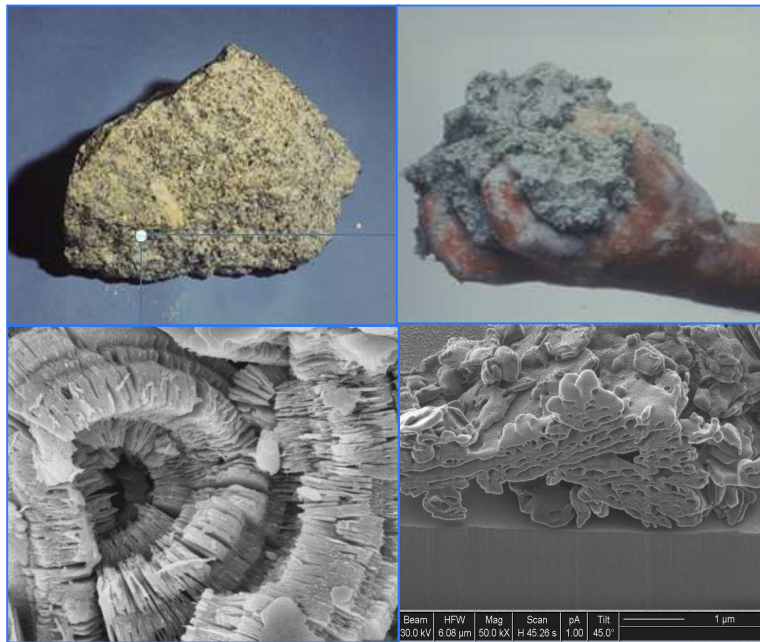


Kaolin for Cosmetics



Where does Cornish kaolin come from?

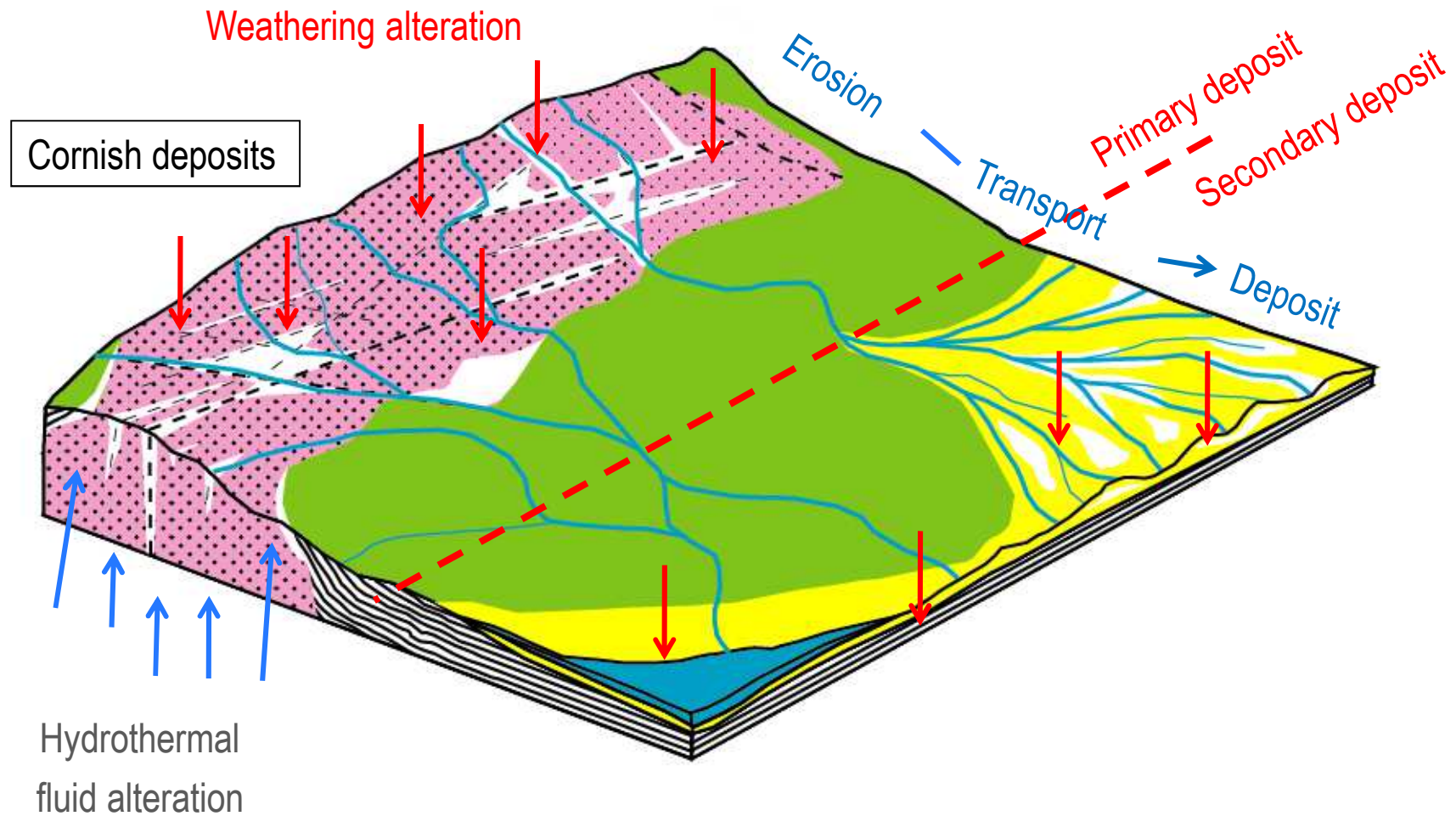


← Granite

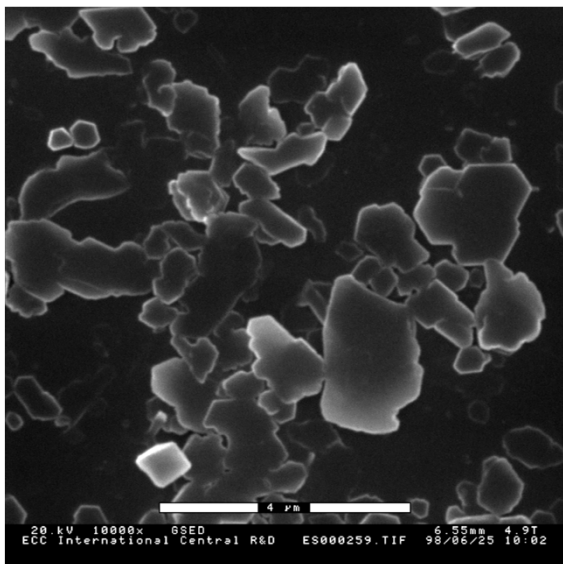
Kaolinised
granite →



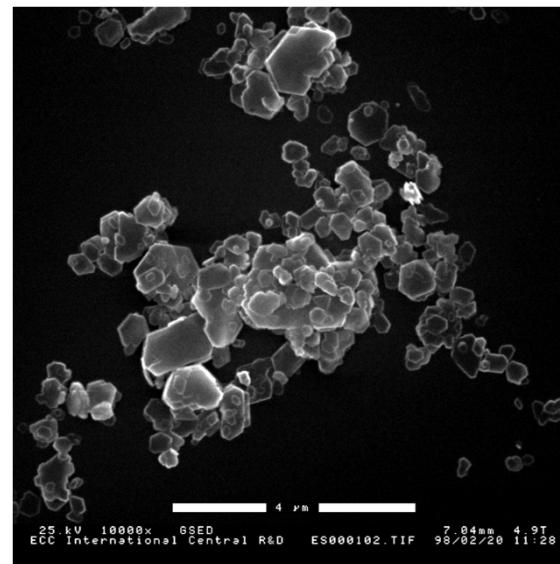
Kaolin deposits can be Primary or Secondary



Imerys global kaolin sourcing



UK



North America

Extraction of kaolin from a primary deposit

IMERCARE[®]
PARTS



Wheal Martyn Pit opened in 1880
ISO 14001 & ISO 9001:2000

Refining and colour beneficiation of kaolin

IMERCARE[™]
PARIS



Milling and drying to produce kaolin powder

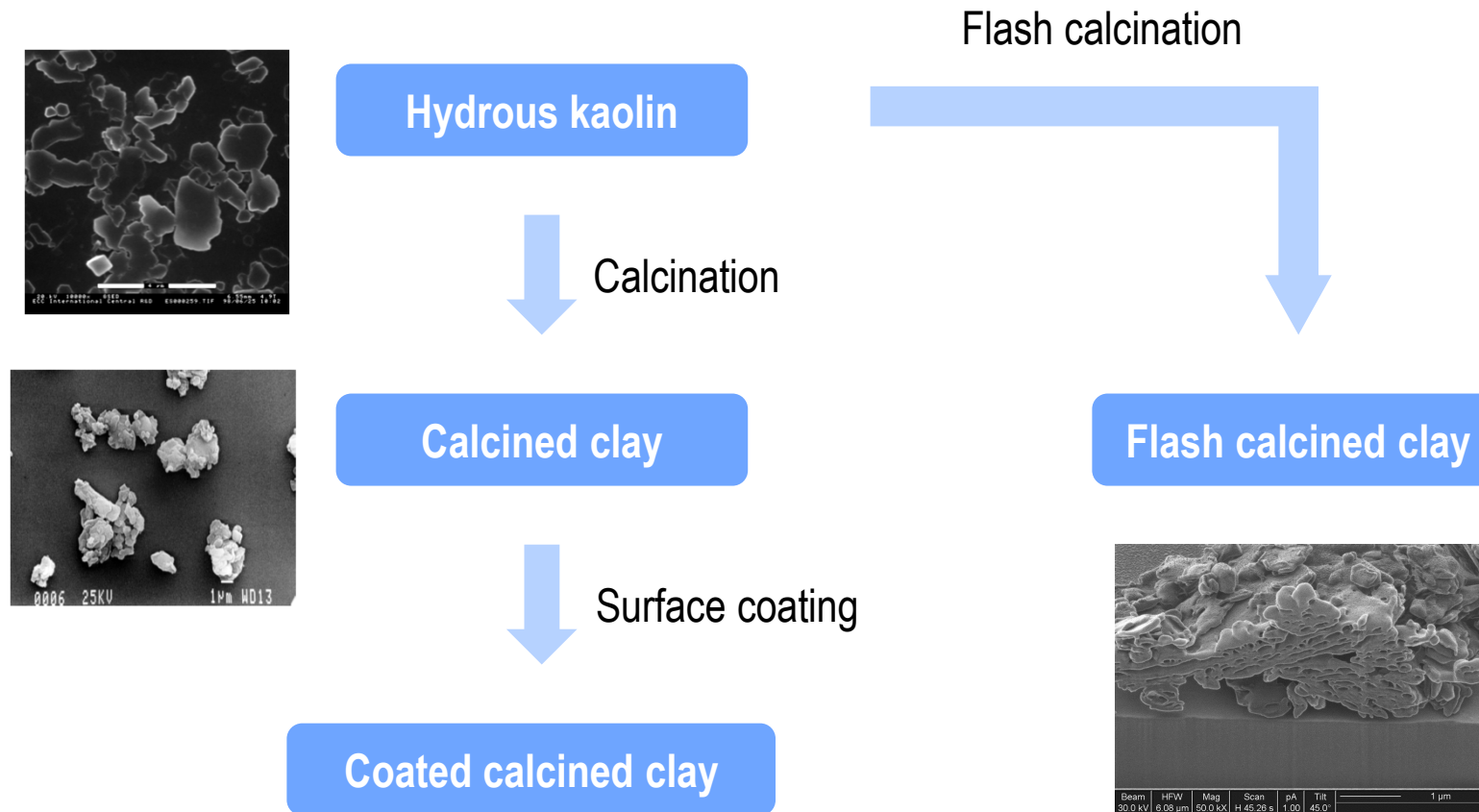
IMERCARE[™]
PARTS



IMER CARETM
PARIS

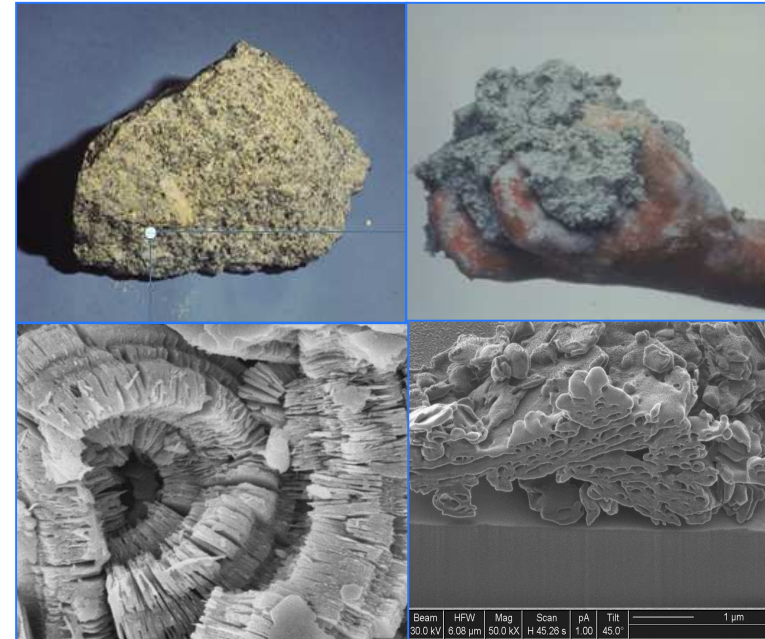


Hydrous kaolin can be transformed further through calcination



■ Main properties

- Sebum and impurity absorption
- Skin adhesion, soft touch
- Opacifying effect
- Improves wear
- Reduces colour migration
- Matt effect
- Reduces greasy effect
- Rheology control
- Chemical resistance, inertness



■ Main applications

- ◆ Make-up
- ◆ Hair care products
- ◆ Liquid foundations
- ◆ Skin care face masks

Kaolin for face masks

IMERCARE
PARIS

Sebum and impurity absorption

Blotting properties

Purifying effect on skin

Detoxifies skin



Cleansing masks



Removes impurities and toxins from the skin due to pollution and stress

Kaolin in daily matifying skin care for oily skins

IMERCARE[™]
PARIS

Biopur matifying fluid

Long lasting matt effect

The power of a clay with blotting properties and excess sebum absorption



Kaolin in foundations for a long lasting matifying effect

IMERCARE[™]
PARIS

Unifiance matifying fluid for sensitive skins

- Long lasting matt effect
- High tolerance
- Opacifying effect
- Enhanced cover
- Rheology effect



Kaolin in natural lipsticks for a semi mat effect

IMERCARE[™]
PARIS

Une matt lipstick

- Natural composition
- Semi matt effect
- Improved wear
- Enhanced cover



ImerCare™ 02KS – a unique kaolin

IMERCARE
PARIS

Dispersion in water (2g kaolin – 10g water)
After 2 weeks



ImerCare™
2K

ImerCare™
02KS

ImerCare™
04K

ImerCare™
07K

↓
No sedimentation

- Flows easily
- Easy to handle
- Disperses in water instantly
- Stable suspension in water
- Good dispersion in oils
- Gives a luminous matt effect on skin

Imerys kaolin range



ImerCare™ 02KS

Extra soft feel
Low coverage

Particle size distribution 0.2µm
Oil absorption 48%

ImerCare™ 04K

Soft feel
Medium coverage,
Very high opacity

Particle size distribution 0.4µm
Oil absorption 46%



ImerCare™ 07K

Soft and creamy feel
Medium coverage
Very good adhesion on skin

Particle size distribution 0.7µm
Oil absorption 42%



ImerCare™ 2K

Soft and very creamy
High coverage

Particle size distribution 1.7µm
Oil absorption 38%



Skin care products

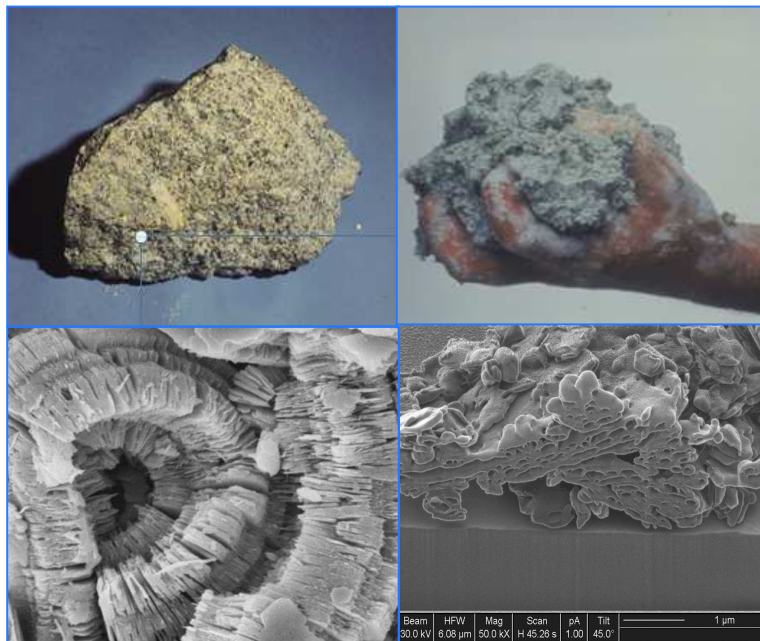
Oily skin
Anti acne treatments
Rheology / thickening

Good compromise
Suitable for a lot
of applications

Face mask & color cosmetics

Matt finish
Good wear
Barrier effect

Formulations guide



Kaolin in face masks: formulation example

	COMMERCIAL NAME	CHEMICAL NAME	SUPPLIER	%
A	WATER			72.50
	ACTIGUM VSX20	SCLEROTIUM GUM	CARGILL LASERSON	0.50
	ETHANOL DEB 100	ETHANOL		5.00
B	IMERCARE 2K	KAOLIN	IMERYS	20.00
C	CRILLET 1	POLYSORBATE 20	CRODA	1.00
D	FRAGRANCE			0.50
E	EUXYL K702	PHENOXYETHANOL, BENZOIC ACID, DEHYDROXYACETIC ACID, AQUA, ETHYLHEXYLGLYCERIN, POLYAMINOPROPYL BIGUANIDE	SCHULKE	0.50
TOTAL				100.00

High kaolin loading: 20-40%

Kaolin in matifying daycream for oily skins

	COMMERCIAL NAME	CHEMICAL NAME	SUPPLIER	%
A	EMULGADE SE PF	GLYCERYL STEARATE, CETEARETH-20, CETEARETH-12, CETEARYL ALCOHOL, CETY PALMITATE	BASF	5.00
	LANETTE O	CETEARYL ALCOHOL	BASF	1.00
	LABRAFAC CC	CAPRYLIC/CAPRIC TRIGLYCERIDES	GATTEFOSSE	5.00
	VEGELIGHT	COCONUT ALKANES (and) COCO-CAPRYLATES/CAPRATES	GRANT	5.00
	HUILE DE NOYAUX D'ABRICOTS	PRUNUS ARMENIACA KERNEL OIL	BERTIN	1.00
	BIOXAN SF T50	TOCOPHEROL (MIXED)	MASSO	0.10
B	WATER			76.80
	GLYCERINE	GLYCERINE	COPPER	3.00
	SATIAXANE CX911	XANTHAN GUM	UNIVAR	0.40
C	IMERCARE 02KS	KAOLIN	IMERYS	2.00
D	FRAGRANCE			0.60
E	PRESERVATIVES			tbd
F	DERMOFEEL PA3			0.10
G	BIOXAN ACETATE 130IU	TOCOPHERYL ACETATE	MASSO	0.10
H		pH CORRECTOR		tbd
TOTAL				100.10

- Fine kaolin 02KS
- Kaolin loading: 2% to 4%

Kaolin in foundations for a long lasting matifying effect

	COMMERCIAL NAME	CHEMICAL NAME	SUPPLIER	%
A	ABIL EM 90	CETYL PEG/PPG-10/1 DIMETHICONE	EVONIK	2.00
	ISOLAN GI 34	POLYCGYCERYL-4 ISOSTEARATE	EVONIK	1.00
	JOJOBA (BUXUS CHINENSIS) OIL			1.00
	LABRAFAC CC	CAPRYLIC/CAPRIC TRIGLYCERIDES	GATTEFOSSE	8.00
	TEGOSOFT OP	ETHYLHEXYL PALMITATE	DEGUSSA	1.50
	XIAMETER PMX-200 SILICONE FLUID 5CST	DIMETHICONE	DOW CORNING	1.00
	PARACERA W80 WAX	MICROCRYSTALLINE WAX	PARAMELT	1.20
	TOCOPHERYL ACETATE			0.90
B	WATER			61.24
	GLYCERINE	GLYCERINE		1.00
	SODIUM CHLORIDE			1.00
C	SA-C47051	TiO2 AND DIMETHICONE	MIYOSHI KASEI	6.00
	SA-C331700-102	CI77492 & DIMETHICONE	MIYOSHI KASEI	0.74
	SA-C332199-102	CI77491 & DIMETHICONE	MIYOSHI KASEI	0.41
	SA-C335000-102	CI77499 & DIMETHICONE	MIYOSHI KASEI	0.01
	FZ-3196	CAPRYLYL DIMETHICONE	DOW CORNING	5.00
D	IMERCARE 2K	KAOLIN	IMERYS	3.00
E	XIAMETER® PMX-0245 CYCLOPENTASILOXANE	CYCLOPENTASILOXANE	XIAMETER	5.00
F	PRESERVATIVES			TBD
G	FRAGRANCE			TBD
TOTAL				100.00

- Kaolin 2K with a covering power (higher particle size distribution)
- Kaolin use : 3% to 5%

Kaolin in natural lipsticks for a semi mat effect

	COMMERCIAL NAME	CHEMICAL NAME	SUPPLIER	%
A	SOPHIM MC30	HYDROGENATED POLYISOBUTENE	SOPHIM	13.45
	SCHERCEMOL 318 ESTER	ISOPROPYL ISOSTEARATE	LUBRIZOL	8.00
	SOFTISAN 645	BIS6DIGLYCERYL POLYACYLADIPATE-2	SASOL	15.00
	INDOPOL	POLYBUTENE	INEOS OLIGOMER	5.00
	SCHERCEMOL TISC ESTER	TRISOSTERAYL CITRATE	LUBRIZOL	15.00
B		MICROCRYSTALLINE WAX	SONNEBORN REFINED PRODUCTS	3.50
		EUPHORBIA CERIFERA (Candelila) WAX	STRAHL & PITCH	6.00
		COPEMICA CERIFERA (carnauba) WAX	STRAHL & PITCH	1.50
		OZOKENITE	KAHL & CO	2.50
C		TITANIUM DIOXIDE	SUN MAPRECOS	0.20
		RED IRON OXIDES	SUN MAPRECOS	4.50
		RED 6 LAKE	SUN MAPRECOS	1.50
	DC RED 7 LAKE	RED 7 LAKE	SUN MAPRECOS	0.60
	SOPHIM MC30	HYDROGENATED POLYISOBUTENE	SOPHIM	13.20
D	IMERCARE 04K	KAOLIN	IMERYS	2.00
E	FLAMENCO RED	MICA, TiO2	BASF	8.00
F		ASCORBYL PALMITATE		0.05
G	FRAGRANCE			TBD
TOTAL				100.00

- Kaolin 04K (or 07K) with medium covering power
- Kaolin loading: 2% to 8%