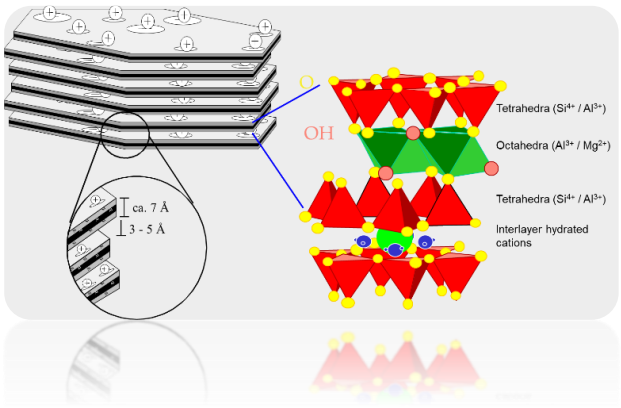
EPHYLA
Natural Active Design

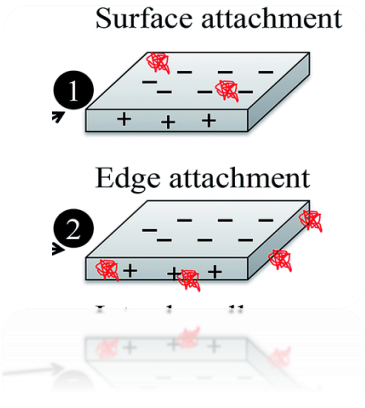
OLO 3D technology:
Guideline Formulation

EPHYLA
Natural Active Design

Introducing OLO 3D technology

- OLO 3D is OLO 3D is a vegetable origin organic modified bentonite.
- Bentonites forming OLO 3D are carefully selected and purified in order to fullfully the cosmetic international standard in term of heavy metals and microbiological content.
- The organic modification is carried out using a Stearalkonium chloride.
- OLO 3D comes under powder form and it is preservative free

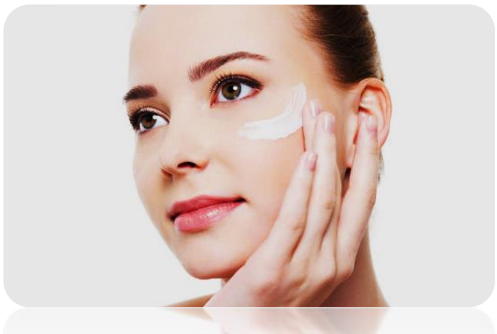




EPHYLA
Natural Active Design

OLO 3D technology Benefits

Skincare and Make Up:



- Thickens oil phases
- Stabilizes oil phases against syneresis and improving emulsion stability
- Provide a matte finish to the skin
- Prevents sweating/syneresis in lipstick
- Maintain homogeneity in molten and setting stages in stick products
- Enhances wear
- Excellent light diffuser

Suncare:

- Boost the Sun Protector Factor
- Reduce pigments separation and settlement
- Reduce ultrafine TiO2 related whitening effect

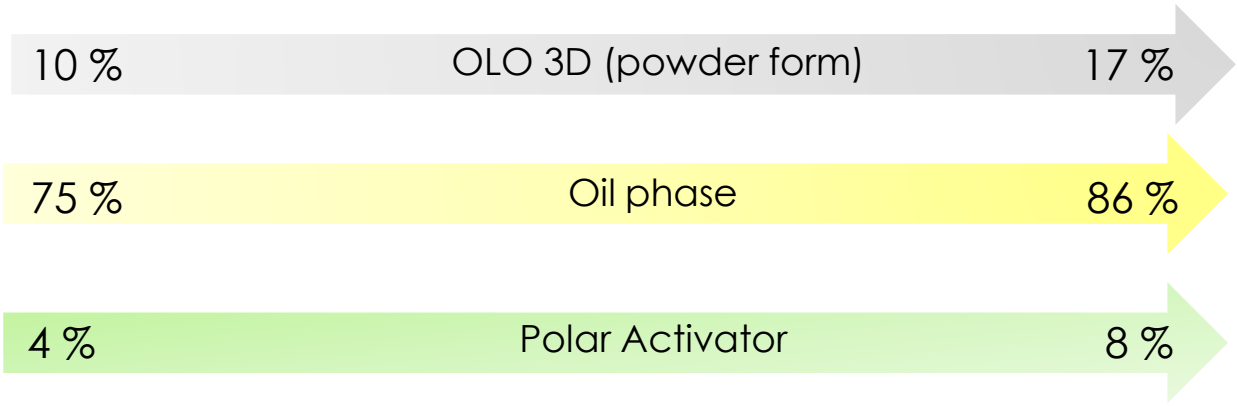
Incorporation and equipment guideline

					
Mixing tool	Propeller	Planetary	Impeller - blade	Rotor-Stator	Multiple Stage High Shear Mixer or colloidal mixer
Shear developpement	Low	Medium	Medium-High	Medium-High	High
Suitability					
Speed rate			> 3000 rpm	> 3000 rpm	> 3000 rpm
Temperature			• Oil at up to 50°C increases OLO 3D hydration rate improving the dispersion and increasing the viscosity		
Incorporation order			• Put the oil into the vessel. Then, add slowly OLO 3D under moderate speed. Finally increase the shear rate for a better dispersion. • Ensure full wetting achieved before activation • A chemical polar activator can be introduced to optimize gel formation depending on the nature of the oil phase and equipment used		

EPHYLA
Natural Active Design

Incorporation guideline

Use level to produce master gels



Suitable Polar activator	Propylene Carbonate, Triethyl citrate, Propanediol
Suitable Oil	Triglyceride, Alkane, Silicon
Viscosity range	100000 mPa/s - > 1000000 mPas/s
Use level of master gel	5-30 %
How to use the master gel	Disperse in the oil phase using a homogenizer or high shear mixer to totally disperse for maximum benefit.

Commercial Name	INCI
OLO 3D	Stearalkonium bentonite

EPHYLA
Natural Active Design

Customer (brand)	**EPHYLA**
Formula Name	**BB cream**
Formula Ref	**EP_BBC_F35**

Phase	Commercial Name	%	INCI
A	Water	QSP	Aqua
A	Frametime CX (EPHYLA)	4	Bentonite & Xanthan gum & Citric acid
B	Fibregum Bio	1	Acacia senegal gum
B	Mikhart 10	1	Calcium carbonate
C	Glycerin	2	Glycerin
C	Propanediol	6	Propanediol
D	Coconut Oil	3	Cocos nucifera oil
D	Avocado Oil	6	Persea gratissima oil
D	Jojoba Oil	2	Simmondsia chinensis seed oil
D	HTR1 (EPHYLA)	2,5	Helianthus annuus seed oil & Protium heptaphyllum resin
E	Finsolv Tn	12,7	C 12-15 Alkyl Benzoate
E	Mix of pigments	10	Iron Oxide Yellow (CI 77492) & Iron Oxide Red (CI 77491) & Iron Oxide Black (CI 77499) & Titanium dioxide (CI 77891) & Aluminum hydroxide & Magnesium stearate
F	NS-EX-81 (NEXT STEP LAB)	0,3	Polyglyceryl-8 oleate
F	Preservatives	QS	/
F	Perfume	QS	Parfum
F	OLO 3D_FTN (EPHYLA)	3	C12-15 Alkyl Benzoate & Stearalkonium Bentonite & Dicaprylyl carbonate
F	NS Boost (NEXT STEP LAB)	2	Mica & Silica
		100	

FINAL PH : 6,5 - 7,5

Protocol
1- Combine Water and Frametime CX and homogenize: A phase
2- Add the B phase to the A phase and mix and homogenize
3- Add C to A &B
4- Prepare the D phase
4- Prepare the E phase and homomix until complete dispersion of pigments
5- Homogenize F phase, add to D&E homomix until complete dispersion
6- Add D&E&F to A&B&C and mix until completely homogeneous

EPHYLA
Natural Active Design

Customer (brand)	**EPHYLA**
Formula Name	**Lip Balm**
Formula Ref	**EP_LB_F5**

Phase	Commercial Name	%	INCI
A	OLO 3D _DDT_P (EPHYLA)	64,99	Stearalkonium bentonite & Helianthus annus seed oil & Balanites roxburghii seed oil & Propanediol
B	Kokum Butter (EPHYLA)	15,00	Garcinia indica seed butter
B	Organic Desert Date Butter (EPHYLA)	15,00	Balanites roxburghii seed oil & Hydrogenated vegetable oil & Tocopherol
C	Unipure red LC 320	0,01	CI 75470
D	Aroma	QS	Aroma
D	HTR1 (EPHYLA)	3,00	Helianthus annuus seed oil & Protium heptaphyllum resin
D	Vitamin C Tetra E (EPHYLA)	1,00	Tetrahexyldecyl ascorbate
		100	

Protocol
1- Prepare A
2- Melt B, combine with A and mix until homogeneous
3- Add C and mix until homogeneous
4- Add D and mix until homogeneous

EPHYLA
Natural Active Design

Customer (brand)	**EPHYLA**
Formula Name	**Timeless smoothie**
Formula Ref	**EP_TS_F2**

Phase	Commercial Name	%	INCI
A	Preservatives	QS	/
A	Water	QSP	Aqua
B	Frametime CX (EPHYLA)	5	Bentonite & Xanthan gum & Citric acid
B	Fibregum Bio	0,15	Acacia senegal gum
B	Xanthan Gum FF	0,1	Xanthan gum
B	Borohyal (EPHYLA)	1	Bentonite & Borojoa patinoi fruit juice
B	Revertime (EPHYLA)	0,1	Montmorillonite & Ulva lactuca extract
C	Glycerin	1,5	Glycerin
C	Propanediol	5	Propanediol
D	Jojoba oil	2	Simmondsia chinensis seed oil
D	Neossance squalane	5	Squalane
D	Moringa oil (EPHYLA)	4	Moringa oleifera seed oil
D	Desert Date oil (EPHYLA)	4	Balanites roxburghii seed oil
D	Sericite GMS 4C	1	Mica
D	Perfume	QS	Parfum
D	OLO 3D_FTN (EPHYLA)	6	Stearalkonium Bentonite & C 12 15 alkyl benzoate & Dicaprylyl carbonate
		100	

FINAL PH : 5 - 6

Protocol
Solubilize A in water
2- Add the phase B to A and mix until completely homogeneous
3- Add C and mix
4- Prepare and mix D phase
5- Add the phase D to A&B&C and mix until completely homogeneous