

NEW

Dual-core Technology: Longwear & Protection, Brand- New Solution

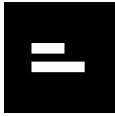
Longwear / Intelligent Phase Inversion
Skin-friendly / Innovative Film-forming

Innovative film-forming & smart emulsification tech,
for premium skin feel and long-lasting performance.

New Solution



GreenZn Co., Ltd. 



CONTENT



- Industry Pain Points & Tech Challenges
- GreenZn Core Tech Decoding
- Superior Skin Feel & Efficacy Verification
- Market Applications & Commercial Value

■ The Core Dilemma of Sunscreen Foundation: = Adhesion vs. Longwear — Hard to Balance?

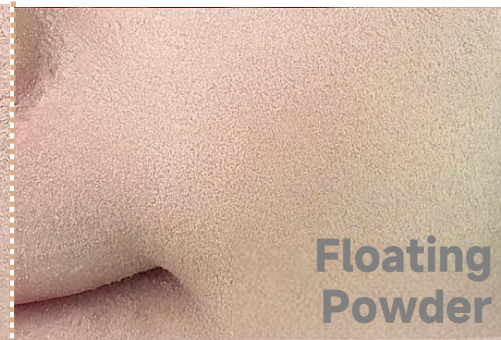
Poor Durability: Fragile film, easy cracking & peeling

Film without elasticity cracks over time, losing longwear & protection.



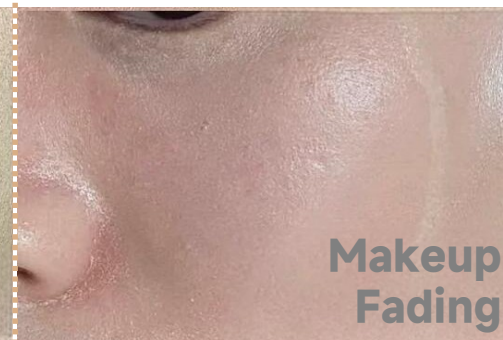
Heavy Skin Feel: Sticky, occlusive texture

High polymer content raises viscosity, reduces breathability, creates mask-like feel.



Easy Wash-off: Protection fails when exposed to sweat

Weak water resistance; film collapses by sweat/sebum, causing white runoff.



Uneven Film: Poor spreadability, patchy finish

Traditional film-formers form inconsistent layers, damaging makeup & protection.



The Impossible Triangle: Skin Feel, Efficacy & Stability

Consumers want ultra-light feel + potent repair, challenging classic O/W & W/O emulsions. Oily skin gets oily surface & dry base; dry skin faces heavy texture & breakouts. High-internal-phase formulas separate easily with changing temperature & humidity.

Mismatch Between Skin Needs & System Properties

Oily skin: O/W is non-sticky but under-hydrated → skin over-secretes oil (oily surface, dry base cycle)

Dry skin: W/O repairs barrier, but high oil clogs pores, triggers acne, bad for summer

Oily Surface, Dry Base · Breakout Risks

Limits of Physical Stability & Active Loading

High-internal-phase emulsions crack/separate/leak oil with temp change, shorter shelf life

O/W struggles to dissolve high-dose oil-soluble actives; water evaporates fast in dry conditions, failing to deliver long-lasting hydration.

Emulsion Breakage & Separation · Limited Efficacy

Balanced Rigidity & Flexibility: Biomimetic Film-forming Innovation

Longwear is not only about hard films. Mechanical control + biomimetic structure create smart protective films with high UV protection, breathability and rub resistance, breaking traditional limits.



Mechanical Control

Blend plasticizers & high/low Tg film-formers to cut brittleness while keeping tensile strength, balancing rigidity & flexibility.



Balanced Rigidity & Flexibility



Structural Biomimicry

Mimic lotus leaf/feather micro-structures for breathable, waterproof & sweat-resistant film; strong adhesion, no pilling.



Lightweight & Breathable



Smart Film-forming

Elastic breathable film releases sweat vapor to avoid stuffiness; it tightens on water contact to stop white runoff.



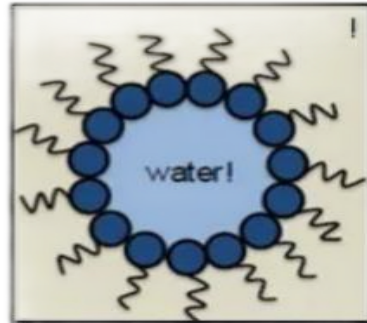
Water-activated Reinforcement

01

Smart Phase-Inversion Emulsification Tech



Before Application: O/W



After Application: W/O

Smart Water-Oil Phase-Inversion Mechanism

Shear force triggers phase change: fresh O/W at first swipe → longwear W/O, balancing instant hydration and water/sweat resistance.

Initial O/W State

Serum-like cool hydrating texture, less greasy than traditional sunscreen foundation. Water melts quickly on skin.

O/W Hydration

Phase Inversion During Application

Rubbing shear breaks emulsion, releases powder & phases to skin. Texture smoothly shifts from watery to silky.

Seamless Skin Fusion

Final W/O State

Stable W/O locks water inside. Outer oil film creates waterproof & sweat-resistant layer for long-lasting makeup.

W/O Makeup Lock

Scientific Formulation: Unlock Skin Moisture

Cream Reference Formula — Moisturizing Face Cream XY251209-1

Trade Name	Content	INCI
Z-Emuslix PI-100F	2.50%	CETEARYL ALCOHOL, C20-22 ALKYL PHOSPHATE, PEG-100 STEARATE, GLYCERYL STEARATE, SILICA, ISONONYL ISONONANOATE
Liponate BDP	2.00%	BIS-DIGLYCERYL POLYACYLADIPATE-2
Lipovol GTB	2.00%	TRIBEHENIN
GDActive Squalane	1.00%	SQUALANE
Golden Jojoba Oil	1.00%	SIMMONDSIA CHINENSIS (JOJOBA) SEED OIL
Limnanthes Alba (Meadowfoam) Seed Oil	0.50%	LIMNANTHES ALBA (MEADOWFOAM) SEED OIL
C24RC	5.00%	ETHYLHEXYL PALMITATE
DM5	5.00%	DIMETHICONE
Medical Vaseline	1.50%	PETROLATUM
Seabird Feather Oil	7.00%	CETYL ETHYLHEXANOATE
GTCC	5.00%	CAPRYLIC/CAPRIC TRIGLYCERIDE
Water	48.00%	WATER
Arocos-RK	0.50%	RASPBERRY KETONE
AroHydro-H	0.50%	1,2-HEXANEDIOL
Butylene Glycol	6.00%	BUTYLENE GLYCOL
EG-1	5.00%	GLYCERETH-26
Glycerin	3.00%	GLYCERIN
SF-1	2.00%	ACRYLATES COPOLYMER, WATER
PC 2000	0.30%	AMINOMETHYL PROPANOL
Zenipoly SSP	2.10%	SODIUM ACRYLATE/SODIUM ACRYLOYLDIMETHYL TAURATE COPOLYMER, ISOHEXADECANE, POLYSORBATE 80, WATER, SORBITAN OLEATE
86308842	0.10%	PARFUM



2.5%

Z-Emuslix PI-100F
Single use, no co-emulsifier

30%

Natural plant oils mimic skin lipid barrier, repairing dry lines & flakiness for deep, long-lasting hydration.

01

Formula Highlights

Initial watery texture delivers a pleasant sensory experience.

Post phase inversion, it locks water and works with oils to nourish dry skin.

- Watery Texture on Application
- Phase-Inversion Film Formation
- Lightweight Protection

•**Broad-Spectrum High Protection:** SPF50+ blocks UVB against sunburn. Multiple UV filters shield UVA to reduce photoaging.

•**Exclusive Phase-Inversion Emulsification Tech:** PI-100F delivers lightweight non-greasy texture. Melts and forms film instantly, no heavy/sticky residue.



Sunscreen Reference Formula —
Phase-inversion Sunscreen Lotion (In
Vitro SPF50) XYDW25110701

Trade Name	Content	INCI
Z-Emuslix PI-100F	4.00%	CETEARYL ALCOHOL, C20-22 ALKYL PHOSPHATE, PEG-100 STEARATE, GLYCERYL STEARATE, SILICA, ISONONYL ISONONANOATE
Lanol 99	3.50%	ISONONYL ISONONANOATE
CAPRYLYL TSO	3.00%	CAPRYLYL METHICONE
MCX	8.00%	ETHYLHEXYL METHOXYCINNAMATE
HYSHELL A+	2.00%	DIETHYLAMINO HYDROXYBENZOYL HEXYL BENZOATE
Sunobel® OS	3.00%	ETHYLHEXYL SALICYLATE
Micro TiO2 060 AS	3.00%	TITANIUM DIOXIDE, ALUMINUM HYDROXIDE, TRIETHOXYCAPRYLYLSILANE
Lanol 99	1.50%	ISONONYL ISONONANOATE
Water	56.60%	WATER
AroHydro-PHP	0.50%	HYDROXYACETOPHENONE
AroHydro-H	0.50%	1,2-HEXANEDIOL
1,3-Butylene glycol	8.00%	BUTYLENE GLYCOL
Glycerin	2.00%	GLYCERIN
Carbopol® Aqua SF-1 Polymer	1.50%	SODIUM ACRYLATES COPOLYMER, WATER
PC 2000	0.40%	AMINOMETHYL PROPANOL
HYSHELL SORB-M	2.00%	METHYLENE BIS-BENZOTRIAZOLYL TETRAMETHYLBUTYLPHENOL, WATER, DECYL GLUCOSIDE, PROPYLENE GLYCOL, XANTHAN GUM
Zenipoly SSP	0.50%	SODIUM ACRYLATE/SODIUM ACRYLOYLDIMETHYL TAURATE COPOLYMER, ISOHEXADECANE, POLYSORBATE 80, WATER, SORBITAN OLEATE
86424048	0.10%	PARFUM

Makeup Reference Formula:
Phase Inversion Foundation DW26050801

Trade Name	Content	INCI
Z-Emuslix PI-100F	4.00%	CETEARYL ALCOHOL, C20-22 ALKYL PHOSPHATE, PEG-100 STEARATE, GLYCERYL STEARATE, ISONONYL ISONONANOATE, SILICA
RH-CM5	9.00%	CYCLOPENTASILOXANE
QH02	4.00%	TRIMETHYLSILOXYSILICATE
MT10	2.00%	POLYMETHYLSILSESQUOXANE
L-14E	2.50%	HYDROGENATED POLYISOBUTENE
Tio2 CR50/AS	9.00%	CI 77891, ALUMINUM HYDROXIDE, TRIETHOXYCAPRYLYLSILANE
222	1.50%	DIISOSTEARYL MALATE
PS-12	1.00%	ISODODECANE, DISTEARDIMONIUM HECTORITE, PROPYLENE CARBONATE
RH-CM5	3.00%	CYCLOPENTASILOXANE
LL-100P/AS	0.70%	CI 77492, TRIETHOXYCAPRYLYLSILANE
R516P/AS	0.22%	CI 77491, TRIETHOXYCAPRYLYLSILANE
BL-100P/AS	0.08%	CI 77499, TRIETHOXYCAPRYLYLSILANE
WATER	44.55%	WATER
1,3-BUTANEDIOL	15.00%	1,3-BUTANEDIOL
Carbopol® Aqua SF-1 Polymer	1.50%	ACRYLATES COPOLYMER, WATER
PC 2000	0.35%	AMINOMETHYL PROPANOL
HYDROXYACETOPHENONE	0.50%	HYDROXYACETOPHENONE
AroHydro-H	0.50%	1,2-HEXANEDIOL
SIMULGEL™ 600	0.50%	ACRYLAMIDE/SODIUM ACRYLOYLDIMETHYLTAURATE COPOLYMER, ISOHEXADECANE, POLYSORBATE 80, WATER, SORBITAN OLEATE
SLA1170	0.10%	PARFUM

Kiss-Resistant:
Foundation "Smart Tech"

No Transfer on Phone, · All-Day Comfort

Unique phase-inversion tech forms breathable soft-focus film. Makeup remains intact while calling, wearing masks or touching screens.

Longwear Makeup
Lock · All-Day Performance

Firm skin adhesion, no dullness or patchiness. Phase-inversion keeps makeup clean under oil & sweat for all-day flawless finish.

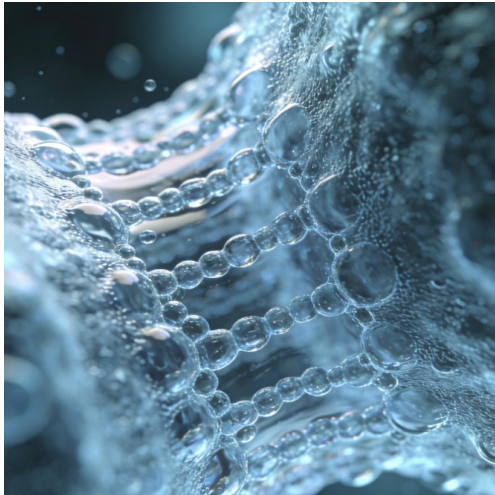
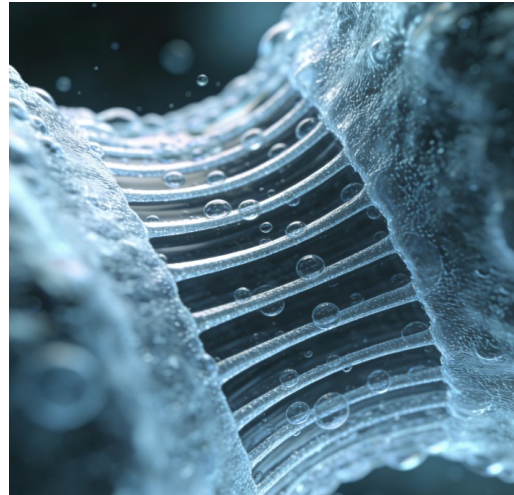
Target Users

- Young professionals for natural "no-makeup" look
- Live streamers & performers for long-wear needs
- Oily / combination skin, dislike sticky foundation



02

Water-Triggered Film-forming Tech



The film restructures, self-repairs and strengthens when meeting water, improving water & sweat resistance.

Innovative soft-hard film synergy: strong adhesion + flexibility, no creasing, breathable longwear makeup.



Water-Activated Enhancement Dynamic Film Stabilization



Dynamic Wet-State Film Formation



More Stable Upon Water Contact



**Achieving lasting wear
& skin adhesion**

Light Longwear Makeup, Hydrating Skin Care

4%

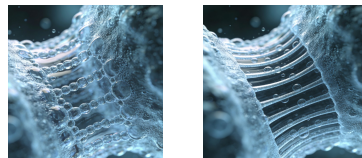
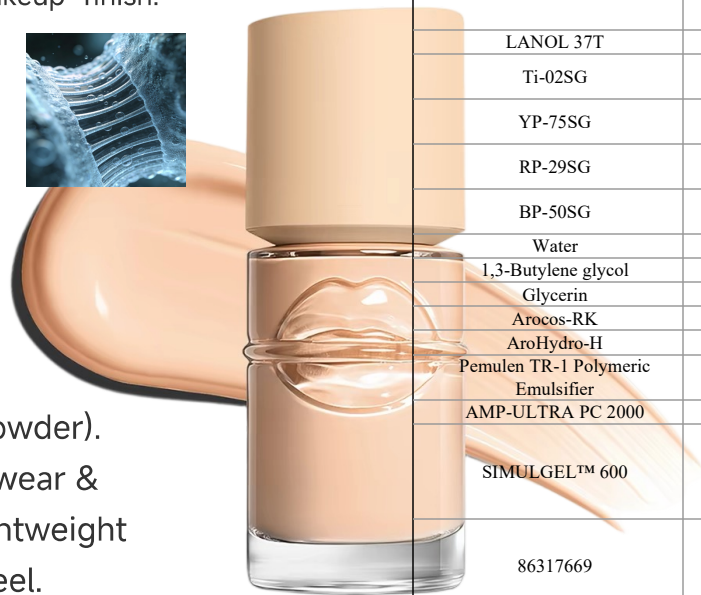
Z-Emuslix PI-100F

O/W base with light breathable feel. Shear & skin temperature trigger shift to W/O, forming moisture-locking film for silky hydration.

3%

GD Resin AquaFuse PG

Superior film-forming & longwear power. Siloxane offers smooth spreadability for sheer "no-makeup" finish.



01

Formula Highlights

Golden-triangle system (hydration + film + powder). Only 3% GD Resin AquaFuse PG boosts longwear & waterproof performance while preserving lightweight hydrating texture, balancing finish and skin feel.

Makeup Reference Formula — Water Tone Foundation XYDW26062601

Trade Name	Content	INCI
Z-Emuslix PI-100F	4.00%	C20-22 ALKYL PHOSPHATE, CETEARYL ALCOHOL, PEG-100 STEARATE, GLYCERYL STEARATE, SILICA, ISONONYL ISONONANOATE
GTB	1.00%	TRIBEHENIN
TEGOSOFT G20	3.00%	OCTYLDODECANOL
KF-56A	5.00%	PHENYL DIMETHICONE
DISM	5.00%	DIISOSTEARYL MALATE
GDResin AquaFuse PG	3.00%	ACRYLATES/OCTYLACRYLAMIDE COPOLYMER, POLYURETHANE-1, OCTYLDODECANOL, PENTYLENE GLYCOL
LANOL 37T	3.50%	TRIHEPTANOIN
Ti-02SG	8.00%	CI77891, SODIUM STEAROYL GLUTAMATE, ALUMINUM HYDROXIDE
YP-75SG	0.36%	CI77492, SODIUM STEAROYL GLUTAMATE, ALUMINUM HYDROXIDE
RP-29SG	0.10%	CI77491, SODIUM STEAROYL GLUTAMATE, ALUMINUM HYDROXIDE
BP-50SG	0.02%	CI77499, SODIUM STEAROYL GLUTAMATE, ALUMINUM HYDROXIDE
Water	57.22%	WATER
1,3-Butylene glycol	5.00%	1,3-BUTANEDIOL
Glycerin	2.00%	GLYCERIN
Arocos-RK	0.500%	RASPBERRY KETONE
AroHydro-H	0.50%	1,2-HEXANEDIOL
Pemulen TR-1 Polymeric Emulsifier	0.35%	ACRYLATES/C10-30 ALKYL ACRYLATE CROSSPOLYMER
AMP-ULTRA PC 2000	0.40%	AMINOMETHYL PROPANOL
SIMULGEL™ 600	1.00%	ACRYLAMIDE/SODIUM ACRYLOYLDIMETHYLTAURATE COPOLYMER, ISOHEXADECANE, POLYSORBATE 80, WATER, SORBITAN OLEATE
86317669	0.05%	PARFUM

Waterproof Test



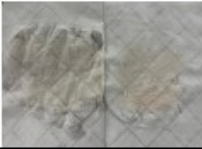
Waterproof Durability
No visible peeling from 2h to 8h



Transfer Resistance
Anti-transfer & anti-smudge
against water at 2/4/6/8h



Rubbing Resistance
Superior to commercial
products

项目 Item	取等量样品涂抹 Apply an equal amount of the sample	初始 Initial	2h	4h	6h	8h
水珠附着测试 Water Bead Adhesion Test						
残留测试 Residue Test						
搓洗测试 Rubbing Test						

Left: Our water tone foundation | Right: Commercial product

Sunscreen Reference Formula
— Kids Macromolecule Sun Lotion
SPF50+ XYDW26062901

Trade Name	Content	INCI
Z-Emuslix PI-100F	4.00%	CETEARYL ALCOHOL, C20-22 ALKYL PHOSPHATE, PEG-100 STEARATE, GLYCERYL STEARATE, ISONONYL ISONONANOATE, SILICA
TEGOSOFT G20	5.00%	OCTYLDODECANOL
GTB	0.50%	TRIBEHENIN
LANOL 37T	5.00%	TRIHEPTANOIN
DBA	5.00%	DIBUTYL ADIPATE
TEGOSOFT TN	5.00%	C12-15 ALKYL BENZOATE
HYSHELL T150	2.00%	ETHYLHEXYL TRIAZONE
HYSHELL HEB	4.00%	DIETHYLHEXYL BUTAMIDO TRIAZONE
HYSHELL SORB-S	3.00%	BIS-ETHYLHEXYLOXYPHENOL METHOXYPHENYL TRIAZINE
GDRResin AquaFuse PG	3.00%	ACRYLATES/OCTYLACRYLAMIDE COPOLYMER, POLYURETHANE-1, OCTYLDODECANOL, PENTYLENE GLYCOL
Water	45.20%	WATER
1,3-Butylene glycol	7.00%	BUTYLENE GLYCOL
Glycerin	2.00%	GLYCERIN
Arocos-RK	0.500%	RASPBERRY KETONE
AroHydro-H	0.50%	1,2-HEXANEDIOL
PC 2000	0.30%	AMINOMETHYL PROPANOL
Carbopol® Aqua SF-1 Polymer	2.00%	ACRYLATES COPOLYMER, WATER
HYSHELL SORB-M	5.00%	METHYLENE BIS-BENZOTRIAZOLYL TETRAMETHYLBUTYLPHENOL, WATER, DECYL GLUCOSIDE, PROPYLENE GLYCOL, XANTHAN GUM
Zenipoly ASP	1.00%	ACRYLAMIDE/SODIUM ACRYLOYLDIMETHYLAURATE COPOLYMER, C13-14 ISOPARAFFIN, LAURETH-7, WATER

Sun Protection Only,
Gentle on Skin

SPF50+ High Protection

Long-lasting UVA/UVB defense for safe outdoor activities.

Macromolecular Film-forming Tech

Breathable surface film, non-penetrating, mild for delicate skin.

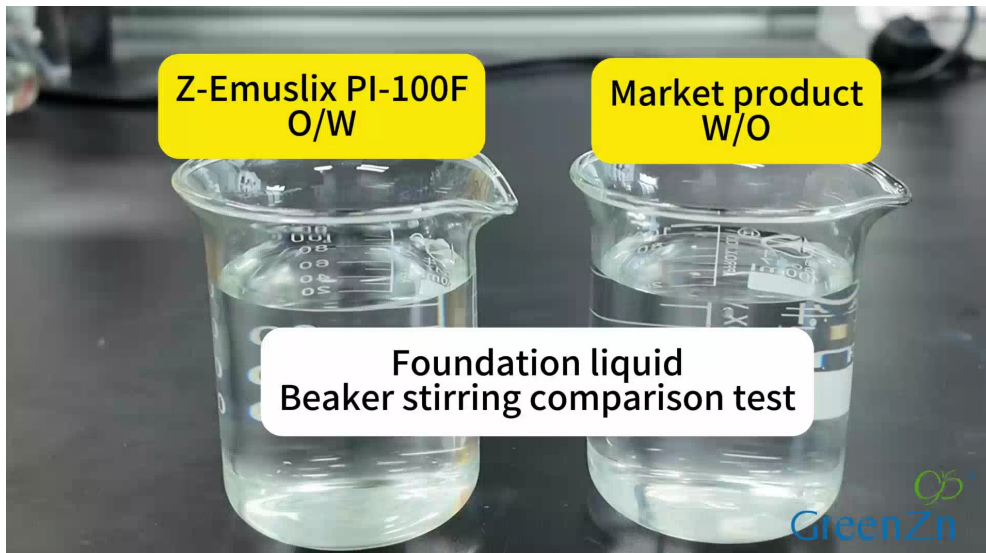
Phase-Inversion Smart

Watery, non-sticky texture. Light film, no heavy white cast.

Application Scenarios

Kindergarten activities, family trips, beach vacations, daily school commute

■ Product Validation



Phase-Inversion Measured via Conductivity Test =

Test Procedure

1. Test initial conductivity of 10% diluted sample.
2. Apply sample on arm, scrape after 2 min and re-test conductivity.

Test Conclusion

Initial conductivity: 18.10 $\mu\text{S}/\text{cm}$

→ O/W emulsion (water continuous phase).

After water evaporation, conductivity falls to 2.16 $\mu\text{S}/\text{cm}$

→ phase inversion to W/O emulsion (oil continuous phase).

Sample Preparation



Initial Conductivity



2 mins after Application



03

Soft Film Skin-Adhering Tech



Flexible & Elastic Long-Lasting Skin Adhesion

- **Transparent glossy flexible film, stretches with skin, crack-resistant**
- **Improves color longevity**
- **Low tackiness, high adhesion**

■ Lip Product Reference Formula

Transfer-proof Lip Gloss GDS260927CY-1

15%

GDResin EB-200

Single film former EB-200 forms flexible elastic film to lock pigments. Lips-friendly & friction-resistant for anti-transfer effect.

- **Matte finish, smooth application**
- **Long wear, transfer-resistant**
- **Comfortable soft film, no tight rigid crust feeling**

Trade Name	Content	INCI
GDThick BI-THIN 602	2.50	HYDROGENATED STYRENE/ISOPRENE COPOLYMER
Isododecane	18.00	ISODODECANE
EM90	1.00	CETYL PEG/PPG-10/1 DIMETHICONE
BENTONE® 38 V CG	4.86	DISTEARDIMONIUM HECTORITE
PC	1.62	PROPYLENE CARBONATE
Isododecane	23.52	ISODODECANE
AEROSIL R 972	1.00	SILICA DIMETHYL SILYLATE
GD Pearl PQ 03	1.50	POLYMETHYLSILSESQUIOXANE
GD Pearl SI 008	1.50	DIMETHICONE/VINYL DIMETHICONE CROSSPOLYMER, SILICA
GD Pearl SM 25	10.00	SYNTHETIC FLUORPHLOGOPITE
GDResin EB-200	15.00	BIS-HYDROXYETHOXYPROPYL DIMETHICONE/IPDI COPOLYMER ETHYLCARBAMATE, DIMETHICONE, TRIMETHYLSILOXYSILICATE
Isododecane	14.48	ISODODECANE
GD Pearl IR 75	2.90	CI 77491
GD Pearl IB 33	0.81	CI 77499
Red 7	0.30	CI 15850
GD Pearl TI-903	0.20	CI 77891, ALUMINUM HYDROXIDE
GD Pearl IY 32	0.11	CI 77492
VITAMIN E ACETATE	0.20	TOCOPHERYL ACETATE
MICROCARE PE	0.30	PHENOXYETHANOL
SLA1165	0.20	PARFUM

THANK YOU

Add: Unit 338, Geochemistry Institute of the Chinese
Academy of Science, Kehua Road, Guangzhou, China

Website: <https://greenzn.net/>

GreenZn Co., Ltd. Q

