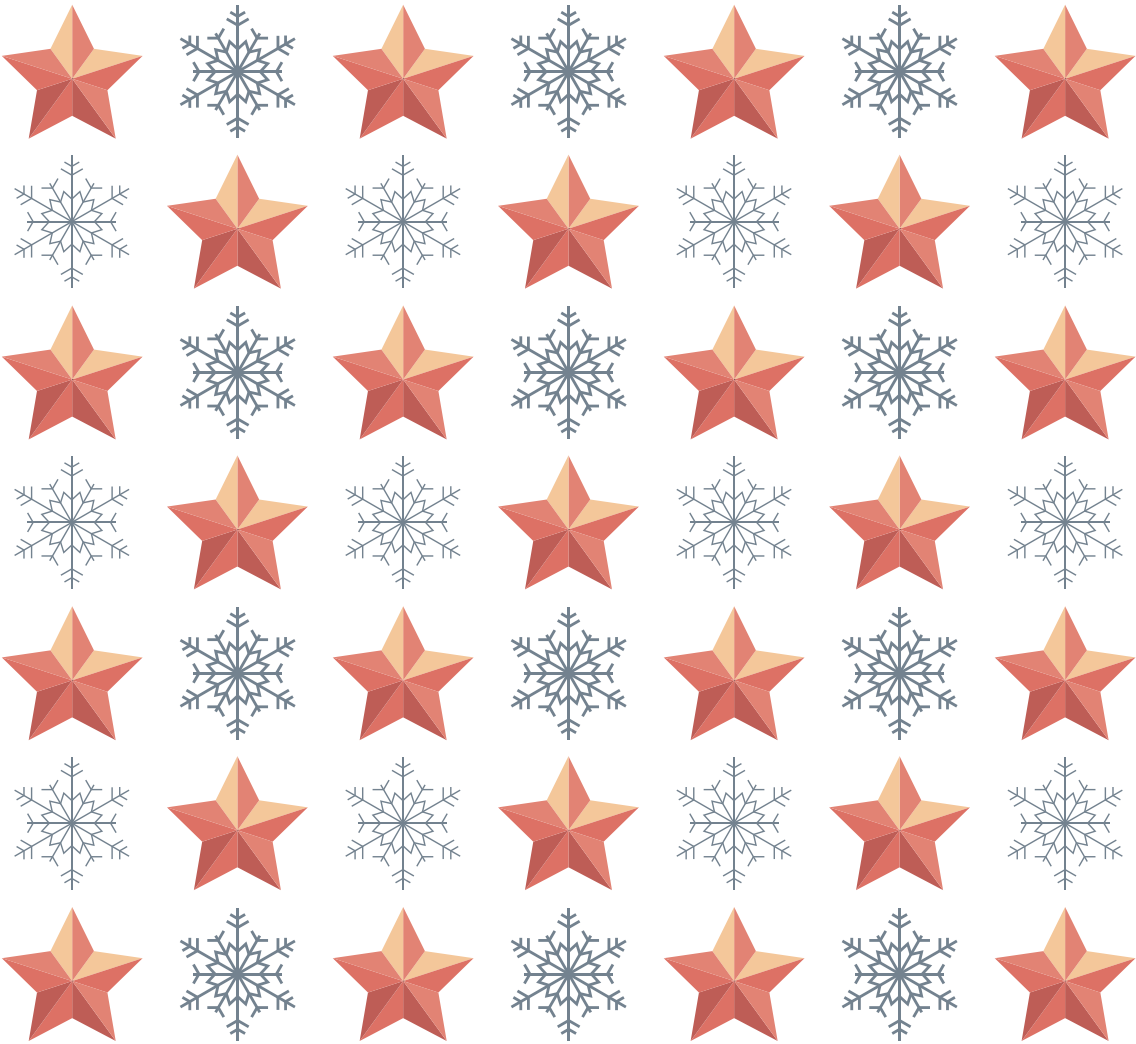


ECO-FRIENDLY
DE-ICER USING
EXTRACTS FROM
STARFISH

ECO-ST

The World's First Eco-Friendly De-icer Using Starfish Extract



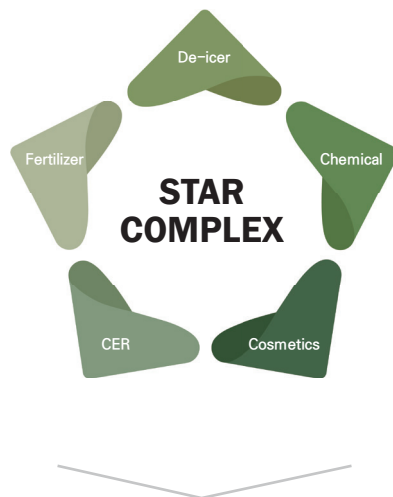
Innovative Solution for Eco-Friendly De-icer,

PROJECT 'STAR - COMPLEX' TO 'COMPANY VISION'

Complex

- A group of a similar type together in one place [Compound]
- Made of many different things or parts that are connected

STAR-COMPLEX PROJECT: UPCYCLING THE OCEAN'S PREDICAMENT, STARFISH, TO MATERIALIZE VARIOUS NEW R&D AND BUSINESS OPPORTUNITIES
FULFILLING & PIONEERING GLOBAL GROWTH VISION BASED ON ECO-FRIENDLY CHEMICAL RESEARCH AND BUSINESS PROJECTS



Solid Type Eco-Friendly De-icer 'ECO-ST'

Eco-Friendly Solid De-icer using Starfish Extract
No.1 Eco-friendly De-icer Manufacturer in Korea
World's Best Corrosion Protection

Cosmetic Raw Material 'Penellagen'

Collagen TDS raw material completed by combining starfish-derived collagen peptides with elastic etosomes. Global No. 1 collagen delivery efficiency through percutaneous application

Liquid Fertilizer 'Fertistar'

An Eco-Friendly Liquid Fertilizer Utilizing Completely Upcycled Starfish After extraction
Extremely cost-effective starfish fertilizer

Eco-Friendly Chemical

Production of liquid recycled soda ash using waste soda ash Recycled phosphoric acid and regenerated SHMP production using waste phosphoric acid

CER

Reducing Carbon Emission based on incinerating marine waste starfish Saving Road maintenance cost by using ECO-ST to reduce additional carbon emission

COMPANY VISION

GLOBAL ECO-FRIENDLY CHEMICAL DEVELOPMENT / MANUFACTURING COMPANY



COMPANY HISTORY

STAR's TECH Co., Ltd is a manufacturer and distributor of innovative, reliable and efficient eco-friendly de-icing solutions available.

2017

- | | | | |
|----|--|----|---------------------|
| 06 | Received the Army Chief of staff Award from Ministry of Defense Start-up Challenge | 11 | Founded STAR's TECH |
|----|--|----|---------------------|

2018

- | | | | |
|----|---|----|---|
| 02 | Established Dangjin Plant | 08 | Signed the First Export Contract with Japan |
| 05 | ECO-ST PCT Applied | 09 | Eco-Label Certified in S. Korea |
| 05 | Obtained Venture Certified | 11 | Received Prime Minister Award from 2018 Challenge! K-Startup |
| 07 | Nominated in Seoul City R&D Support Program | | |

2019

- | | | | |
|----|--|----|--|
| 02 | Obtained Excellent Performance Certification | 08 | Designated as Excellent Product in Public Procurement Service, Republic of Korea |
| 04 | Expanded Dangjin Plant (Smart Factory System Applied) | | |
| 06 | Participated in KOREA-FINLAND Summit Economic Mission as 5 Korean Startups Leading by S. Korean President | | |

2020

- | | | | |
|----|---|----|---|
| 04 | Yeosu Factory Established | 09 | Acquired NEP Certification |
| 06 | Selected as one of 40 Korean Baby Unicorns | 12 | Selected as one of Forbes Asia 30 Under 30 |

2021

- | | | | |
|----|--|----|--------------------------------------|
| 01 | Established Eastern European Corporation | 03 | Series B Investment (15M USD) |
| 02 | Marketplace Opened in North American De-icer Market (Amazon, Etc.) | 04 | Listed on Alberta APL |

2022

- | | | | |
|----|--|----|--|
| 05 | Launched Fertistar, a Starfish Liquid Fertilizer | 08 | Expanded and Relocated Dangjin & Yeosu Factory |
| 05 | Launched LABOPE, a Skincare brand using Penellagen | 09 | Received 'Technical Innovation' Award in APWA Alberta Chapter |
| 08 | Acquired Zero Waste Certification | | |

ECO-ST



ECO-ST - ECO-FRIENDLY DE-ICER USING STARFISH EXTRACT

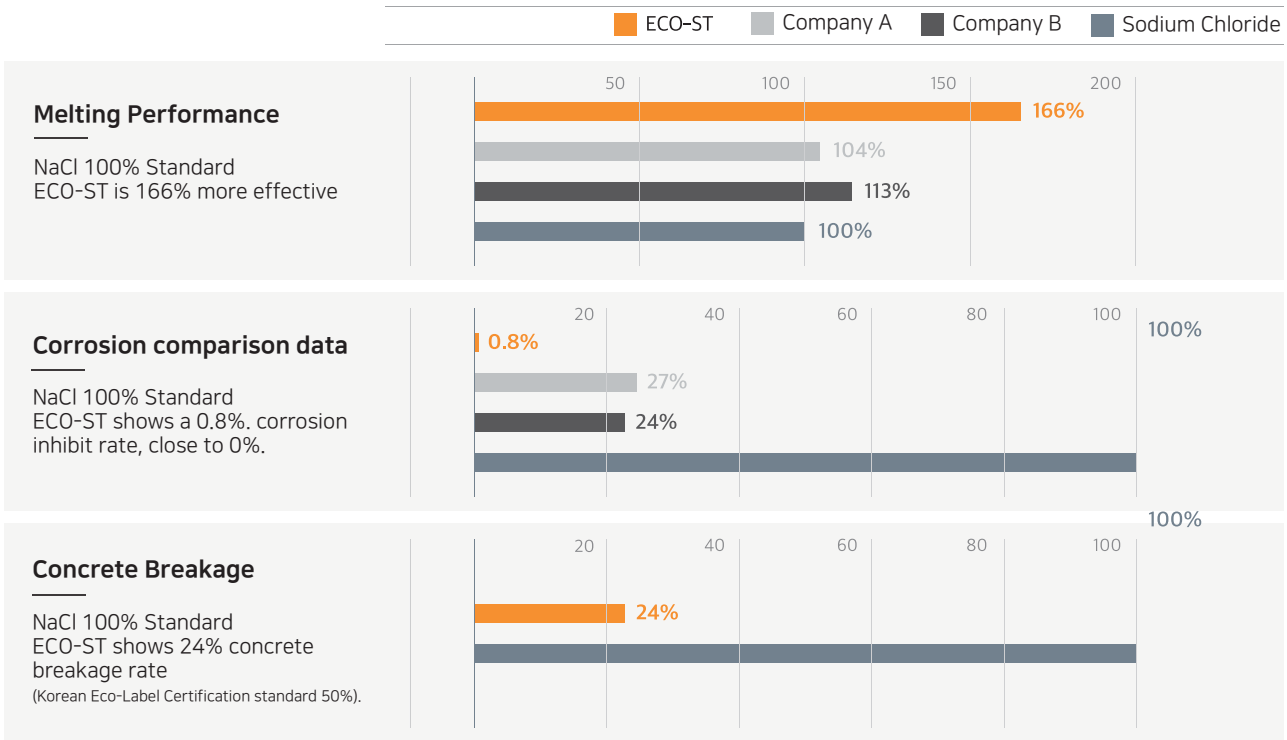
ECO-ST is an Eco-Friendly De-icer produced using specially formulated starfish extracts.

By recycling bio-waste from predatory starfish, our product addresses corrosion and environmental issues with conventional salt while offering superior snow melting performance.

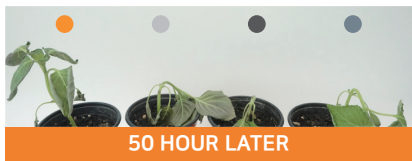
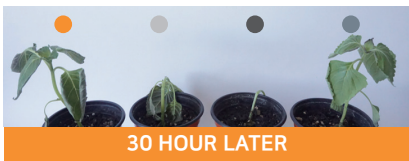
ECO-ST's outstanding snow melting performance is 166% more effective than sodium chloride ice snow melter. This level of performance provides a level of maintenance up to 3 times greater than calcium chlorides. Also, with the help of starfish extract, ECO-ST's metal corrosion level was tested 0.8% in Korea, United States and Japan, which is lower than drinking water.



PERFORMANCE COMPARISON DATA



EFFECTS ON PLANT



This test demonstrates the effects of plants sprayed with different deicers. ECO-ST's effect on plants is much softer in comparison to the application of sodium chloride with one-fifth concentration.

Solution Concentration (%)			
ECO-ST	5%	Company B	5%
Company A	5%	Sodium Chloride	1%



UPCYCLING MARINE WASTE STARFISH

Solving starfish's marine ecosystem destruction , disposal cost, incineration, and limitations of existing de-icers



DESIGNED FOR LONG-TERM STORAGE

Specially coated bead-type ECO-ST can be stored for a long time and minimizes dust generation



EXCELLENT MELTING PERFORMANCE

Melting performance improved to 166% Compared to Salt
Lasts 3 times longer than calcium chloride



PERFECT-ECO

Environmental damages such as metal corrosion, concrete damage, and plant damage can be minimized with starfish extract



ZERO CORROSION

Major reduction in corrosion rate, close to 0%, at 0.8% corrosion while using 1/3 of corrosion inhibitor compared to competitors

WHY STARFISH?

STAR's Tech is getting free supply of marine waste starfish from the Korean Government and contributing to social values environmental benefits by reducing starfish incineration cost.

<Starfish Damages in South Korea>



Aquaculture Damages

Annual 400M\$ Damages to Aquaculture
Destroyed Coral Reefs



Excessive Disposal Cost

4,000 Tons of Starfish Purchased
1,424.17 USD/Ton of Disposal Costs



Insufficient Solutions

Lack of Practical Products
for Starfish Utilization

< Total Social Value per 1 bag of ECO-ST>

70.80_{USD}

1

49.70 USD

Road Repair
Costs Reduced



Reduced Starfish Damages

Minimized Ecosystem Damages
Less Pollution Due to Starfish Disposal

2

14.50 USD

Vehicle Damage
Cost Reduced



Minimal Chloride Ions

Minimized Ocean Pollution
Less Plant Damages

3

4.40 USD

Starfish Damages
Savings



Saved Economical Costs

Less Road Damages
Reduced Starfish Disposal Cost

4

2.20 USD

Plants Damage
Savings



Sustainability

Maintaining Marine Ecosystem
Marine Waste Upcycling

PRODUCT LINE

FINAL PRODUCT



ECO-ST_1000kg

ECO-ST_55 lb

ECO-ST_33 lb

ECO-ST_22 lb

ECO-ST_11 lb

Volume	2200 lb	Volume	55 lb	Volume	33 lb	Volume	22 lb	Volume	11 lb
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How to Use

Unit: g/m²

Temperature	0°C ~ -5°C	-5°C ~ -15°C	-15°C ~ -25°C	-25°C ~ -35°C
below 3cm of snow	30	60	90	120
above 3cm of snow	40	70	100	130

When there is more than 5 cm of snow, broom the snow away moderately before spraying the product.
You may adjust the amount of product to use depending on the conditions.
(Frequently freezing area, temperature)

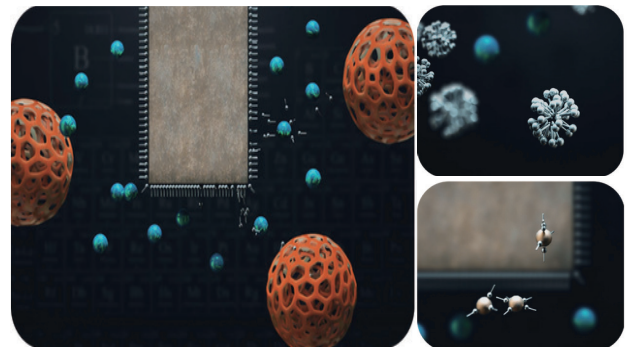
TECHNICAL SERUM

STAR's TECH also offers High-tech Serum to mix with de-icers to significantly reduce metal corrosion and concrete breakage.

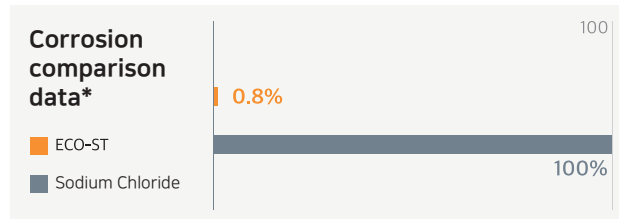
1. CORROSION INHIBITOR (ECO-ST_SERUM)



High-corrosion inhibit technology serum developed with Seoul National University and Ministry of SMEs and Startups

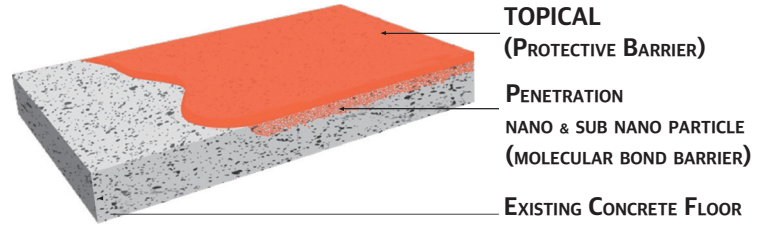


Apperance	Package



ECO-ST's Technical Serum is a fully-customizable serum that can be mixed with de-icers.
By mixing the serum with 1% ~ 5%(normally 2%), the finalized product's corrosion level can be significantly dropped.

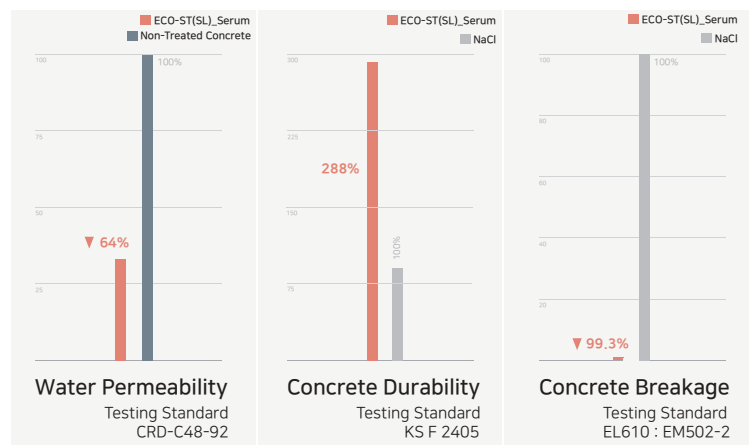
2. CONCRETE INHANCER (ECO-ST(SL)_SERUM)



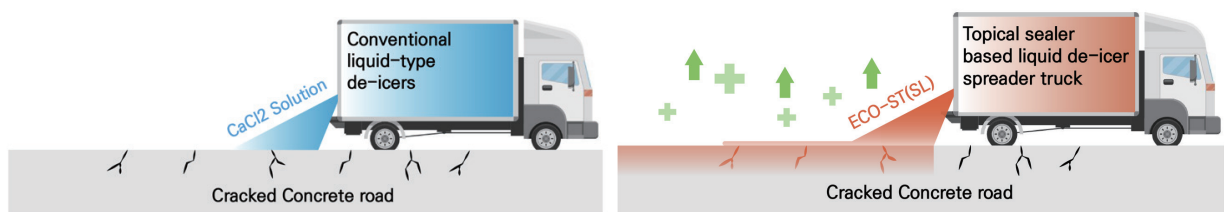
Innovative concrete-reinforced liquid serum developed with the Ministry of Environment and the Korea Conformity Laboratories



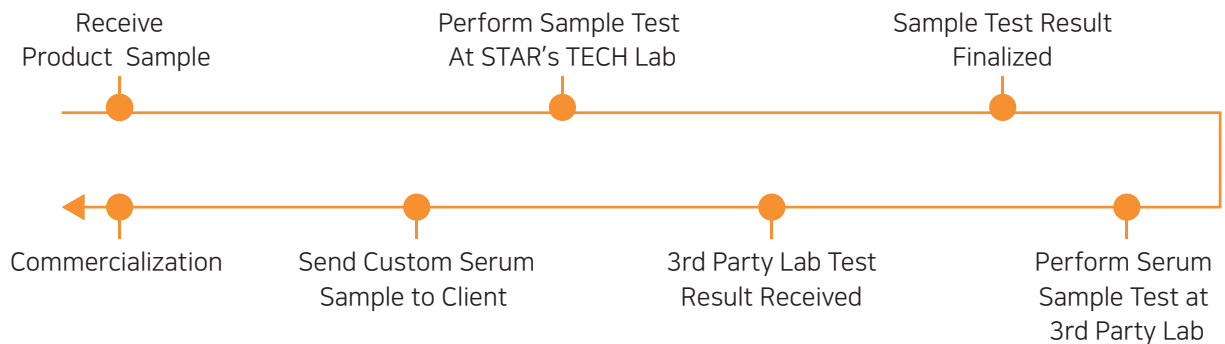
Performance Comparison Data*



ECO-ST(SL) contains Penetrating Sealer, which not only protects the concrete from breaking, but also reinforces concrete lifespan. ECO-ST(SL)'s serum can be mixed with both solid / liquid type de-icers by only adding ~0.5% (normally 0.3%).



SCOPE OF WORK



*All test reports are based on STAR's Tech's finalized products.

*Actual test result may vary depending on materials of the target product.



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