

GRANSENSE™

NEXT GENERATION ELASTOMERS

Bio-based materials for
new formulating possibilities



IMCD

IMCDジャパン合同会社

〒141-0021 東京都品川区上大崎二丁目15番19号

TEL: 03-6260-8713 FAX: 06-7632-2073

〒564-0051 大阪府吹田市豊津町1-18エクラート江坂

TEL: 06-6556-6513 FAX: 06-7632-2073

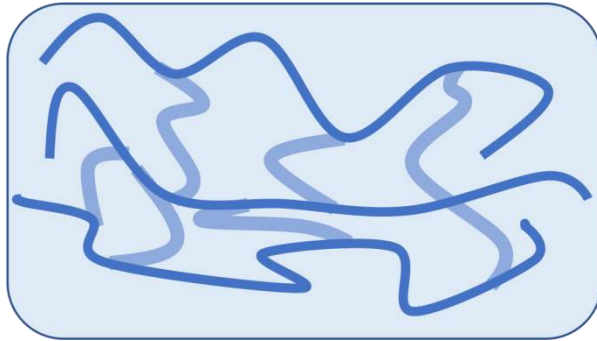
e-mail: customerservice@imcd.jp



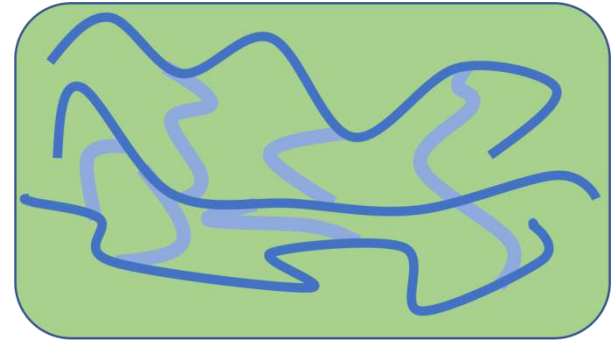
GRANT INDUSTRIES

Where Performance Matters

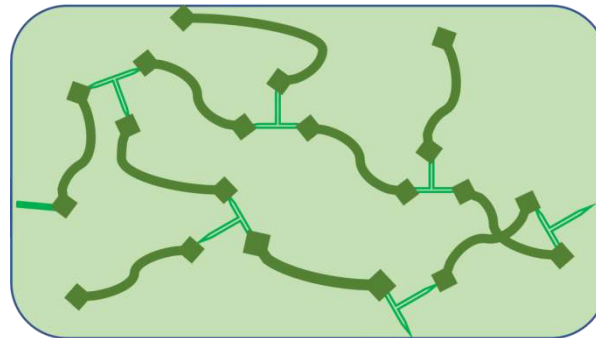
Grant エラストマー技術の進化



シリコン溶媒 + シリコンエラストマー
(GRANSIL LC シリーズ)



植物由来の溶媒 + シリコンエラストマー
(SiAPP シリーズ)



植物由来の溶媒 + 植物由来のエラストマー
(GRANSENSE シリーズ)

Grant エラストマー技術の進化

GRANSIL LC シリーズ
シリコーン + シリコーン



SiAPP シリーズ
植物油 + シリコーン



GRANSENSE シリーズ
植物油 + 植物由来



エラストマー技術の違いは？

THE ELASTOMER TOOLBOX



LC Series:

感触優先, 低い残留物

特徴:

- 無極性の透明ゲル
- 残留D4/D5/D6:1,000ppm以下
- 直鎖シリコーンの溶媒
- 揮発性、非揮発性を選択可能
- **+GRANSIL PSQ** (ポリメチルシルセスキオキサン)
(マイクロスフィアパウダー)

GRANSENSE:

100% ナチュラル優先、自然由来

特徴:

- 低極性の透明ゲル
- 植物アルカンとエステル溶媒
- 中～不揮発性の溶媒を選択可能
- **+GRANPOWDER BBP-700**
(自然由来のパウダー)



GRANT INDUSTRIES
Where Performance Matters

LC Series: 感触優先、低い残留物

GRANSIL RG-12

- イソドデカン、ポリシリコーン-1 1

GRANSIL DMG-2LC

- ジメチコン(2cSt)、ポリシリコーン-1 1

GRANSIL DM-5LC

- ジメチコン (5cSt)、ポリシリコーン-1 1

GRANSIL DMG-6LC

- ジメチコン (6cSt)、ポリシリコーン-1 1

GRANSIL DM-10LC

- ジメチコン (10cSt)、ポリシリコーン-1 1

なぜ残留物が低いのか？

- ECHAによる現在の提案では、リーブオン製剤を1,000ppm未満のD4/D5/D6に制限することが提案されています
- ECHAの提案は、予防的なモデルに基づいており、実際のデータに基づいたものではありません。
- 研究によると、シリコーンは環境中に蓄積されていないことがわかっています。
- 提案は肌の安全性とは関係ありません。

環境中のシリコーン

ご存知でしたか？

ケイ素は環境中で急速に蒸発し、太陽光の影響を受けて空気中で分解します。水中に入った少量は不溶性のため、土壌に分離して分解され、砂に戻ることで分解されます。分解性と生分解性を混同しています。

シリコーンは生分解性ではありませんが、酸性の沈殿物や環境中に存在するUVやO₂によって分解されます。これが、生物有機体のみを介したシリコーンの分解がエンドポイントとは関係なく、実際の測定に反して環境中に蓄積されていると仮定されてしまうことが多い理由です。

参考:

- 分解性：段階的に単純な化合物に分解される化合物のこと。
→ **GRANSIL LC SERIES**
- 生分解性：生物学的薬剤、特に細菌の作用によって分解される可能性があること。 → **GRANSENSE SERIES**

GRANSENSE シリーズ: 100% 自然由来, バイオベース

GRANSENSE TC-21X-C

- トリヘプタノイン
(カプリル/カプリン酸) ヤシアルキル
(ジリノール酸/ブタンジオール) コポリマー
(ヒマシ油/ I P D I) コポリマー
 - 軽い使用感のための低粘度設計

GRANSENSE TC-18X-C

- (カプリル/カプリン酸) ヤシアルキル
トリヘプタノイン
(C9 - 12) アルカン
(ジリノール酸/ブタンジオール) コポリマー
(ヒマシ油/ I P D I) コポリマー
 - 高いクッション性のための高粘度設計



どのエラストマー技術を選
ぶべきか？

THE ELASTOMER TOOLBOX



LC Series:

感触優先, 低い残留物

利点

- “クリーンビューティ”コンセプトの処方
- マットな外観
- シルキー、柔らかいスキンフィール
- 皮脂吸着とコントロール

GRANSENSE:

100% ナチュラル優先、自然由来

利点

- “ナチュラル”コンセプトや“COSMOS認証コスメ”の処方
- ツヤ感のある外観
- 保湿性と軽いスキンフィール
- 塗布時の伸びを向上



GRANT INDUSTRIES
Where Performance Matters

互換性のあるスペクトル

COMPATIBILITY SPECTRUM

Silicone elastomer gel
(GRANSIL DM-5)

Degradable

Hybrid elastomer gel
(GRANSENSE CU-115)

Natural elastomer gel
(GRANSENSE TC-8X)

Biodegradable



Silicones, hydrocarbons

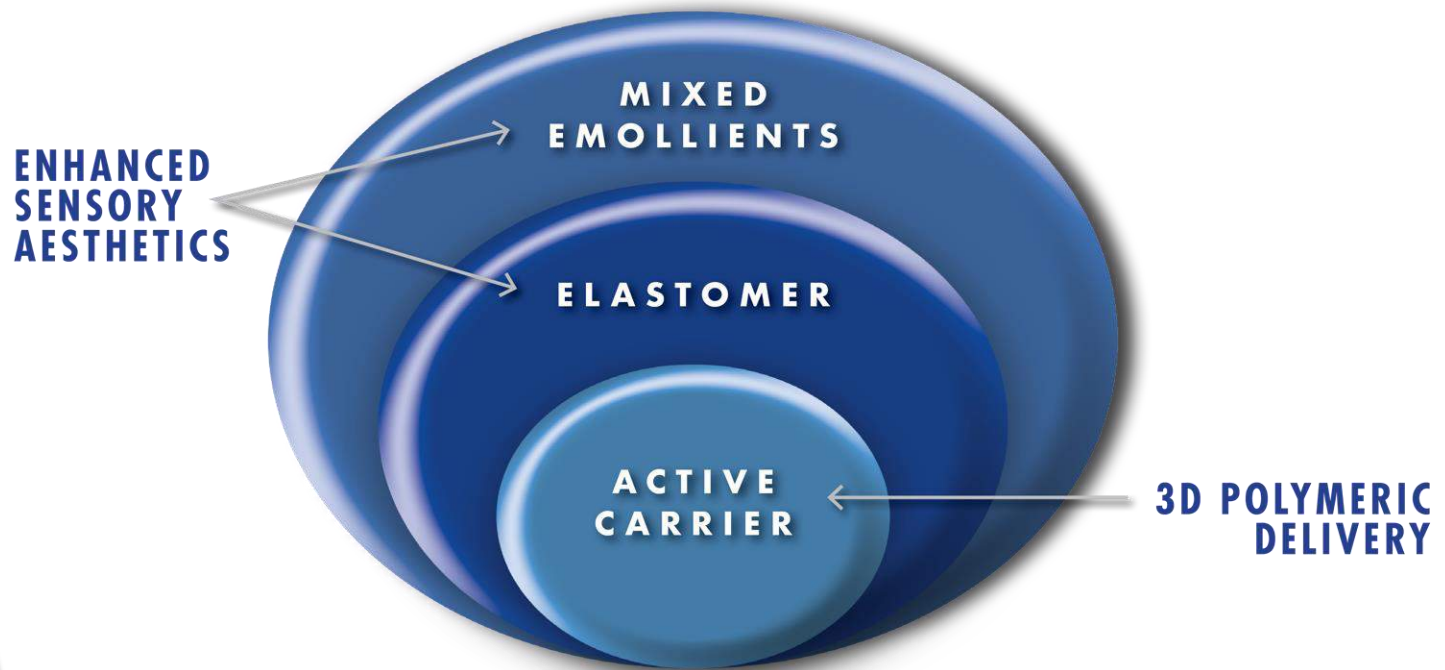
Natural oils, organic sunscreens, esters

ご紹介...GRANSENSE

Gransenseって何？

- 新しい配合の可能性を追求した次世代の特許出願中のエラストマーゲルシリーズ
- 100%天然由来、バイオベースの素材
- 感触的には、グランセンスエラストマーの方が保湿感が顕著にあります。
- 化粧品に優れた感触を提供することは、すべてのタイプの化粧品に共通する要望です。
- 処方中の極性に対して、フレンドリーな互換性を提供
- 艶やかで明るいお肌に導きます。
- 中国INCIに対応した製品（TC-18X-C、TC-21X-C）です。

GRANSENSE の設計コンセプト



GRANSENSE の生分解性

GRANSENSE TC-11X & GRANSENSE TC-8X

- ISO 16128 指数: 自然指数: 1.00
- Biodegradability (OECD 301B):
固有の生分解性
- USDA BioPreferred (ASTM D6866 C14): Yes
- Cosmos 認証: Yes

※TC-18X-C、TC-21X-Cについては、USA BioPreferredおよびCOSMOS認証を申請中

GRANSENSE の生分解性

試験方法の定義:

- ISO 16128-2:2017では、成分カテゴリーに適用される自然、自然由来、オーガニック及びオーガニック由来の指数を計算するアプローチが記載されています。
- Biodegradability (OECD 301B)は、液体環境下で最低28日間のCO₂生成量を評価することで、材料の生分解性を判定するためにレスピロメトリーを使用しています。
- USDA BioPreferred (ASTM D6866 C14)放射性炭素分析を用いて、固体、液体、気体試料のバイオベース炭素/バイオジェニック炭素含有量を測定します。
- Cosmos規格は、COSMOS Standard AISBLの努力により、オーガニック化粧品やナチュラル化粧品の共通の要求事項や定義を定義した調和のとれた認証です。

GRANSENSE の応用

- 一般的な推奨配合量は「5-95%」ですが、処方によって異なります。
- シリコンベースの原料と比較すると、少量でも良く、マスマーケット向けの処方に有効な配合量は、「3-5%」です。
- **GRANSIL** のシリコンエラストマーと組み合わせることで、新しい質感と性能特性を生み出すことができます。
- スキンケア、ベースメイクアップ、ポイントメイクアップ、ボディケア、日焼け止め、ヘアケア

GRANSENSE の相溶性

COMPATIBILITY CHART

| | | |
|--------------|----|--------------------|
| Compatible | C | Clear |
| | T | Translucent |
| | H | Homogenous |
| Dispersible | HD | Hazy/Dispersible |
| | OD | Opaque/Dispersible |
| | Cr | Crystals |
| Incompatible | I | Incompatible |

POLAR

| Compatibility Spectrum | | Glycerin | Butylene Glycol | Propylene Glycol | Ethanol | Dibutyl Adipate | Dicaprylyl Ether | Octyldodecanol | Jojoba Oil | Olive Squalene | Castor Oil | Isononyl Isononanoate | Coco-Caprylate/Caprate | Isostearyl Palmitate | Octyl Palmitate | Propylene Glycol Dicaprylate/Dicaprate | Caprylic/Capric Triglyceride | C12-15 Alkyl Benzoate | Butyl Lactate | Triheptanoin | Oleyl Lactate | C12-13 Alkyl Lactate | Octocrylene | Ethylhexyl Methoxycinnamate | Ethylhexyl Salicylate | Homosalate | Avobenzene | |
|------------------------|-----------------|----------|-----------------|------------------|---------|-----------------|------------------|----------------|------------|----------------|------------|-----------------------|------------------------|----------------------|-----------------|--|------------------------------|-----------------------|---------------|--------------|---------------|----------------------|-------------|-----------------------------|-----------------------|------------|------------|----|
| GRANSENSE TC-8X | 1:1 | OD | I | OD | I | OD | I | OD | I | I | OD | OD | OD | I | OD | OD | OD | OD | HD | OD | OD | OD | HD | OD | HD | OD | HD | Cr |
| | 9:1 | I | I | I | I | HD | I | I | I | I | HD | I | HD | I | I | HD | I | T | I | I | I | I | OD | T | I | I | Cr | |
| GRANSIL DM-5 | 1:1 | OD | I | I | I | OD | I | I | I | I | I | T | OD | OD | OD | OD | OD | OD | OD | OD | I | OD | I | I | OD | OD | I | |
| | 9:1 | I | I | I | I | I | I | I | I | I | I | HD | I | I | I | I | I | I | I | I | I | I | I | I | I | I | I | |
| | Fluid:Elastomer | | | | | | | | | | | | | | | | | | | | | | | | | | | |

*相溶性チャートは制限ではなく、参考データとなります。

*より詳しい相溶性チャートをご用意していますので、お問い合わせください。

GRANSENSE の相溶性

COMPATIBILITY CHART

| | | |
|--------------|----|--------------------|
| Compatible | C | Clear |
| | T | Translucent |
| | H | Homogenous |
| Dispersible | HD | Hazy/Dispersible |
| | OD | Opaque/Dispersible |
| | Cr | Crystals |
| Incompatible | I | Incompatible |

NON-POLAR

| Compatibility Spectrum | | Cyclotetrasiloxane | Cyclopentasiloxane | Cyclohexasiloxane | Dimethicone, 5 cst | Coconut Alkanes | Isododecane | Undecane (and) Tridecane | Polybutene |
|------------------------|-----------------|--------------------|--------------------|-------------------|--------------------|-----------------|-------------|--------------------------|------------|
| GRANSENSE TC-8X | 1:1 | I | I | I | I | I | I | I | I |
| | 9:1 | I | I | I | I | I | I | I | I |
| GRANSIL DM-5 | 1:1 | HD | HD | HD | HD | C | C | C | OD |
| | 9:1 | T | T | T | T | I | C | I | I |
| | Fluid:Elastomer | | | | | | | | |

WAXES

| Compatibility Spectrum | | Polyethylene Wax | Microcrystalline Wax | Paraffin Wax | Cetyl Alcohol | Stearyl Alcohol | Beeswax | Candelilla Wax | Carnauba Wax |
|------------------------|-----------------|------------------|----------------------|--------------|---------------|-----------------|---------|----------------|--------------|
| GRANSENSE TC-8X | 1:1 | H | Cr | Cr | Cr | Cr | H | H | Cr |
| | 9:1 | Cr | Cr | Cr | Cr | Cr | Cr | Cr | Cr |
| GRANSIL DM-5 | 1:1 | H | H | H | Cr | Cr | H | H | H |
| | 9:1 | H | H | I | Cr | Cr | I | Cr | I |
| | Fluid:Elastomer | | | | | | | | |

*相溶性チャートは制限ではなく、参考データとなります。

*より詳しい相溶性チャートをご用意していますので、お問い合わせください。

GRANSENSE の処方例

NATURAL-ME-TIME MILKY SERUM

| Phase | Ingredient | INCI | % |
|----------|--------------------------------|---|--------|
| A | DEIONIZED WATER | Water | 60.00 |
| | GLYCERIN | Glycerin | 4.00 |
| | XANTHAN GUM | Xanthan Gum | 0.50 |
| | LEXGARD NATURAL | Glyceryl Caprylate & Glyceryl Undecylenate | 1.00 |
| B | GRANSENSE TC-8X | Coco-Caprylate/Caprate & Triheptanoin & C9-12 Alkane & Dilinoleic Acid/Propanediol/PDI Crosspolymer | 15.00 |
| | IMWITOR 375 | Glyceryl Citrate/Lactate/Linoleate/Oleate | 5.50 |
| | COVI-OX T 90 EU C | Tocopherol | 1.00 |
| | FLORAMAC MACADAMIA OIL REFINED | Macadamia Integrifolia Seed Oil | 7.00 |
| | RITA SWEET ALMOND OIL | Prunus Amygdalus Dulcis (Sweet Almond) Oil | 2.00 |
| | Naturesoft 800 | Cellulose | 4.00 |
| | | | Total: |

Procedure:

1. Weigh Phase A in the main kettle equipped with homogenizer. Mix until uniform.
2. Weigh Phase B in a side kettle equipped with side sweep. Mix until uniform.
3. Add Phase B to the main kettle. Mix until uniform.

G105-417.01

NATURAL-ME-TIME HYDRO SERUM

| Phase | Ingredient | INCI | % |
|----------|------------------------|---|--------|
| A | DEIONIZED WATER | Water | 61.20 |
| | XANTHAN GUM | Xanthan Gum | 0.30 |
| | GLYCERIN | Glycerin | 5.00 |
| | HAISUGARCANE BG | Butylene Glycol | 1.50 |
| | LEXGARD NATURAL | Glyceryl Caprylate & Glyceryl Undecylenate | 1.00 |
| B | EMULGADE SUCRO PLUS | Sucrose Polystearate & Cetyl Palmitate | 4.00 |
| | CETIOL CC | Dicaprylyl Carbonate | 6.00 |
| | CETYL ALCOHOL | Cetyl Alcohol | 1.50 |
| | COVI-OX T 90 EU C | Tocopherol | 1.00 |
| C | GRANSENSE TC-8X | Coco-Caprylate/Caprate & Triheptanoin & C9-12 Alkane & Dilinoleic Acid/Propanediol/PDI Crosspolymer | 15.00 |
| | EUMULGIN SG | Sodium Stearoyl Glutamate | 0.50 |
| | SB-700 | Silica | 3.00 |
| | | Total: | 100.00 |

Procedure:

1. Weigh Phase A in the main kettle equipped with homogenizer and heat to 60-65°C. Mix until uniform.
2. Weigh Phase B in the side kettle equipped with propeller and heat to 60-65°C. Mix until uniform.
3. Add Phase B to the main kettle and mix until uniform.
4. Add Phase C to the main kettle and mix until uniform.
5. Switch to side sweep and cool down to room temperature.

G105-418.01

GRANSENSE の処方例

NATURAL-ME-TIME NIGHT CREAM

| Phase | Ingredient | INCI | % | |
|------------------------|------------------------|---|--------------------|-------|
| A | GRANSENSE TC-8X | Coco-Caprylate/Caprate & Triheptanoin & C9-12 Alkane & Dilinoleic Acid/Propanediol/PDI Crosspolymer | 15.00 | |
| | GRANSURF PG-14 | Polyglyceryl-6 Polyricinoleate & Polyglyceryl-10 Dioleate | 4.00 | |
| | DEHYMULS PGPH | Polyglyceryl-2 Dipolyhydroxystearate | 2.00 | |
| | COVI-OX T 90 EU C | Tocopherol | 1.00 | |
| | COCONUT OIL | Cocos Nucifera (Coconut) Oil | 6.00 | |
| | PHYTOLANE NS | Olive Squalane | 6.00 | |
| | FLUIDANOV 20X | Octyldodecanol & Octyldodecyl Xyloside | 2.50 | |
| | B | DEIONIZED WATER | Water | 56.10 |
| | | SOLAGUM AX | Acacia Senegal Gum | 0.10 |
| GLYCERIN | | Glycerin | 3.00 | |
| SODIUM CHLORIDE | | Sodium Chloride | 1.00 | |
| LEXGARD NATURAL | | Glyceryl Caprylate & Glyceryl Undecylenate | 1.00 | |
| BENTONE HYDROCLAY 2000 | | Hectorite | 2.00 | |
| C | AEROSIL 200 | Silica | 0.30 | |
| Total: | | | 100.00 | |

Procedure:

1. Weigh Phase A in the main kettle equipped with homogenizer and heat to 70-75°C. Mix until uniform.
2. From Phase B combine Glycerin and Bentone Hydroclay 2000 in a side kettle to make a slurry.
3. Weigh Phase B in the side kettle equipped with propeller and heat to 70-75°C. Add slurry to Phase B. Mix until uniform.
4. Add Phase B to the main kettle. Mix until uniform.
5. Add Phase C to the main kettle. Mix until uniform.

G105-419.02

NATURAL-ME-TIME DAY CREAM

| Phase | Ingredient | INCI | % |
|----------|------------------------|---|--------|
| A | DEIONIZED WATER | Water | 54.50 |
| | XANTHAN GUM | Xanthan Gum | 0.25 |
| | GLYCERIN | Glycerin | 3.90 |
| | LEXGARD NATURAL | Glyceryl Caprylate & Glyceryl Undecylenate | 1.00 |
| | HAIUGARCANE BG | Butylene Glycol | 1.95 |
| B | GRANSENSE TC-8X | Coco-Caprylate/Caprate & Triheptanoin & C9-12 Alkane & Dilinoleic Acid/Propanediol/PDI Crosspolymer | 10.00 |
| | EMULGADE SUCRO PLUS | Sucrose Polystearate & Cetyl Palmitate | 3.90 |
| | COVI-OX T 90 EU C | Tocopherol | 1.00 |
| | CETEARYL ALCOHOL | Cetearyl Alcohol | 3.90 |
| | SHEA BUTTER | Butyrospermum Parkii (Shea) Butter | 9.80 |
| | IMWITOR 375 | Glyceryl Citrate/Lactate/Linoleate/Oleate | 1.95 |
| | EUTANOL G | Octyldodecanol | 3.90 |
| | CETIOL CC | Dicaprylyl Carbonate | 1.95 |
| C | TIMIRON SUPER GOLD | Mica & Titanium Dioxide | 2.00 |
| Total: | | | 100.00 |

Procedure:

1. Weigh Phase A in the main kettle equipped with homogenizer and heat to 65-70°C. Mix until uniform.
2. Weigh Phase B in the side kettle equipped with propeller and heat to 65-70°C. Mix until uniform.
3. Add Phase B to the main kettle and mix until uniform.
4. Add Phase C to the main kettle equipped with side sweep and cool to room temperature.

G105-420.01

GRANSENSE の処方例

NATURAL-ME-TIME SUNSCREEN, SPF-30

| Phase | Ingredient | INCI | % | |
|-----------------|-------------------|---|-------------|-------|
| A | UV CUT ZNO-68-CG | Zinc Oxide & Caprylic/Capric Triglyceride & Polyhydroxystearic Acid | 22.00 | |
| | GRANSENSE TC-8X | Coco-Caprylate/Caprate & Triheptanoin & C9-12 Alkane & Dilinoleic Acid/Propanediol/PDI Crosspolymer | 13.00 | |
| | GRANSURF PG-14 | Polyglyceryl-6 Polyricinoleate & Polyglyceryl-10 Dioleate | 4.00 | |
| | CETIOL LC | Coco-Caprylate/Caprate | 7.00 | |
| | MYRITOL 312 | Caprylic/Capric Triglyceride | 12.39 | |
| | PELEMOL PHS-8 | Polyhydroxystearic Acid | 0.70 | |
| | PHYTOLANE LS | Olive Squalane | 5.00 | |
| | COVI-OX T 90 EU C | Tocopherol | 1.00 | |
| | DEHYMULS PGPH | Polyglyceryl-2 Dipolyhydroxystearate | 2.00 | |
| | FLUIDANOV 20X | Octyldodecanol & Octyldodecyl Xyloside | 2.00 | |
| | B | DEIONIZED WATER | Water | 22.76 |
| | | BENTONE HYDROCLAY 2000 | Hectorite | 0.50 |
| | | ZEMEA | Propanediol | 4.00 |
| SODIUM CHLORIDE | | Sodium Chloride | 1.00 | |
| LEXGARD NATURAL | | Glyceryl Caprylate & Glyceryl Undecylenate | 1.00 | |
| C | SPHERILEX 10 PC | Hydrated Silica | 1.00 | |
| | AEROSIL 200 | Silica | 0.65 | |

Total: 100.00

Procedure:

1. Weigh Phase A in the main kettle equipped with homogenizer and mix until uniform.
2. From Phase B combine Zemea and Bentone Hydroclay 2000 in a side kettle to make a slurry.
3. Weigh Phase B in a side kettle equipped with propeller. Add slurry to Phase B. Mix until uniform.
4. Add Phase B to the main kettle. Mix until uniform.
5. Switch to side sweep and sequentially add Phase C to the main kettle. Mix until uniform.

G105-421.01

NATURAL-ME-TIME BOUNCY CREAM, SPF-50

| Phase | Ingredient | INCI | % |
|----------|----------------------|---|-------|
| A | TRIHEPTANOIN | Triheptanoin | 19.20 |
| | EUTANOL G | Octyldodecanol | 4.00 |
| | SPHERILEX 10 PC | Hydrated Silica | 0.30 |
| | UV CUT TIO2-55-CG | Titanium Dioxide & Caprylic/Capric Triglyceride & Stearic Acid & Alumina & Polyhydroxystearic Acid | 11.00 |
| | UV CUT ZNO-68-CG | Zinc Oxide & Caprylic/Capric Triglyceride & Polyhydroxystearic Acid | 30.00 |
| | NATURESOFT 800 | Cellulose | 6.00 |
| | GRANSENSE TC-8X | Coco-Caprylate/Caprate & Triheptanoin & C9-12 Alkane & Dilinoleic Acid/Propanediol/PDI Crosspolymer | 15.00 |
| | PELEMOL PHS-8 | Polyhydroxystearic Acid | 2.50 |
| | WHITE BEESWAX NF | Beeswax | 6.00 |
| | CANDELILLA WAX MD-21 | Euphorbia Cerifera (Candelilla) Wax | 1.00 |
| | CETIOL CC | Dicaprylyl Carbonate | 5.00 |

Total: 100.00

Procedure:

1. Weigh Phase A in the main kettle equipped with homogenizer and heat to 65-70°C. Mix until uniform.
2. Switch to side sweep and cool down to room temperature.

G105-389.01

GRANSENSE の処方例

NATURAL-ME-TIME BOUNCE PRIMER

| Phase | Ingredient | INCI | % |
|----------|--------------------------|---|-------|
| A | GRANSENSE TC-8X | Coco-Caprylate/Caprate & Triheptanoin & C9-12 Alkane & Dilinoleic Acid/Propanediol/PDI Crosspolymer | 55.00 |
| | VEGELIGHT SILK-LC | Coconut Alkanes & Coco-Caprylate/Caprate | 6.00 |
| | SEBUMOL ODPC | Octyldodecyl PCA | 25.00 |
| | SPHERILEX 10 PC | Hydrated Silica | 10.00 |
| | NATURESOFT 800 | Cellulose | 2.00 |
| | AEROSIL 200 | Silica | 2.00 |

Total: 100.00

Procedure:

1. Sequentially add Phase A in the main kettle equipped with 3-prong blade. Mix until uniform.

G105-400.02

NATURAL-ME-TIME MOUSSE FOUNDATION

| Phase | Ingredient | INCI | % |
|----------|--------------------------|---|-------|
| A | CETIOL LC | Coco-Caprylate/Caprate | 10.00 |
| | ALCOLEC BS | Lecithin | 1.50 |
| | GRANSENSE TC-8X | Coco-Caprylate/Caprate & Triheptanoin & C9-12 Alkane & Dilinoleic Acid/Propanediol/PDI Crosspolymer | 15.00 |
| | GRANSURF PG-14 | Polyglyceryl-6 Polyricinoleate & Polyglyceryl-10 Dioleate | 8.00 |
| | COVI-OX T 90 EU C | Tocopherol | 1.20 |
| | VEGELIGHT SILK-LC | Coconut Alkanes & Coco-Caprylate/Caprate | 1.00 |
| B | NAID-TRI-77891 | Titanium Dioxide & Disodium Stearoyl Glutamate & Aluminum Hydroxide | 7.20 |
| | NAID-Y-77492 | Iron Oxide(CI 77491) & Disodium Stearoyl Glutamate & Aluminum Hydroxide | 2.10 |
| | NAID-RB-77491 | Iron Oxide(CI 77491) & Disodium Stearoyl Glutamate & Aluminum Hydroxide | 0.47 |
| | NAID-B-77499 | Iron Oxide(CI 77499) & Disodium Stearoyl Glutamate & Aluminum Hydroxide | 0.19 |
| | MEARLMICA CF | Mica | 6.00 |
| C | DEIONIZED WATER | Water | 29.87 |
| | BENTONE HYDROCLAY 2000 | Hectorite | 2.00 |
| | GLYCERIN | Glycerin | 5.00 |
| | HAISUGARCANE BG | Butylene Glycol | 3.00 |
| | LEXGARD NATURAL | Glyceryl Caprylate & Glyceryl Undecylenate | 1.00 |
| | SOLAGUM AX | Acacia Senegal Gum & Xanthan Gum | 0.07 |
| D | DEIONIZED WATER | Water | 5.00 |
| | SODIUM CHLORIDE | Sodium Chloride | 0.70 |
| E | AEROSIL 200 | Silica | 0.70 |

Total: 100.00

Procedure:

1. Weigh Phase A in the main kettle equipped with homogenizer. Mix until uniform.
2. Micro-pulverize Phase B and add to the main kettle. Mix until uniform.
3. From Phase C, combine Glycerin and Bentone Hydroclay 2000 in a side kettle to make a slurry.
4. Weigh Phase C in the side kettle equipped with propeller. Add slurry to Phase C. Mix until uniform.
5. Weigh Phase D in a side kettle and mix until uniform. Then, add to Phase C.
6. Add Phase CD to the main kettle and mix until uniform.
7. Switch to side sweep and add Phase E to the main kettle. Mix until uniform.

G105-394.01

GRANSENSE の処方例

NATURAL-ME-TIME POWDERY FOUNDATION, SPF-30

| Phase | Ingredient | INCI | % |
|------------------------|-------------------------------|---|--------|
| A | GRANSENSE TC-8X | Coco-Caprylate/Caprate & Triheptanoin & C9-12 Alkane & Dilinoleic Acid/Propanediol/PDI Crosspolymer | 12.00 |
| | GRANSURF PG-14 | Polyglyceryl-6 Polyricinoleate & Polyglyceryl-10 Dioleate | 4.00 |
| | VEGELIGHT SILK-LC | Coconut Alkanes & Coco-Caprylate/Caprate | 1.00 |
| | PHYTOLANE LS | Olive Squalane | 3.00 |
| | MYRITOL 312 | Caprylic/Capric Triglyceride | 6.00 |
| | FLUIDANOV 20X | Octyldodecanol & Octyldodecyl Xyloside | 2.00 |
| | ALCOLEC BS | Lecithin | 1.00 |
| | COVI-OX T 90 EU C | Tocopherol | 1.20 |
| | UV CUT TIO2-55-CG | Titanium Dioxide & Caprylic/Capric Triglyceride & Stearic Acid & Alumina & Polyhydroxystearic Acid | 5.00 |
| | UV CUT ZNO-68-CG | Zinc Oxide & Caprylic/Capric Triglyceride & Polyhydroxystearic Acid | 20.00 |
| B | NAID-TRI-77891 | Titanium Dioxide & Disodium Stearoyl Glutamate & Aluminum Hydroxide | 3.00 |
| | NAID-Y-77492 | Iron Oxide(CI 77492) & Disodium Stearoyl Glutamate & Aluminum Hydroxide | 2.10 |
| | NAID-RB-77491 | Iron Oxide(CI 77491) & Disodium Stearoyl Glutamate & Aluminum Hydroxide | 0.47 |
| | NAID-B-77499 | Iron Oxide(CI 77499) & Disodium Stearoyl Glutamate & Aluminum Hydroxide | 0.19 |
| | MEARLMICA CF | Mica | 2.00 |
| C | DEIONIZED WATER | Water | 30.17 |
| | BENTONE HYDROCLAY 2000 | Hectorite | 1.80 |
| | GLYCERIN | Glycerin | 3.00 |
| | LEXGARD NATURAL | Glyceryl Caprylate & Glyceryl Undecylenate | 1.00 |
| | SOLAGUM AX | Acacia Senegal Gum & Xanthan Gum | 0.07 |
| SODIUM CHLORIDE | Sodium Chloride | 1.00 | |
| Total: | | | 100.00 |

Procedure:

1. Weigh Phase A in the main kettle equipped with homogenizer and heat to 35-40°C. Mix until uniform.
2. Micro-pulverize Phase B and add to the main kettle. Mix until uniform.
3. From Phase C, combine Glycerin and Bentone Hydroclay 2000 in a side kettle to make a slurry.
4. Weigh Phase C in a side kettle equipped with propeller and heat to 40-45°C.
5. Add slurry to Phase C. Mix until uniform.
6. Add Phase C to the main kettle. Mix until uniform.

NATURAL-ME-TIME BB

| Phase | Ingredient | INCI | % |
|---------------------------|--|---|--|
| A | GRANSENSE TC-8X | Coco-Caprylate/Caprate & Triheptanoin & C9-12 Alkane & Dilinoleic Acid/Propanediol/PDI Crosspolymer | 12.00 |
| | GRANSURF PG-14 | Polyglyceryl-6 Polyricinoleate & Polyglyceryl-10 Dioleate | 5.00 |
| | CETIOL LC | Coco-Caprylate/Caprate | 20.00 |
| | PELEMOL 6GPR | Polyglyceryl-6 Polyricinoleate | 1.00 |
| | COVI-OX T 90 EU C | Tocopherol | 1.50 |
| | ALCOLEC BS | Lecithin | 1.00 |
| | PELEMOL PHS-8 | Polyhydroxystearic Acid | 2.00 |
| | NATURESOFT 800 | Cellulose | 2.00 |
| | MYRITOL 312 | Caprylic/Capric Triglyceride | 4.00 |
| | B | MIYONAT VAA-WHITE | Titanium Dioxide & Sodium Myristoyl Glutamate & Aluminum Hydroxide |
| MIYONAT VAA-YELLOW | | Iron Oxide (CI 77492) & Sodium Myristoyl Glutamate & Aluminum Hydroxide | 0.74 |
| MIYONAT VAA-RED | | Iron Oxide (CI 77491) & Sodium Myristoyl Glutamate & Aluminum Hydroxide | 0.22 |
| MIYONAT VAA-BLACK | | Iron Oxide (CI 77499) & Sodium Myristoyl Glutamate & Aluminum Hydroxide | 0.07 |
| SB-700 | | Silica | 6.00 |
| MEARLMICA CF | Mica | 3.00 | |
| C | DEIONIZED WATER | Water | 30.19 |
| | BENTONE HYDROCLAY 2000 | Hectorite | 1.80 |
| | SODIUM CHLORIDE | Sodium Chloride | 1.00 |
| | SOLAGUM AX | Acacia Senegal Gum & Xanthan Gum | 0.10 |
| | GLYCERIN | Glycerin | 3.00 |
| LEXGARD NATURAL | Glyceryl Caprylate & Glyceryl Undecylenate | 1.00 | |
| D | AEROSIL 200 | Silica | 0.70 |
| Total: | | | 100.00 |

Procedure:

1. Weigh Phase A in the main kettle equipped with homogenizer and mix until uniform.
2. Micro-pulverize Phase B and add to the main kettle. Mix until uniform.
3. Weigh Deionized Water in Phase C and heat to 45-50°C. Add remaining ingredients sequentially. Mix until homogeneous.
4. Add Phase C to the main kettle and mix until uniform.
5. Switch to side sweep and add Phase D to the main kettle. Mix until uniform.

GRANSENSE の処方例

NATURAL-ME-TIME LUMI LIPSTICK

| Phase | Ingredient | INCI | % |
|-------------------|----------------------------------|---|-------|
| A | REFINED CANDELILLA WAX MD-21 | Euphorbia Cerifera (Candelilla) Wax | 13.00 |
| | CARNAUBA WAX | Copernicia Cerifera (Carnauba) Wax | 3.00 |
| | NF YELLOW BEESWAX | Beeswax | 2.00 |
| | RITA SWEET ALMOND OIL | Prunus Amygdalus Dulcis (Sweet Almond) Oil | 18.00 |
| | KESTER WAX K-60P | Polyhydroxystearic Acid | 3.00 |
| | EUTANOL G | Octyldodecanol | 5.00 |
| | COCONUT OIL | Cocos Nucifera (Coconut) Oil | 1.50 |
| | GRANSENSE TC-8X | Coco-Caprylate/Caprate & Triheptanoin & C9-12 Alkane Dilinoleic Acid/Propanediol/PDI Crosspolymer | 15.00 |
| | D&C RED NO. 7, 40% IN CASTOR OIL | Ricinus Communis Seed Oil & Red 7 | 30.00 |
| | TIO2, 50% IN CASTOR OIL | Titanium Dioxide (and) Castor Oil | 8.00 |
| AEROSIL 200 | Silica | 0.40 | |
| SUCRALOSE | Sucralose | 0.10 | |
| COVI-OX T 90 EU C | Tocopherol | 1.00 | |

Total: 100.00

Procedure:

1. Weigh Phase A in the main kettle equipped with 3-prong blade. Heat to 90-95°C and mix until uniform.
2. Pour at 75-80°C.

G105-395.01

NATURAL-ME-TIME GLOW BRONZER

| Phase | Ingredient | INCI | % |
|----------|------------------------|---|-------|
| A | DEIONIZED WATER | Water | 57.70 |
| | SOLAGUM TARA | Caesalpinia Spinosa Gum | 0.30 |
| | GLYCERIN | Glycerin | 5.00 |
| | LEXGARD NATURAL | Glyceryl Caprylate & Glyceryl Undecylenate | 1.00 |
| B | PALMITIC ACID | Palmitic Acid | 1.00 |
| | STEARIC ACID 132 | Stearic Acid | 1.50 |
| | JEECHEM GMS-D | Glyceryl Stearate SE | 0.70 |
| C | COVI-OX T 90 EU C | Tocopherol | 1.00 |
| | GRANSENSE TC-8X | Coco-Caprylate/Caprate & Triheptanoin & C9-12 Alkane Dilinoleic Acid/Propanediol/PDI Crosspolymer | 10.00 |
| | MAISITA 9040 | Zea Mays (Corn) Starch | 3.00 |
| | PLANTACARE 1200 UP | Lauryl Glucoside | 1.80 |
| | COLORONA BRONZE | Mica & Iron Oxides (CI 77491) | 12.00 |
| | MEARLMICA CF | Mica | 5.00 |

Total: 100.00

Procedure:

1. Weigh Phase A in the main kettle equipped with homogenizer and heat to 70-75°C. Mix until uniform.
2. Weigh Phase B in the side kettle equipped with propeller and heat to 70-75°C. Mix until uniform.
3. Add Phase B to the main kettle and mix until uniform.
4. Add Phase C sequentially to main kettle and mix until uniform.

G105-393.01

GRANSENSE の処方例

CLEAN & SAFE WATERY SERUM

| Phase | Ingredient | INCI | % |
|------------------------|-------------------------------|---|--------|
| A | DEIONIZED WATER | Water | 61.40 |
| | XANTHAN GUM | Xanthan Gum | 0.30 |
| | GLYCERIN | Glycerin | 5.00 |
| | BUTYLENE GLYCOL | Butylene Glycol | 2.00 |
| | EUXYL PE 9010 | Phenoxyethanol & Ethylhexylglycerin | 1.00 |
| | PLANTACARE 1200 UP | Lauryl Glucoside | 1.60 |
| B | VEGELIGHT 1214LC | Coconut Alkanes & Coco-Caprylate/Caprate | 3.00 |
| | GRANSIL PSQ | Polymethylsilsesquioxane | 5.00 |
| | VITAMIN E ACETATE | Tocopheryl Acetate | 0.10 |
| | GRANSENSE TC-8X | Coco-Caprylate/Caprate & Triheptanoin & C9-12 Alkane & Dilinoleic Acid/Propanediol/PDI Crosspolymer | 10.00 |
| | SEPINOV EMT 10 | Hydroxyethyl Acrylate/Sodium Acryloyldimethyl Taurate Copolymer | 0.60 |
| GRANSIL DM-5/LC | Dimethicone & Polysilicone-11 | 10.00 | |
| Total: | | | 100.00 |

Procedure:

1. Weigh Phase A in the main kettle equipped with homognizer and mix until uniform.
2. Weigh Phase B in the side kettle equipped with propeller and mix until uniform.
3. Add Phase B to the main kettle and mix until uniform.

G105-424.01

CLEAN & SAFE WO SUN FILTER, SPF-50

| Phase | Ingredient | INCI | % | |
|-------------------------------|--|--|---|-------|
| A | DEIONIZED WATER | Water | 32.18 | |
| | GLYCERIN | Glycerin | 5.00 | |
| | PLANTACARE 1200 UP | Lauryl Glucoside | 1.00 | |
| | EUXYL PE 9010 | Phenoxyethanol & Ethylhexylglycerin | 1.00 | |
| | SOLAGUM AX | Acacia Senegal Gum & Xanthan Gum | 0.10 | |
| | GRANPOWDER QSC | Polymethylsilsesquioxane/Silica Crosspolymer | 3.00 | |
| | CITRIC ACID, 30% AQ. SOL. | Water & Citric Acid | 0.02 | |
| | B | UV CUT ZNO-68-CG | Zinc Oxide & Caprylic/Capric Triglyceride & Polyhydroxystearic Acid | 22.00 |
| | | GRANSENSE TC-8X | Coco-Caprylate/Caprate & Triheptanoin & C9-12 Alkane & Dilinoleic Acid/Propanediol/PDI Crosspolymer | 10.00 |
| | | NEO HELIOPAN 303 | Octocrylene | 5.00 |
| NEO HELIOPAN HMS | Homosalate | 5.00 | | |
| JEESCREEN OS USP | Ethylhexyl Salicylate | 5.00 | | |
| PROTACHEM CS-50 | Cetearyl Alcohol | 1.00 | | |
| GRANSURF PG-14 | Polyglyceryl-6 Polyricinoleate & Polyglyceryl-10 Dioleate | 3.00 | | |
| PERFORMALENE 400 POLYETHYLENE | Polyethylene | 1.00 | | |
| SIMULGEL INS 100 | Hydroxyethyl Acrylate/Sodium Acryloyldimethyl Taurate Copolymer & Polysorbate 60 & Isohexadecane | 0.70 | | |
| C | GRANRESIN PMSQ-VL | Polymethylsilsesquioxane & Coconut Alkane | 5.00 | |
| Total: | | | 100.00 | |

Procedure:

1. Weigh Phase A in the main kettle with homogenizer. Heat to 70-75C and mix until uniform. Adjust pH to 6.5-7.5.
2. Weigh Phase B in the side kettle with propeller and heat to 70-75C. Mix until uniform.
3. Slowly add Phase B to the main kettle. Mix until uniform.
4. Add Phase C to the main kettle and mix until uniform.

G105-381.01

GRANSENSE の処方例

GRANSENSE SPLIT-END REPAIR SERUM

| Phase | Ingredient | INCI | % |
|----------|------------------------|---|--------|
| A | GRANSENSE TC-8X | Coco-Caprylate/Caprate & Triheptanoin & C9-12 Alkane & Dilinoleic Acid/Propanediol/PDI Crosspolymer | 70.00 |
| | CETIOL B | Dibutyl Adipate | 30.00 |
| Total: | | | 100.00 |

Procedure:

1. Combine Phase A in the main kettle with sidesweep and mix until uniform.

G105-406.02

GRANSENSE RINSE OFF HAIR MASK

| Phase | Ingredient | INCI | % |
|----------|------------------------|---|--------|
| A | DEIONIZED WATER | Water | 84.19 |
| | BLUEVISC TMS-500 | Behentrimonium Methosulfate & Cetearyl Alcohol & Butylene Glycol | 5.00 |
| | CRODAZOSOFT DBQ | Quaternium-91 & Cetrimonium Methosulfate & Cetearyl Alcohol | 3.00 |
| | BLUEVISC BTMC | Behentrimonium Chloride | 3.00 |
| B | GRANSENSE TC-8X | Coco-Caprylate/Caprate & Triheptanoin & C9-12 Alkane & Dilinoleic Acid/Propanediol/PDI Crosspolymer | 2.00 |
| | GLUADIN WLM | Aqua & Hydrolyzed Wheat Protein | 0.01 |
| | EUXYL K 712 | Water & Sodium Benzoate & Potassium Sorbate | 1.00 |
| | KLEASOL 200ST | Polyquaternium-37 | 1.50 |
| C | LACTIC ACID 90% | Lactic Acid & Water | 0.30 |
| Total: | | | 100.00 |

Procedure:

1. In the main kettle add DI Water, equipped with propeller. Heat to 70-75C.
2. Add remaining ingredients from Phase A sequentially to the main kettle at 70-75C. Mix until uniform.
3. Start cooling batch to 45-50C. Add Phase B sequentially. Mix until uniform.
4. Adjust pH with Phase C to 4.5-5.5.

Note: Rinse-off treatment mask repairs hair damage from color treatments, environment, heat and age. After shampoo and conditioner, apply generously to wet hair, leave on for 5-10 minutes and rinse.

G105-427.01

GRANSENSE の処方ヒント

- 製剤の油相に添加するか、乳化後に添加します。
- 高温や高せん断に弱いです。
- せん断により厚みが減少します。
- クレープ硬化はしません。
- 経時での酸化はなく、匂いや色の変化もありません。
- 製剤中に存在するすべての INCI は COSMOS 規格のウェブサイトに掲載されています。

<http://www.cosmos-standard-rm.org/verifmp.php>

GRANSENSE の処方ヒント

幅広い種類の増粘剤に対応しています。

- 植物由来の増粘剤 (キサンタンガム、アカシアガム)
- セルロース、スターチ
- シリカ
- クレイ (ヘクトライト)
- ワックス類 (カルナバワックス、キャンデリラワックス)
- 高級アルコール類 (セチルアルコール、ステアリルアルコール)
- 高級脂肪酸 (ステアリン酸、ラウリン酸)

GRANSENSE の処方ヒント

乳化剤、乳化助剤、湿潤剤

- アルキルグルコシド類 (ラウリルグルコシド、セテアリルグルコシド)
- モノ-/ジグリセライド類 (ポリステアリン酸スクロース、ステアリン酸スクロース、トリ酢酸テトラステアリン酸スクロース)
- ポリグリセロールエステル類 (ジイソステアリン酸ポリグリセリル-3、ポリリシノレイン酸ポリグリセリル-3)
- その他、エステル類 (オリーブ油脂セテアリル、オリーブ油脂脂肪酸ソルビタン)
- 脂肪酸類 (ポリヒドロキシステアリン酸、イソステアリン酸)
- “湿潤性” エステル類 (PCAオクチルドデシル、PCAイソステアリル)
- レシチン、レシチン誘導體

GRANSENSE の容器との相性について

GRANSENSE™エラストマーの有機部分は、プラスチックの表面に移行し、可塑剤として作用し、包装の形状や製品の仕上がり状態を変化させる可能性があります。

この現象を避けるためには、ガラス製の容器や、肉厚のポリエステル、ポリエチレンテレフタレート、フェノールタイプのプラスチック素材を使用することをお勧めします。

GRANSENSE のサンプル提供について

- **GRANSENSE** の材料は特許出願中であるため、サンプルをご提供する前に、秘密保持契約書(NDA)と非分析同意書(NAA)を締結させて頂いております。
- **GRANSENSE** の処方例サンプルは、上記の契約書は必要ありませんので、ご要望に応じていつでもご提供させていただきます。

お問い合わせは? Email
customerservice@imcd.jp

Thank you.