	Rs. 0.06-0.07/ sq. ft./day
	RN-ADW3-M		Rs. 0.08-0.09/ sq. ft./day
	RN-ADW3-H		Rs. 0.09-0.10/ sq. ft./day
Warrior Dura Ag ⁺ Shield	RN-DW3-L	1500-2000 sq. ft. / Lt.	Rs. 0.24-0.32/ sq. ft./day
	RN-DW3-M		Rs. 0.25-0.33/ sq. ft./day
	RN-DW3-H		Rs. 0.26-0.34 sq. ft./day

Table 3. Avg. Cost per square ft. per day

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Disclaimer

"Reinste Nano Ventures Pvt Ltd (REINSTE) warrants to the Buyer that this product is in good quality and conforms to the manufacturer's specifications in force on the date of manufacture and when used in accordance with the installation Instructions and when stored as directed in the technical literature. All the information provided is based on best of our knowledge and all the claims made are under standard lab conditions. Properties may change with varying environmental conditions. Manufacturer cannot warrant or guarantee any method of use, performance or application under any particular condition and Buyer is responsible for determining the suitability of intended purpose and assumes all risks therein. REINSTE shall not be liable for any injury, loss, cost of labor or consequential damages either directly, indirectly, or incidentally, arising out of the use or misuse of any product sold by REINSTE or another distributor. If the product is proven to be in nonconformance, the Buyers sole remedy shall be a refund of the purchase price or replacement of the product."



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