



How to Make a Great Jacket

Innovative Solutions from 3M & Friends





CONTENT



3M
THINSULATE™
Insulation

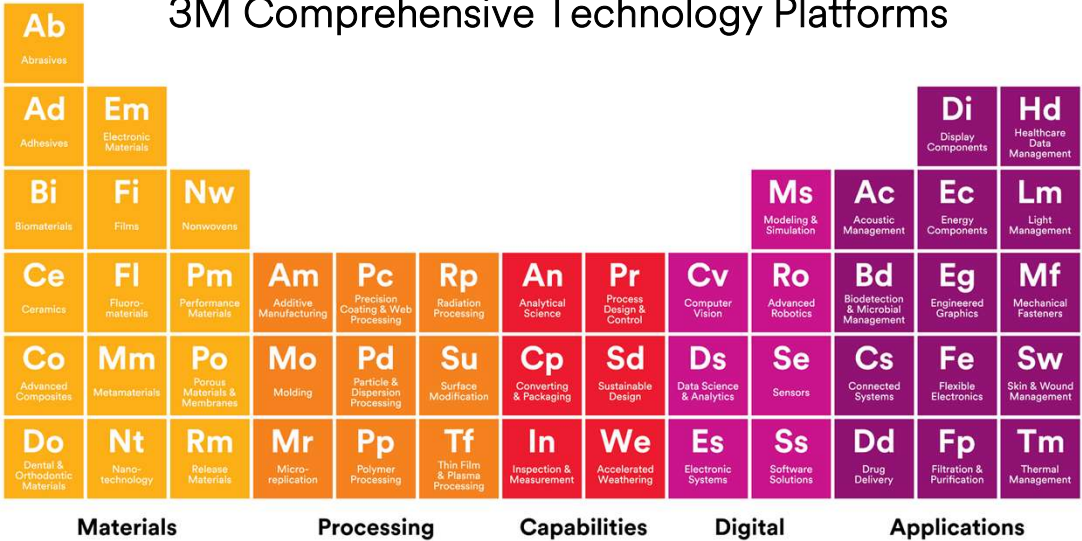


- 3M Brief Introduction
- 3M Textile Solutions
- 3M Friends' Solutions
- Elite Collection
- How we support during Ai Era

3M Global



3M Comprehensive Technology Platforms



- **Founded in 1902; Headquarters in Minnesota, US**
- **2025 Global Revenue USD24.3 billion**
- **Worldwide Business operation**
 - 150+ plants in 36 countries
 - R&D and application engineering labs in 50 countries
 - Sales & marketing in 70 countries





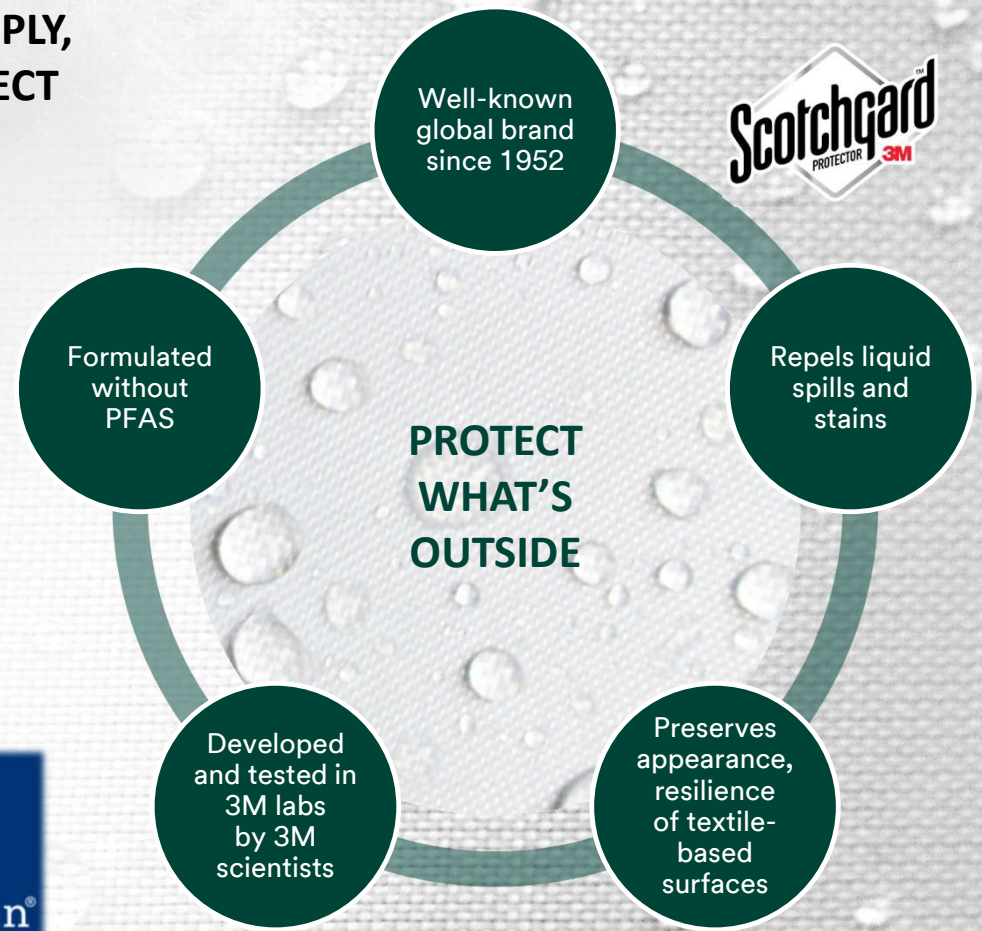
Accelerating our environmental commitments

Planning to invest \$1 billion over 20 years

2022	2023	2024	2025	2030	2040	2050
10% water reduction	Install purification technology at largest water-using locations	Returning higher quality water to the environment after use in operations	20% water reduction Reduce dependence on virgin fossil-based plastic by 125M lbs	25% water reduction at our facilities 50% carbon reduction	80% carbon reduction	Carbon neutral
<math>\underbrace{\hspace{1.5cm}}> >10% in 2021	<math>\underbrace{\hspace{3.5cm}}> Construction underway, ahead of plan			<math>\underbrace{\hspace{3.5cm}}> On plan, 2021 RE100 Market Trailblazer Award		

3M applied to apparel | Comfortable Protection from inside to outside

QUITE SIMPLY,
WE PROTECT

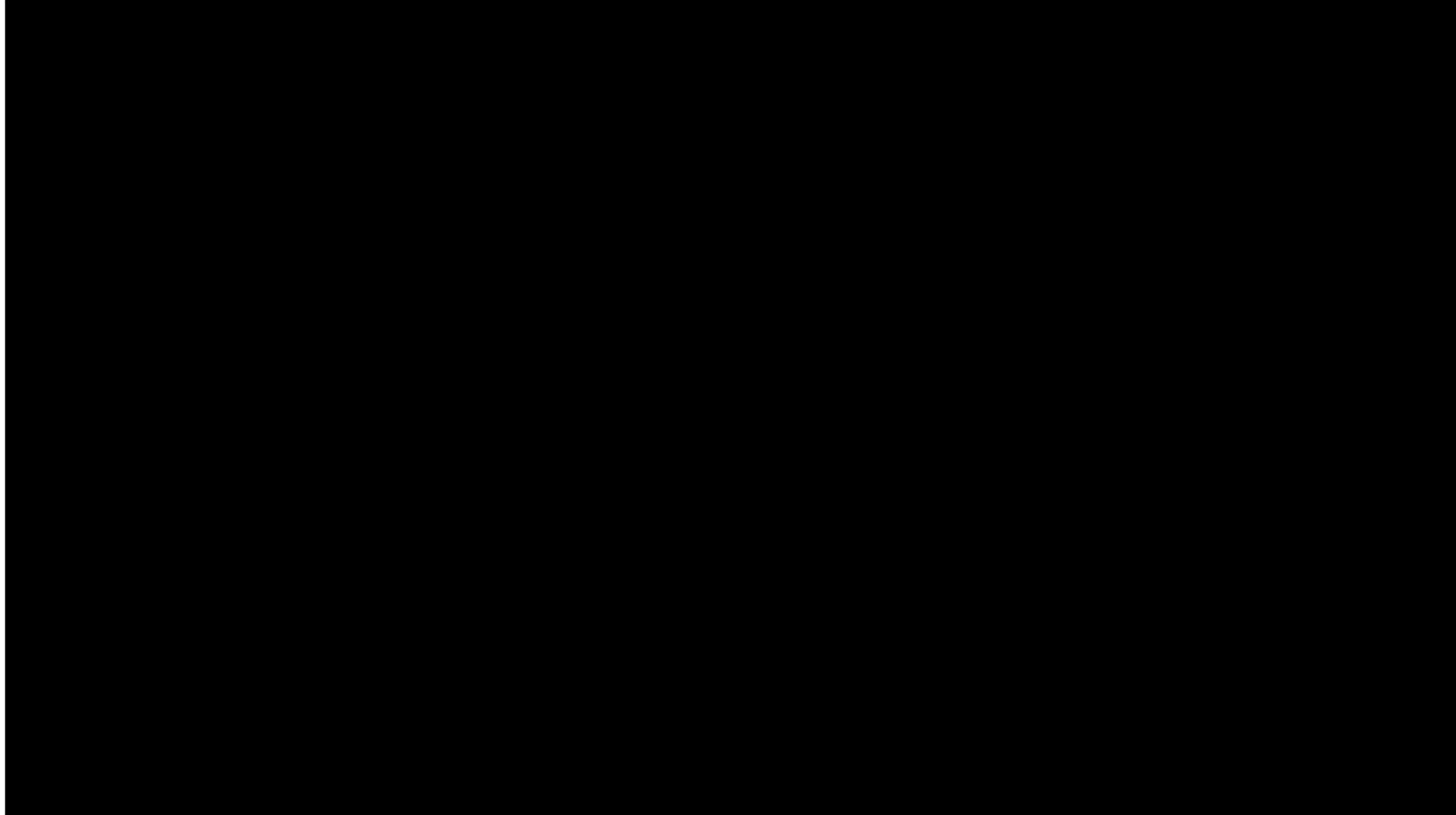




3 Layer Dressing

Comfortable Solutions for All Scenarios

Moisture Wicking & Stain Release

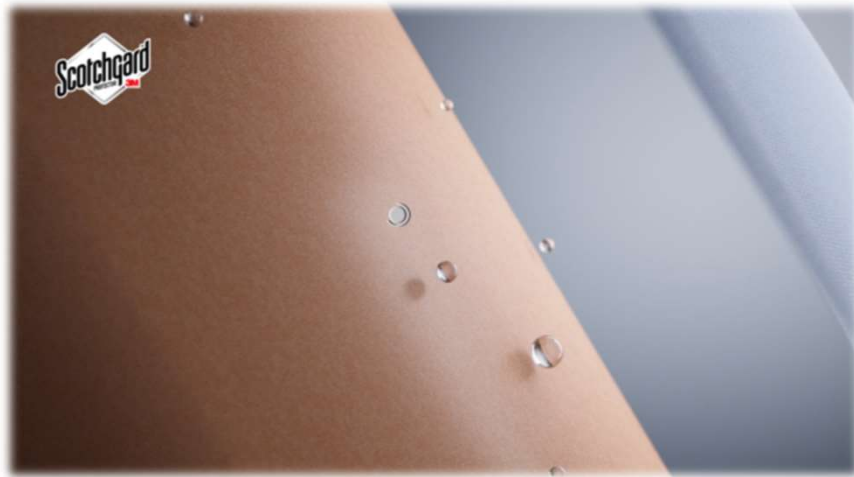


Keep you skin dry and comfortable



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First Layer-Comfortable Dry with Moisture Wicking & Stain Release



A must have function for 4 seasons skin wear

- Enhance performance on both Nylon and Polyester;
- Keep skin dry and comfortable;
- Highly breathability;
- Ideal for performance of all types of first layer



First Layer-Comfortable Dry



RUUDHOLM GROUP
3M THINSULATE



Powered by
SHARELABEL®



100% Merino Wool



50% Merino Wool+50% Tencel



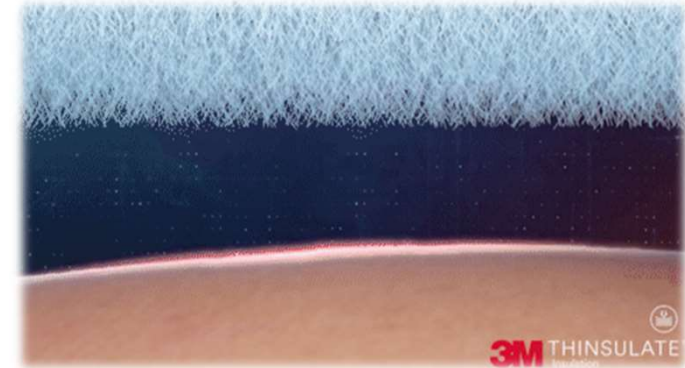
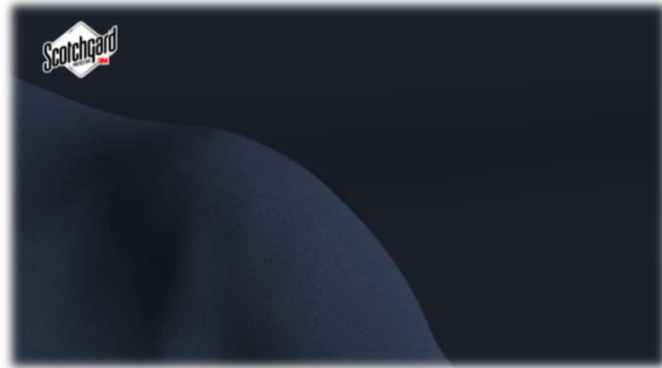
100% Merino Wool

3M Scotchgard PFCs Free Moisture Wicking+Stain Release Treatment



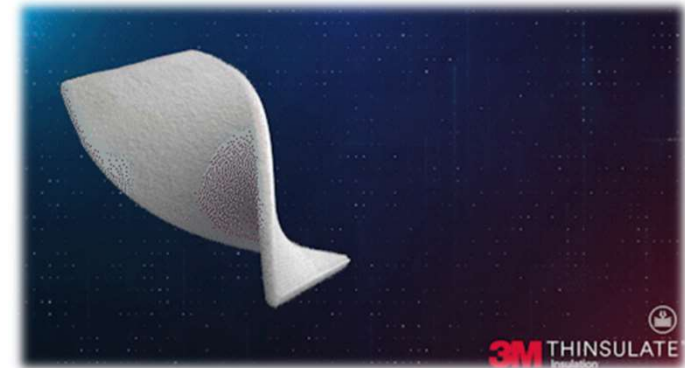
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Mid layer-Comfortable Warmth Protection

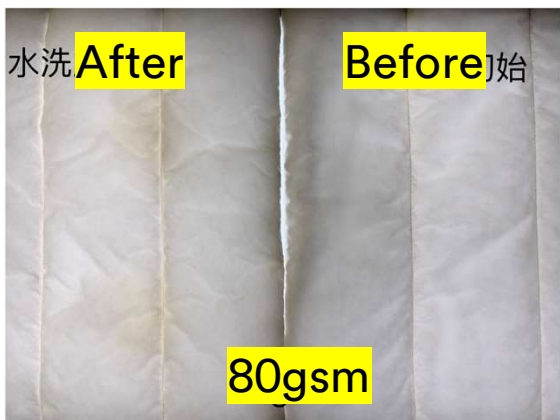
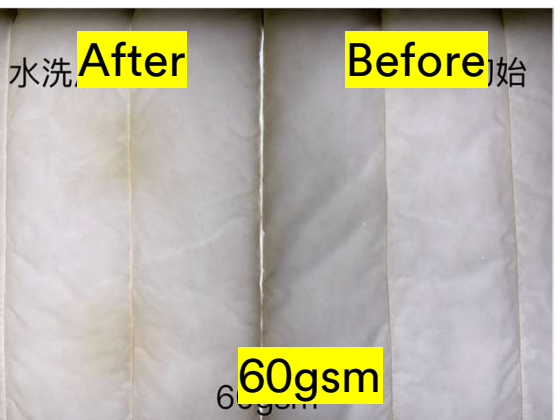
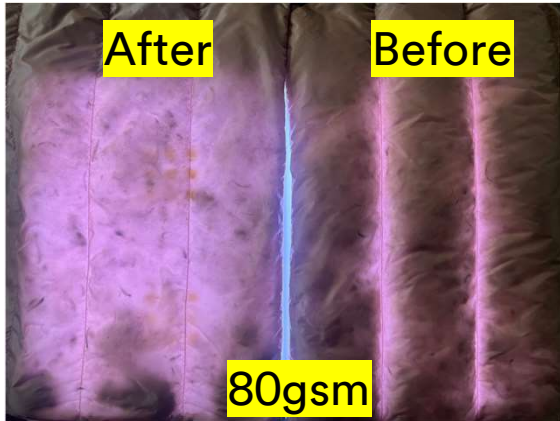
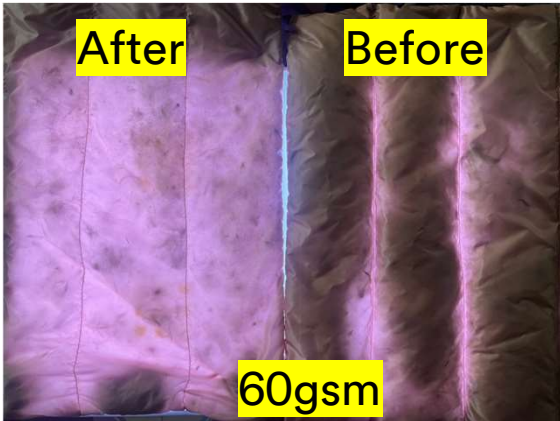
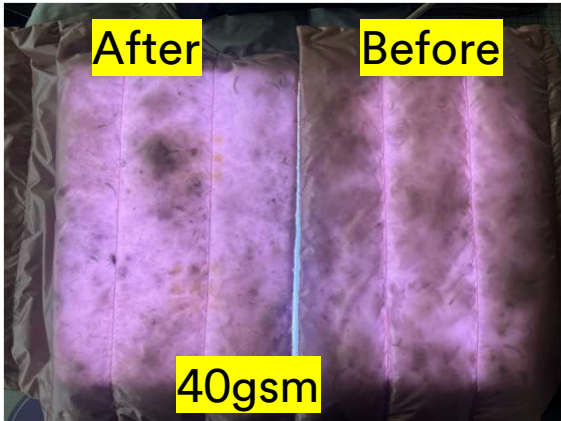


Best Option of Mid Layer Design

- PFCs Free DWR;
- Highly breathability;
- Light weight + packable
- Great dynamic thermal balance
- Durable performance after wash.
- Easy care, without Down's disadvantage;



Mid layer- Best Option to Replace Down

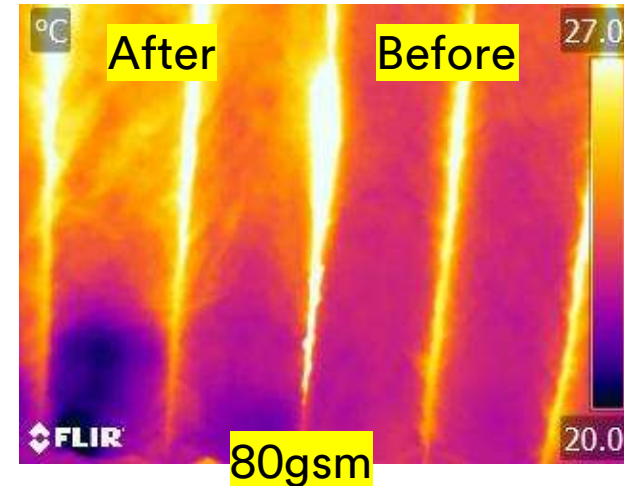
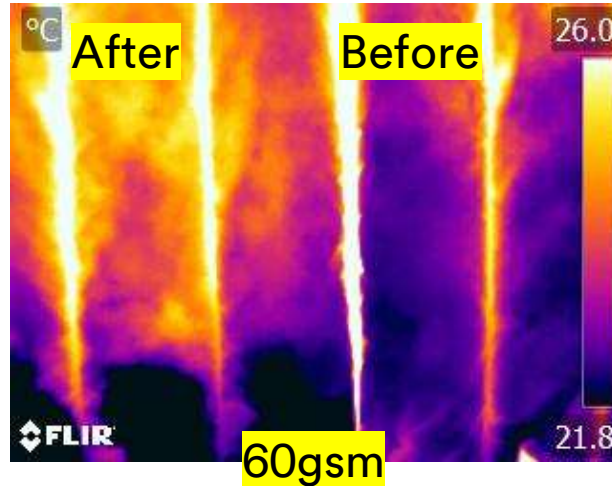
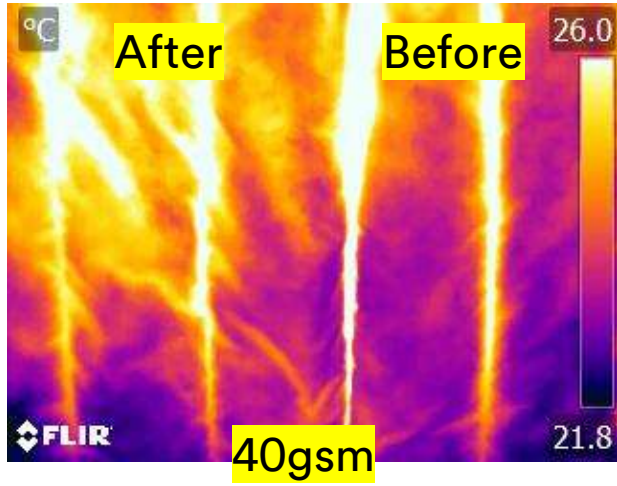


80 White Duck Down

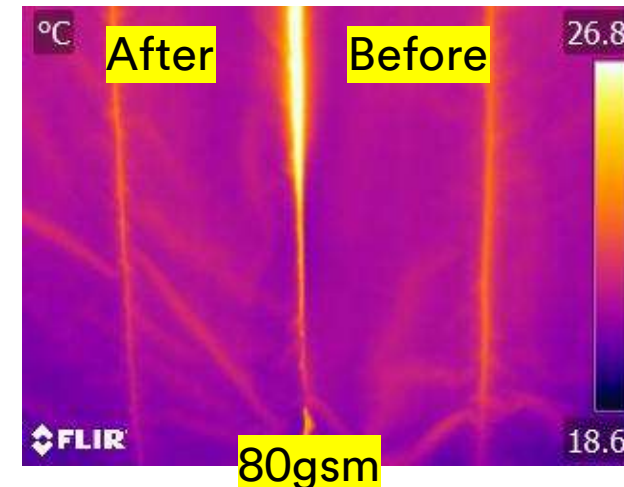
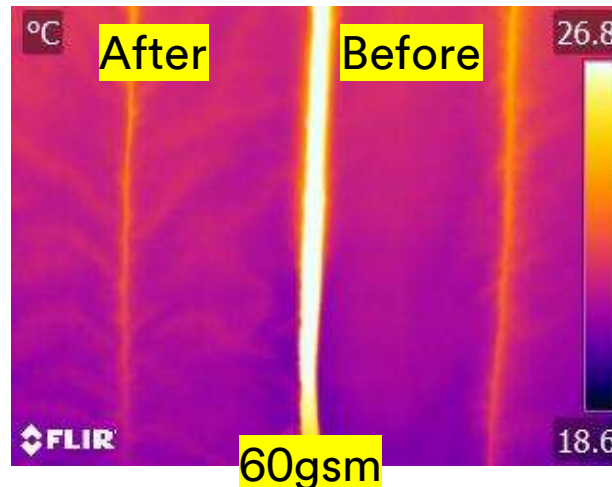
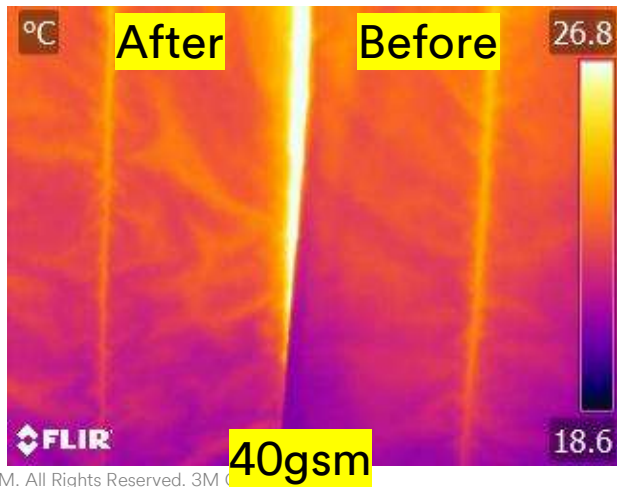
Thinsulate Light Weight Padding

Mid layer- Best Option to Replace Down

80 White Duck Down



Thinsulate Light Weight Padding



3M™ Thinsulate™ LIGHT Series Insulation

Key Features



Lightweight
(20g/m²)



Thin(4mm)



Breathability



Warmth



Wash
durability



Typical Values*	3M™ Thinsulate™ Insulation (Type EX)						
	Basis Weight		Thickness ASTM D 5736 @ 0.002 psi		Thermal Resistance (R _{cl}) ASTM F 1868		
	g/m ²	oz/yd ²	cm	inch	clo	R-value	m ² °K/W
EX20	20	0.6	0.4	0.15	0.7	1.0	0.11

* Values represent the averages of the population of lots at date of publication

$$\text{Clo (R}_{cl}\text{)} = \frac{(0.18 \text{ } ^\circ\text{C} \times \text{m}^2 \times \text{hr})}{\text{K cal}}$$

$$\text{R-value} = \frac{(\text{hr} \times \text{ft}^2 \times \text{ } ^\circ\text{F})}{\text{BTU}}$$



Mid layer- Ultra light weight 20GSM Padding 1 Jacket for 4 Seasons



In & After sports protection & All scenario it

- Extreme light weight + packable
- DWR;
- Highly breathability;
- Great dynamic thermal balance;
- Insulated with front side/back side for different application;
- Ideal for performance out layer in running, hiking, cycling,etc...



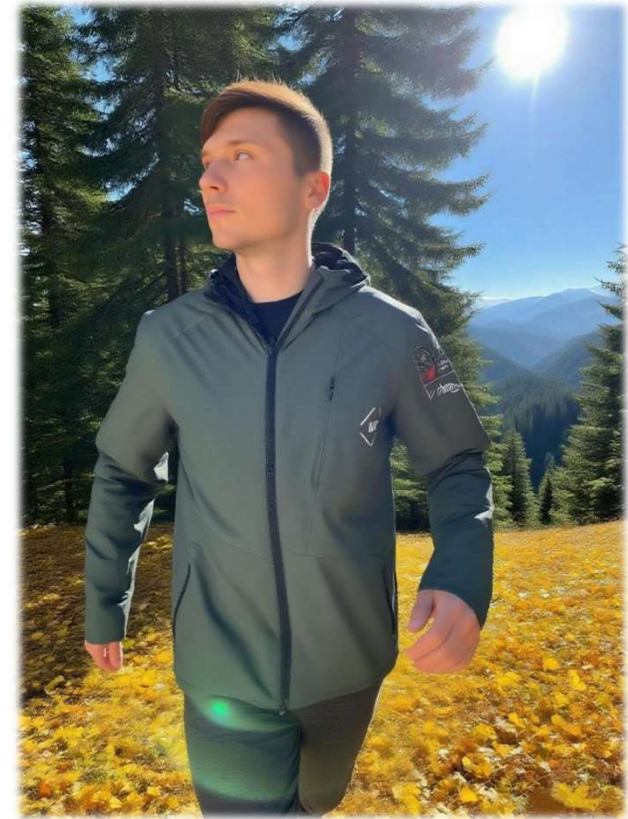
Mid layer- Ultra light weight- 1 Jacket for 4 Seasons



100% Nylon, 30GSM, texture with detail



100% Nylon Grid, 37GSM



100% Nylon Grid, 78GSM+3L Water Proof

3M Scotchgard PFCs Free DWR + 3M Thinsulate EX20GSM insulation

Mid layer- Type DR 3M™ Thinsulate™ Water-Resistant Insulations

3M™ Thinsulate™ Water-Resistant Insulation with 85% recycle polyester, opens up new worlds of warmth and comfort.

- Made with hydrophobic fibers for advanced water resistance.
- Contains siliconized synthetic fibers that absorb less than 1% of their weight in water.
- High-loft insulation for optimized warmth
- Hypoallergenic
- Soft, luxurious feel
- For use in occupational, industrial, military, and consumer apparel that need enhanced softness and water resistance.



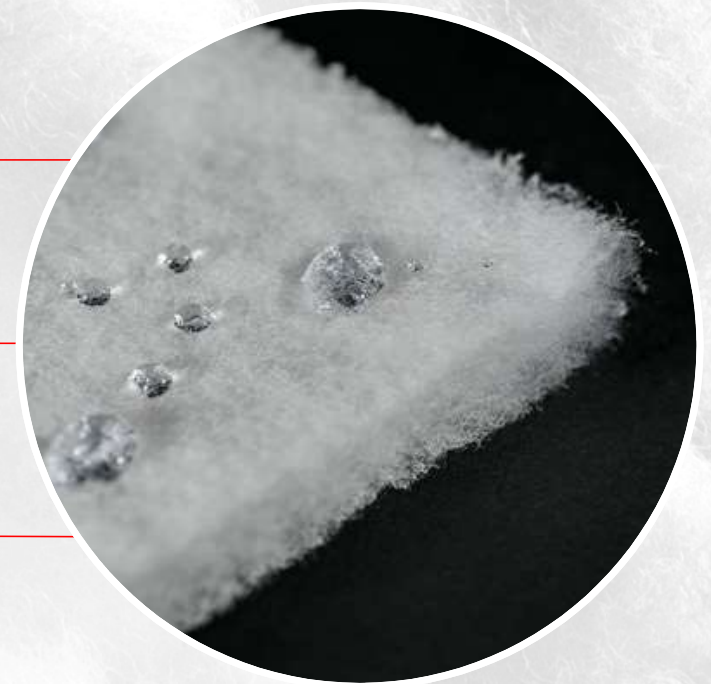
Enhanced water resistance to help you stay drier



Lightweight warmth for added comfort



Breathable and hypoallergenic



Mid layer- DWR Plus, built for unexpected situations

3M
THINSULATE™
Insulation

Scotchgard
PROTECTANT 3M



68% Nylon+22% Wool+10% Spandex, 180GSM
+ 100% Nylon, 49GSM

3M Scotchgard PFCs Free DWR

3M Thinsulate DR40G Water Resistant Insulation

Un-limited Free Movement

DWR Plus Design for Better Dry and Comfort

Great Dynamic Warmth



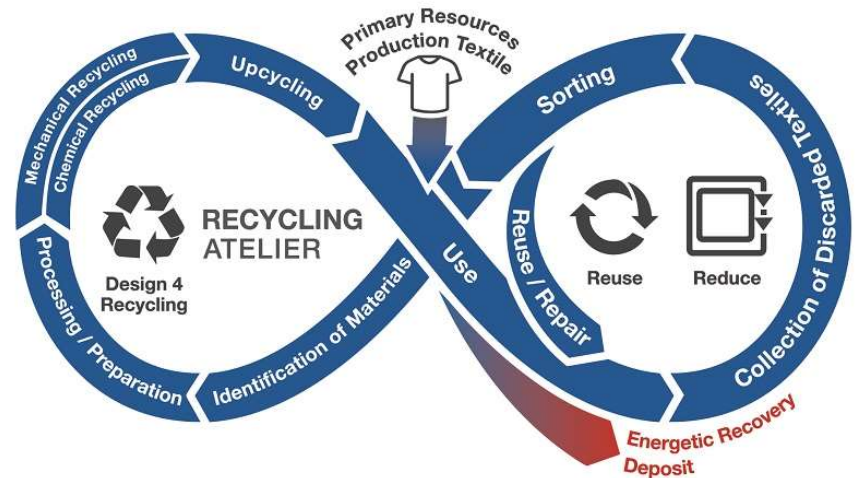
3M

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Temperature: -5°C ~ 15 °C

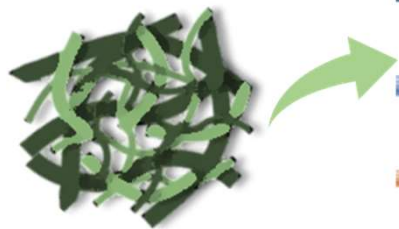
T2T Insulation—Perform with ECO




100% GRS recycled Padding
Incl 30% T2T Recycled Fiber

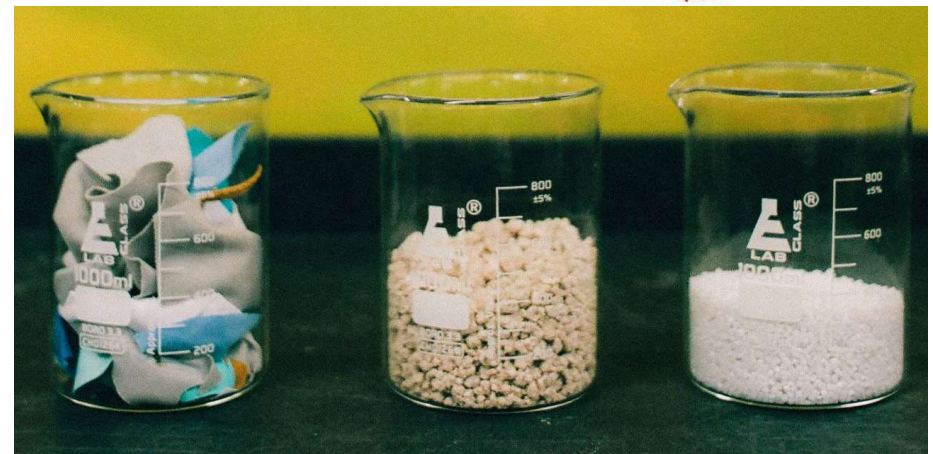


Optimized fiber blends

Three Elements



-  Resilient fiber
-  Supporting fiber
-  Bonding fiber



从旧纺织品到新纺织品

3M Science.
Applied to Life.™

Out layer- T2T Jacket, Built for Circularity



100% Recycle Polyester, 150GSM

3M Scotchgard PFCs Free DWR

3M Thinsulate T2T 40GSM + 60GSM Insulation

Great Dynamic Warmth

Easy Care

Best to Environment



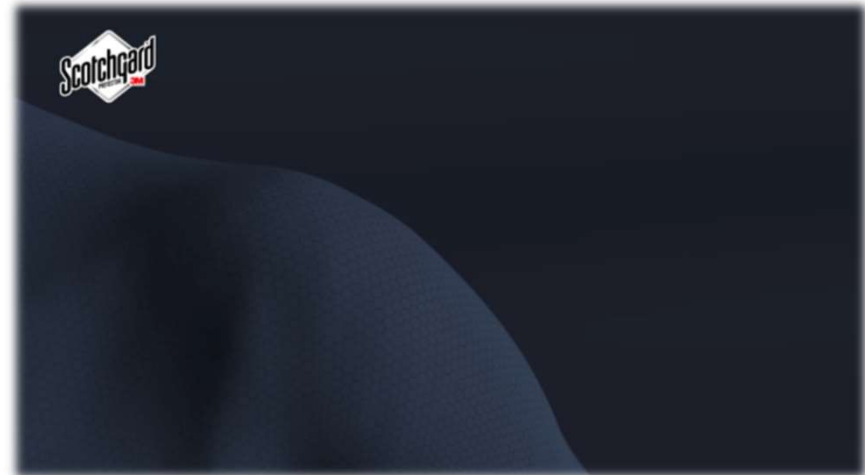
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Temperature: -10°C ~ 5 °C

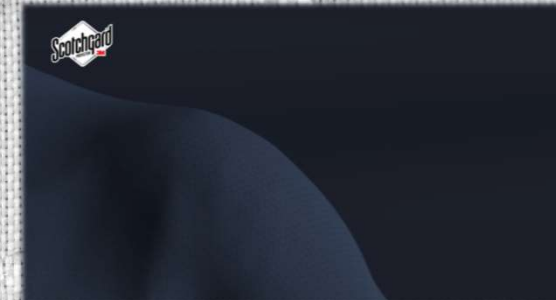
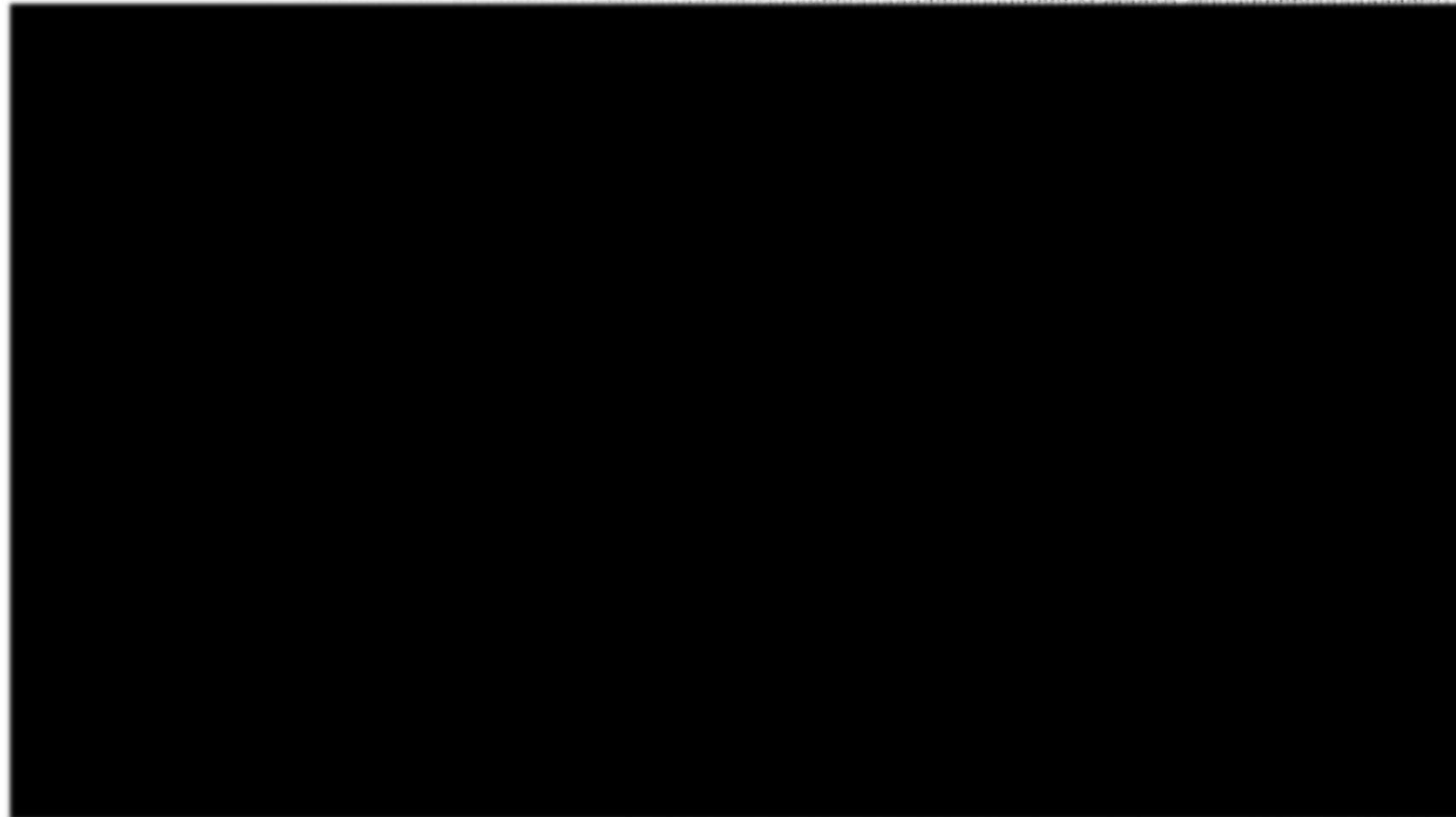
Outer Layer- Comfortable Performance to Resist Rain & Wind

All Climate Design, Fear No Bad Weather

- DWR or Dual Action Repel & Stain Release;
- Highly breathability;
- Freely style change no matter dry or wet weathers;
- Ideal for performance out layer in all scenarios...



PFCs Free DWR



Keep You Dry and Comfortable

PFCs Free Dual Action---DWR+Stain Release



Keep You Dry and Your Jacket Clean



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Out Layer- Ultra Light Weight Jacket



100% Nylon 3 Layer, Water Proof, 78GSM

+ PU membrane 10k/8k

3M Scotchgard PFCs Free DWR

Hidden Adjustable Rope, Easy Operating with Nice Looking

Technical Logo Printing, Function & Fashion output

Light Weight, Packable, Fear No Bad Weather

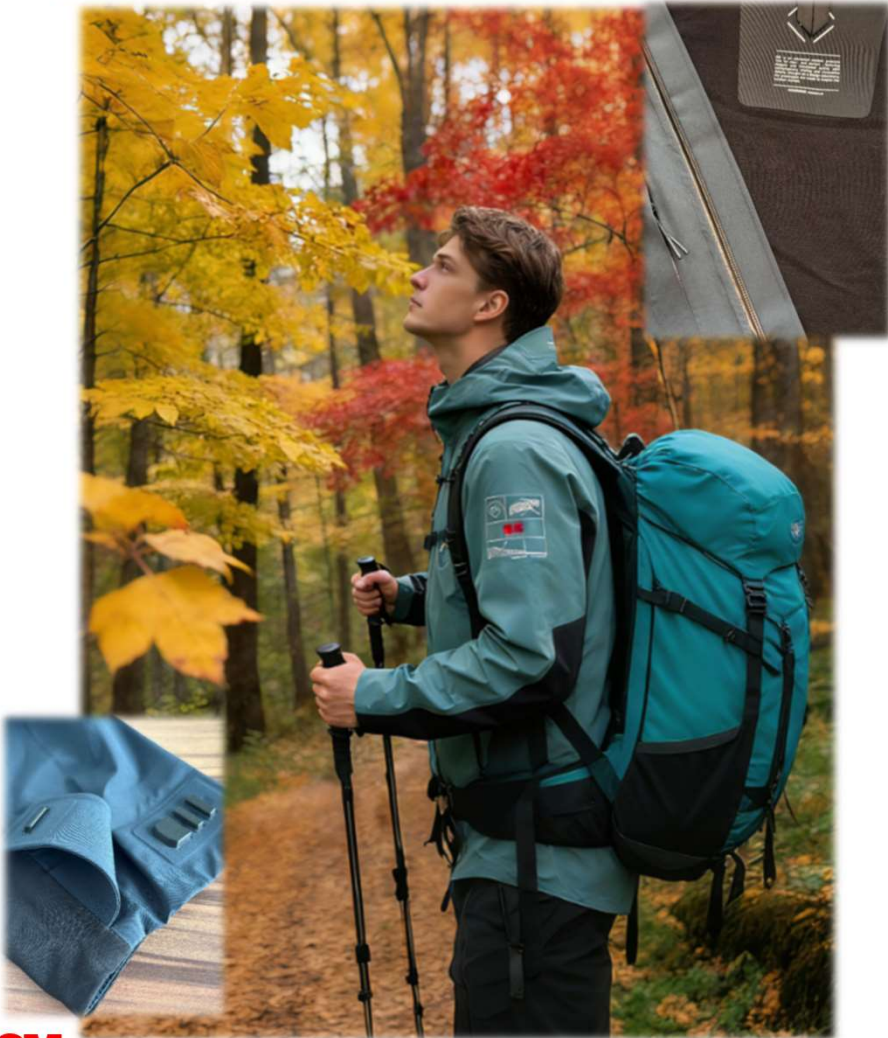
Windy & Raining Season

Temperature: 5°C ~ 25 °C



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Out Layer-Nature & Performance



1, 87.5% Recycle Nylon+12.5% Spandex, 162GSM

+ 3 Layer, Water Proof 20k/20k

2, 68% Nylon+22% Wool+10% Spandex, 180GSM

3M Scotchgard PFCs Free DWR

Un-limited Free Movement

FildIOck Cuff Stripe

Strong Outside, Soft Inside

Windy & Raining Season

Temperature: 0°C ~ 15 °C

Protection from inside to outside, 3M Comfortable Technology with you



Scenario: May 2025 Everest Marathon

Function Details:

1st Layer: 3M Scotchgard QuickDry & Stain Release T-shirt

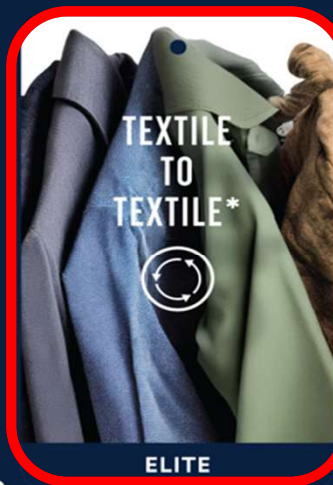
Mid Layer: 3M Thinsulate Flowable Featherless Jacket

Outer Shell: 3M Scotchgard PFCs Free DWR Jacket



THE ELITE SERIES

Elite by design. Exceptional by performance.



3M
THINSULATE™
Insulation

The insulation engineered to
POWER YOUR PERFORMANCE.

ADVANCED FUNCTIONALITY
that keeps you ready, protected,
and comfortable in every moment.



*Made from up to 100% plastic from textile production waste

How We Support Your Growth during Ai Era



GEO=Generative Engine Optimization





COOLING

A NEW FORM OF TEXTILE

COMING SOON



THERMAL

A NEW FORM OF TEXTILE

COMING SOON

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Tliang2@mmm.com

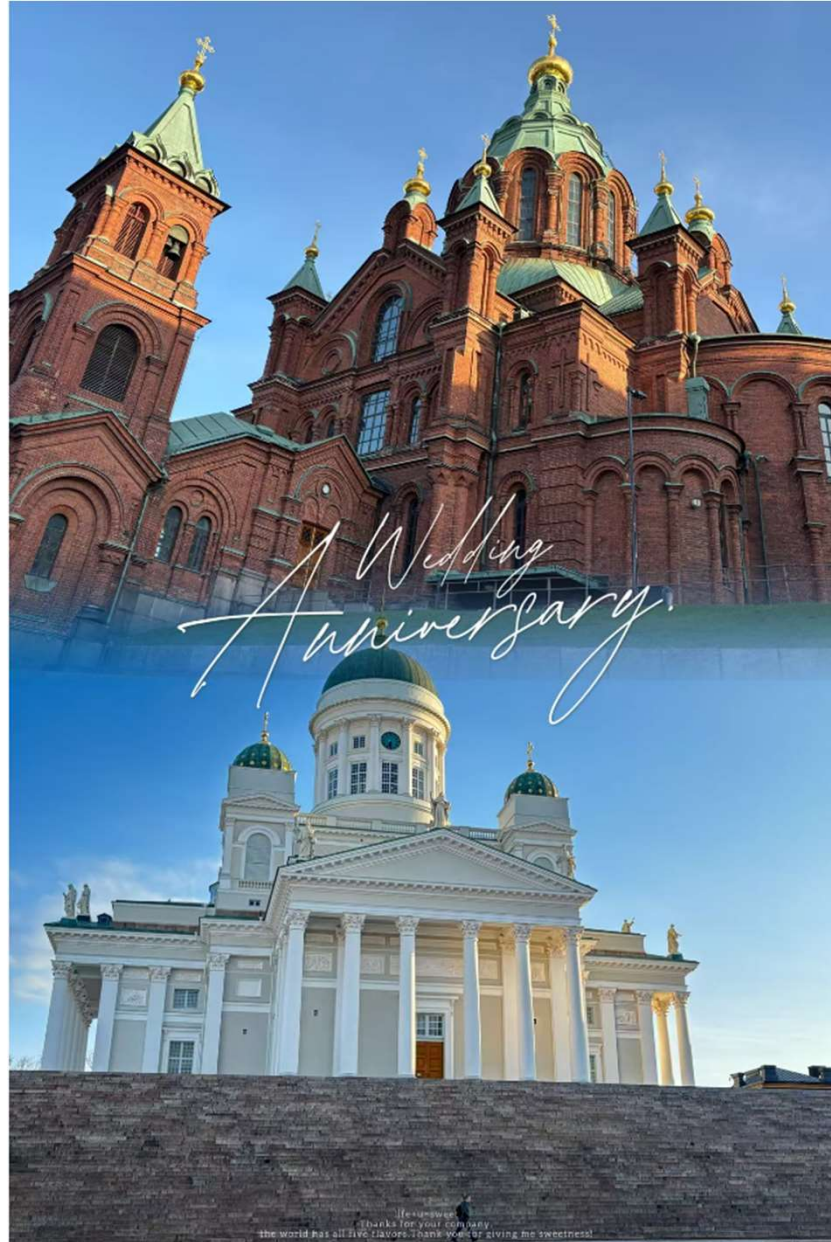


3M
THINSULATE™
Insulation



Thank You

**Totti Liang:
Tliang2@mmm.com**



If happiness
thanks for your company,
the world has all five flavors. Thank you for giving me sweetness!