

Broad Spectrum SPF 50 Sunscreen Cream with Low UV Actives

- High SPF 50 broad-spectrum sunscreen using **organic UV filter**
- Low concentration of UV filters (17%) **reduces** chance for **skin irritation**. The SPF value is boosted by Synoxy HSS.
- Ultra-comfortable sensory without sticky feeling and easy to spread on skin.
- Elegant cream-gel texture with anticipated water resistance performance.

Sensogel 200, as a multi-functional thickener, enables a flexible formulation approach due to stability under a broad range of pH (2 – 12) and a diminished amount of emulsifiers.

Sensogel 200: 3-in-1 stable and ready-to-use associative thickener that can work as an emulsifier, a stabilizer, and thickener for a wide range of **pH (2 – 12)** in O/W sunscreen preparation with a reduced amount of emulsifiers to provide ultra-comfortable sensory and a range of **textures** from sprays to lotions, creams and butters. Also able to **thicken 99% Glycerin** with 1% Sensogel 200, making a water-soluble, petroleum-like viscous paste with a non-tacky sensory. It is designed for skin care, sun care and hair conditioners.

SPF 50 (one subject, FDA protocol), critical wavelength 378 nm

Phase	INCI Name, (Trade Name)	Wt %	
A	Distilled Water	66.15	Process: 1. Heat Phase B at above 85 C to a homogenous solution. 2. Mix phase A by a propeller at 1000 rpm, RT for about 15 minutes to ensure all SG-200 is dissolved. Then heat phase B to 85 C 3. Add B into A while mixing by a propeller at 1300 rpm, 80~85 C. After adding, continue mixing for 20 minutes. 4. Add the lost water, and cool down to 30 C.
	Disodium EDTA	0.05	
	Glycerine	3.00	
B	Sensogel 200	2.00	
	Cetearyl Alcohol (and) Coco Glucoside (Montanov 82)	2.00	
	Polyethylene (Permalene 400)	2.00	
	Avobenzene	2.00	
	Homosalate	10.0	
	Octinoxate	5.00	
	Trimethoxybenzylidene Pentanedione (Synoxy HSS)	2.00	
	C ₁₂₋₁₅ Alkyl Benzoate	5.00	
Preservative	0.80		
Feature	Viscosity (cP) @ 5 rpm	135,000	pH 5.89

This information contained herein is believed to be reliable, but no representation, guarantees or warranties of any kind are made as to its accuracy, suitability for particular application or the results to be obtained. Formulations presented should be used only as a suggested starting point. Full-scale testing and end product performance are the responsibility of the user. Applechem, Inc. makes no warranties, express or implied, including, but not limited to, the implied warranties of the existing third party intellectual property right, especially patents, and merchantability and fitness for a particular purpose. Edition: October 2015, Ref #: CH-SG-200 1709-1