

N9 PURE SILVER™

For a better, safer and a more carefree life,
today and tomorrow.



MARKET DRIVERS

- Increasing consumer concerns for *cleanliness* and freshness in all walks of life, *prevention of odour or smell*.
- Textiles are an ideal breeding ground for bacteria under humid conditions.
- Natural textile fibers do not have an *inherent* antimicrobial property.
- Increasing *activity* levels in lifestyle - Travelling, exercising, socializing.
- Rise in global consumer market, awareness and increased *consumer spending*.
- Rapid growth within the health care and hospitality sectors.
- Increased market demand for *non-leaching*, safe antimicrobials.

N9 PURE SILVER™

A NEXT GENERATION TECHNOLOGY

- Pure, metallic silver in ultra-pure de-ionized water.
- Particle's *large surface area* allows optimum contact with textiles, making it highly effective at deactivating bacteria and other microbes.
- Effectively hooks onto textiles for *extended durability* wash after wash; estimated benefits for the lifetime of a garment.
- *Non-leaching*; remains intact on the treated textile and works where needed to protect the garment or textile.



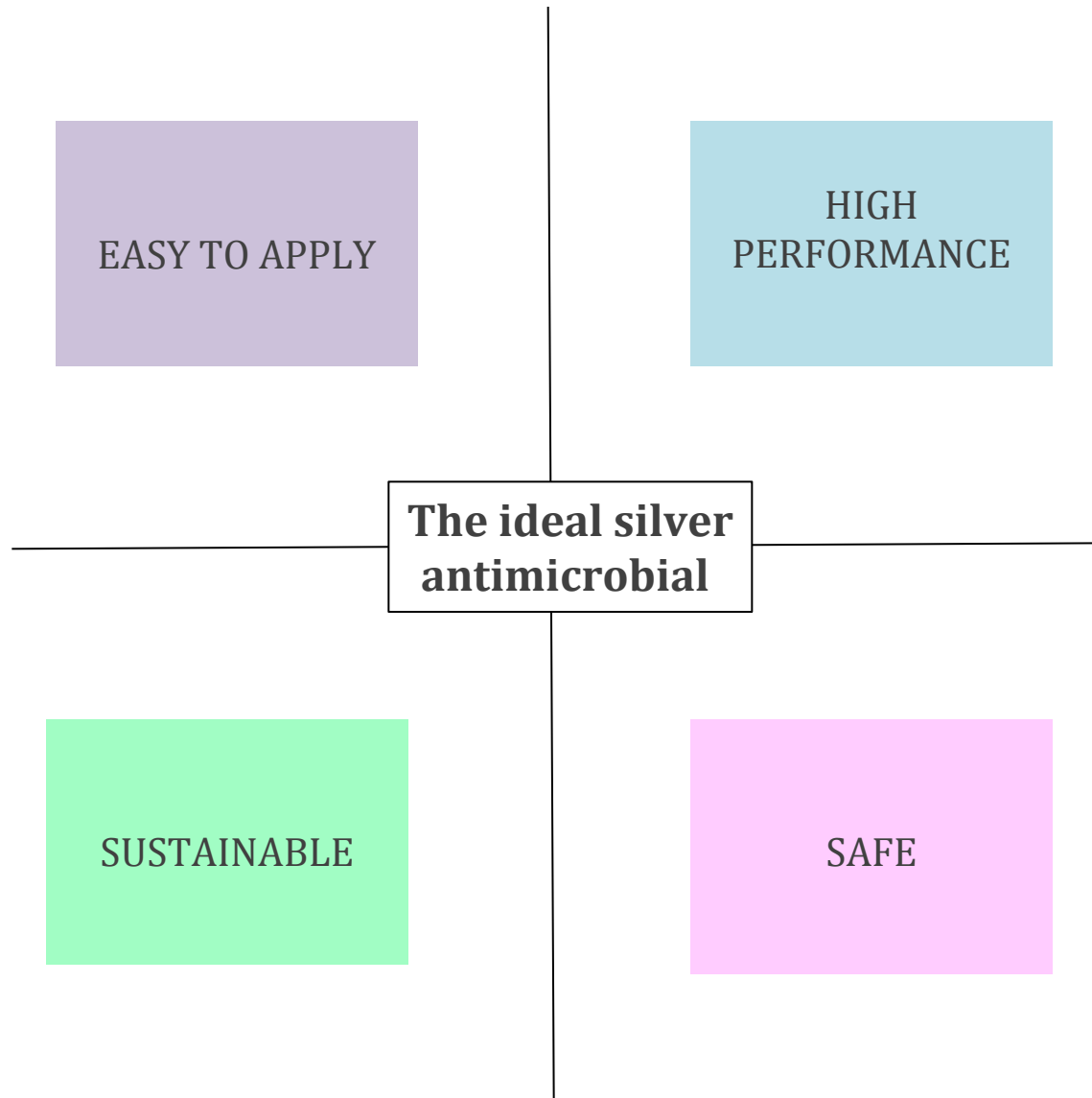
N9 PURE SILVER™

A NEXT GENERATION TECHNOLOGY

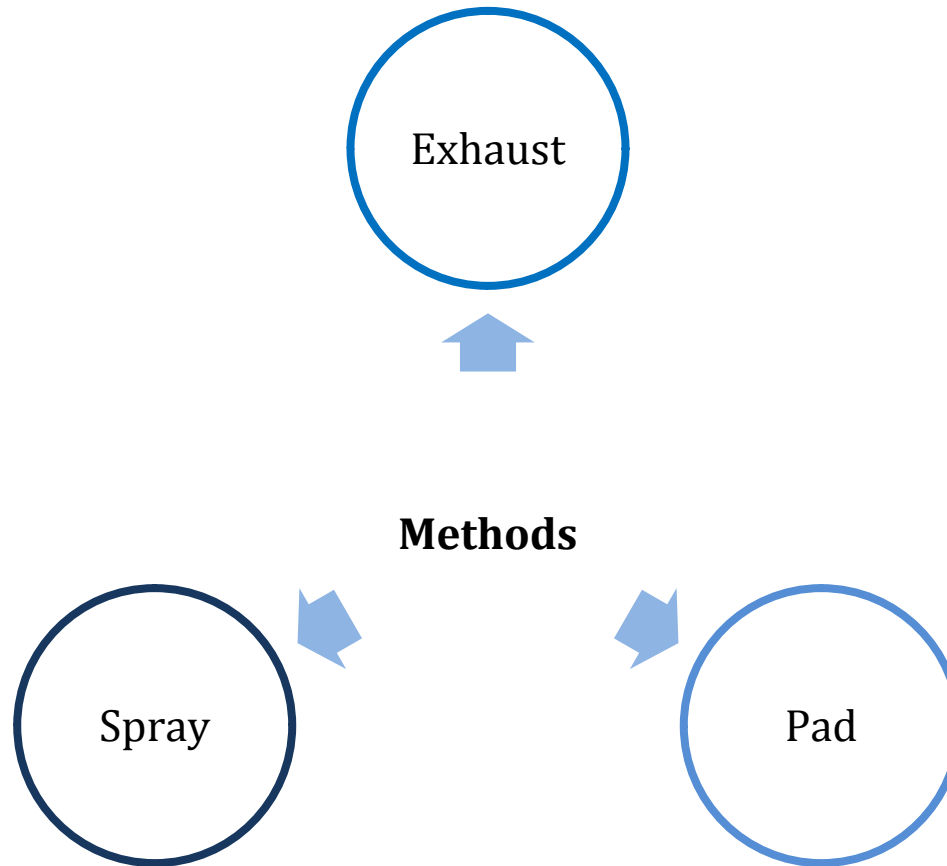


- *Long lasting* performance with minimal silver loading.
- *Easy to apply* and *compatible with multiple substrates*; works invisibly without changing the look or feel of textiles.
- *Safe* on skin, safe on textiles, safe for the environment.





APPLICATION METHODS



SUBSTRATES

Denims



Leather



Mattress,
Bed linen



Jute



Paper,
paper products,
varnishes & ink



Other household
furniture



Are you using the right silver?

- Silver ion based technologies : Silver salts or ions that are bound to polymer or carrier matrices. Example silver nitrates, silver chlorides.
- Old technology: Emphasis on non-leaching and sustainable products.
- International products sold by multi-nationals in EU and US markets are typically concentrated versions.
- Lowering of grades is a common practice. Dilute versions are sold in the Indian market.



N9 Pure Silver™ outperforms *leading* antimicrobials



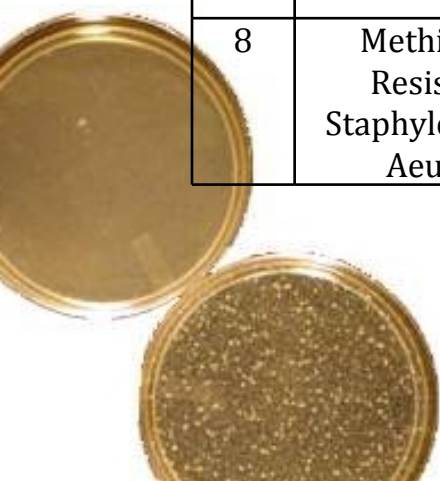
REAL life conditions:

Products based on silver ion based technologies exhibit very low wash durability with active silver getting washed away on repeated washes. Active levels are seen to drop to as low as 50% of original levels after about 5 washes.



Highly effective against a wide range of pathogens

Sl.No	Microbe tested	Notes	Type of microbe	Substrate used	Antimicrobial Efficiency TREATED unwashed 30 washes	
1	Escherichia Coli	E.Coli	Bacteria	Cotton fabric	99.9%	99.9%
2	Escherichia Col	Digestive system infections	Bacteria	Lycra Blends - fabric	99.9%	99.9%
3	Escherichia Coli		Bacteria	Poly cotton - fabric	99.9%	99.9%
4	Escherichia Coli		Bacteria	Wool blends - fabric	99.9%	99.9%
5	Escherichia Coli		Bacteria	Wrinkle free fabric	99.9%	99.9%
6	Staphylococcus Aeurus	S. Aeurus	Bacteria	Cotton Fabric	99.9%	99.9%
7	Brevi Bacterium	Malodour	Bacteria	Cotton Fabric	99.9%	99.9%
8	Methicillin Resistant Staphylococcus Aeurus	MRSA : Hospital infections	Bacteria	Cotton Fabric	99.9%	99.9%



SUSTAINABILITY



- Silver ion based products invariably contain high silver content making them environmentally unsafe.
- They are typically alcohol or ammonia-based resulting in bad odors. They also contain high VOC (volatile organic compounds).
- Import: Products containing VOC may pose challenges during emergency.

N9 Pure Silver™ is

- Non-toxic and skin safe
- Non-leaching
- Pure, natural and environment friendly
- Durable, combined with low release of silver on washing
- Does not interact with body chemistry
- Zero VOC
- Listed by OEKO-TEX, Standard 100



SAFETY

Conventional silver ion based technologies

- Skin /eye irritation rabbit OECD corrosive.
- Unsafe to workers

Composition

High hazard substances

- Alcohols, Ethanol
- Iso Propoanol
- Butanol
- Ammonium Nitrate
- Ammonium Hydroxide
- Silver Chlorides
- Silver Nitrate
- Normal water

N9 Pure Silver™

- Skin /eye irritation rabbit OECD
- NON-IRRITANT and SAFE

Composition

Pharmaceutical grade substances

- Pharmaceutical grade polymers
- Ultra pure water
- Pure silver metal – Zero Silver Nitrate

- N9 Pure Silver™ is OEKO-TEX listed, ensuring excellent environmental credentials and safety.

N9 Pure Silver™ passes toxicology tests proving safety :

- Human repeat insult patch test (HRIPT)
- Acute oral toxicity >5000mg/ Kgbw
- Skin irritation test : Non Irritant
- Mucous membrane irritation tests
- Skin sensitization tests
- 28 –day repeat toxicity test with toxicokinetics
- Bacterial reverse mutation tests
- Chromosomal aberration tests

USAGE

Usage data for silver ion based products:

- 5% on towels for 50 washes
- 3% on cotton knit for 50 washes
- 6% on nylon socks 20 washes
- 2% on poly-cotton for 30 washes
- 6% on poly-cotton for 50 washes
- 2% on PET for 0 washes

TECHNOLOGY	RECOMMENDED	CONSERVATIVE
Silver ion technologies	3.0 %	2.0 %
N9 Pure Silver™	0.5 %	0.3 %



TOTAL SOLUTIONS PROVIDER

Most silver ion suppliers are NOT experts in textile finishing.

Therefore,

- Low focus on textiles
- Single product offering
- Offerings do not include a package of finishing solutions - moisture management and other products are non-existent
- Textile application labs and finishing package development services missing



REASONS TO PARTNER WITH N9 PURE SILVER™



- Featured on the M&S innovation wall as the most innovative product in the range
- Safest product for skin and textiles: OEKO-TEX listed. Non-leaching
- Most sustainable:
Lowest ion release and lowest silver loading
Preserves nature
ZERO-VOC
- Easy to use:
Compatible with multiple processes and substrates



PROMOTION & MARKETING

Hang tags



Front



Back



Front



PROMOTION & MARKETING

Woven Labels

-To be stitched next to the wash care label or below the main label



Front



Back

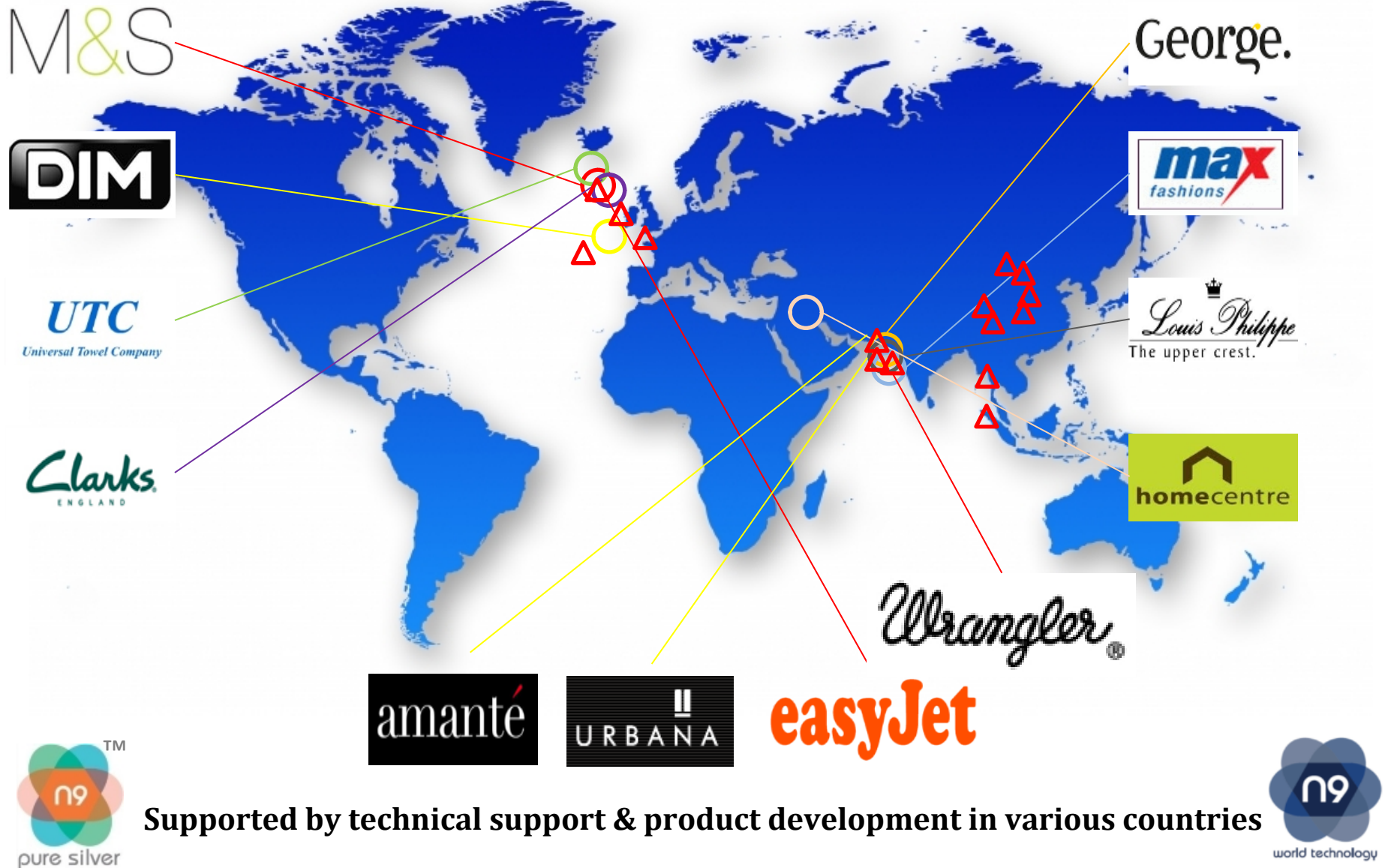


IN-STORE COMMUNICATIONS

- Sales staff training
- Printed visual aids
- Digital slide changers
- E-marketing



N9 PURE SILVER™ LAUNCHES



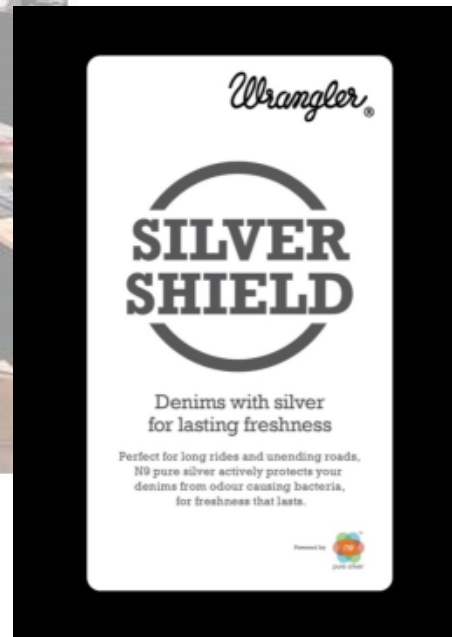
Supported by technical support & product development in various countries

RECENT LAUNCHES

Wrangler®

- Wrangler Silver Shield Jeans

In store promotions & Hang Tags



OTHER LAUNCHES

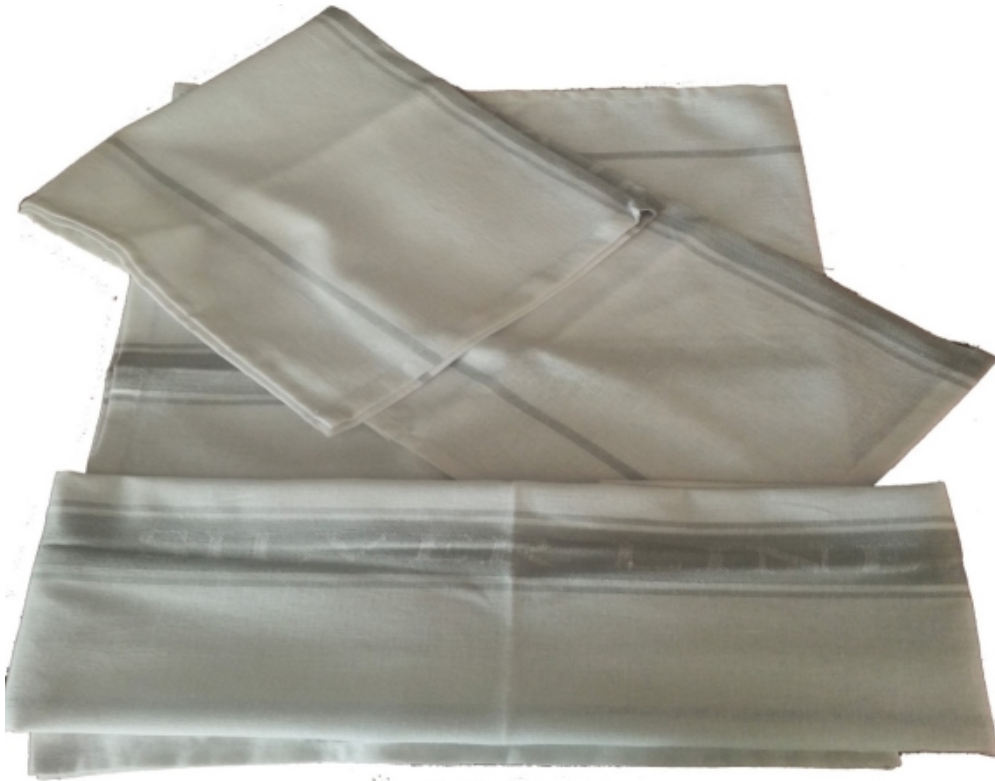
MARKS &
SPENCER

- Marks & Spencer shirts
Hang tag program



OTHER LAUNCHES

- UTC Kitchen towels, UK



MANUFACTURER DETAILS

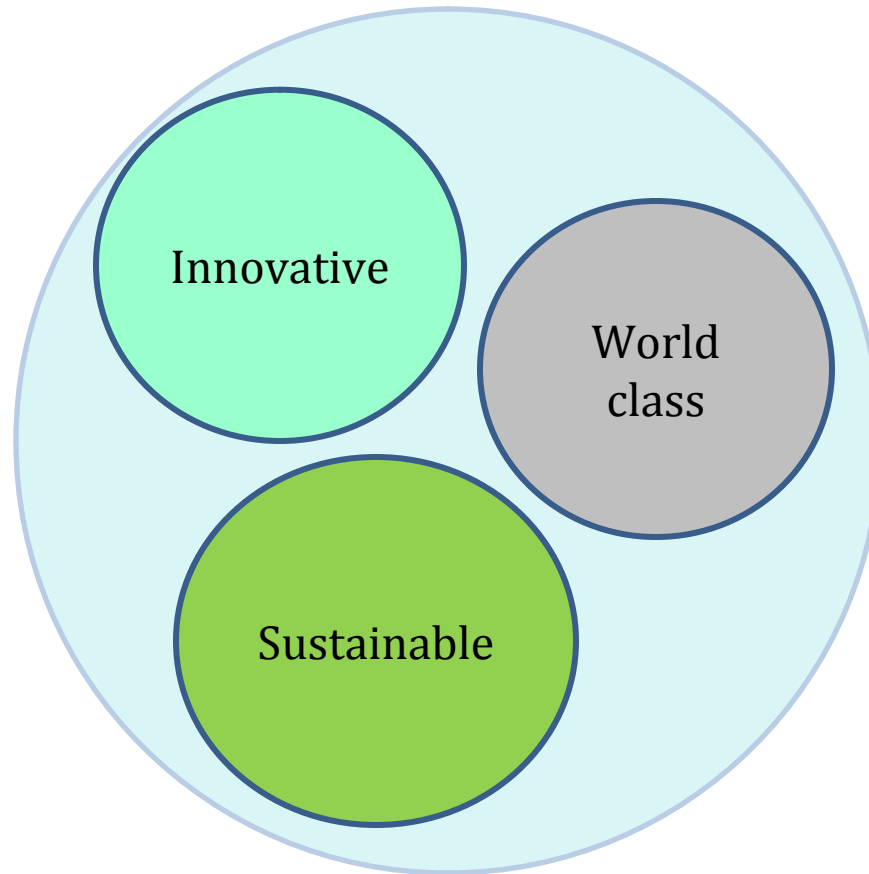
The silver antimicrobial is manufactured by Resil Chemicals Private Limited and marketed exclusively, under the brand N9 Pure Silver™.



- Asia's largest formulator of customized silicones.
- Manufacturer of the world's most sustainable silver antimicrobial which can be used across industries.
- Vast presence across Asia with an excellent network and presence in Thailand, Myanmar, Bangladesh and Sri Lanka.
- IMS certification from LRQA.

WHY N9 PURE SILVER™?

Our application research expertise helps you to
differentiate your products with technologies that are



Loves textiles. Hates bacteria.

