



**FVC-W90(Viscocare-W90F)**

**For Cosmetics/Personal care**

**INNOVATIVE Thickening-Stabilizing  
polymer in powder form**

- 1. Profile**
- 2. Property & Benefit**
- 3. Specification**
- 4. Thickening capability test**  
**(Water / pH range / Electrolyte/ Solvent)**
- 5. Application**

**INCI Name : Hydroxyethyl acrylate  
/Sodium acryloyldimethyltaurate copolymer**

**CAS No.: 111286-86-3**

**EINECS No.: 601-067-4**

**CHINA : listed in IECIC**

**Physical form : Pre-neutralized white powder**

## FVC-W90(Viscocare-W90F)

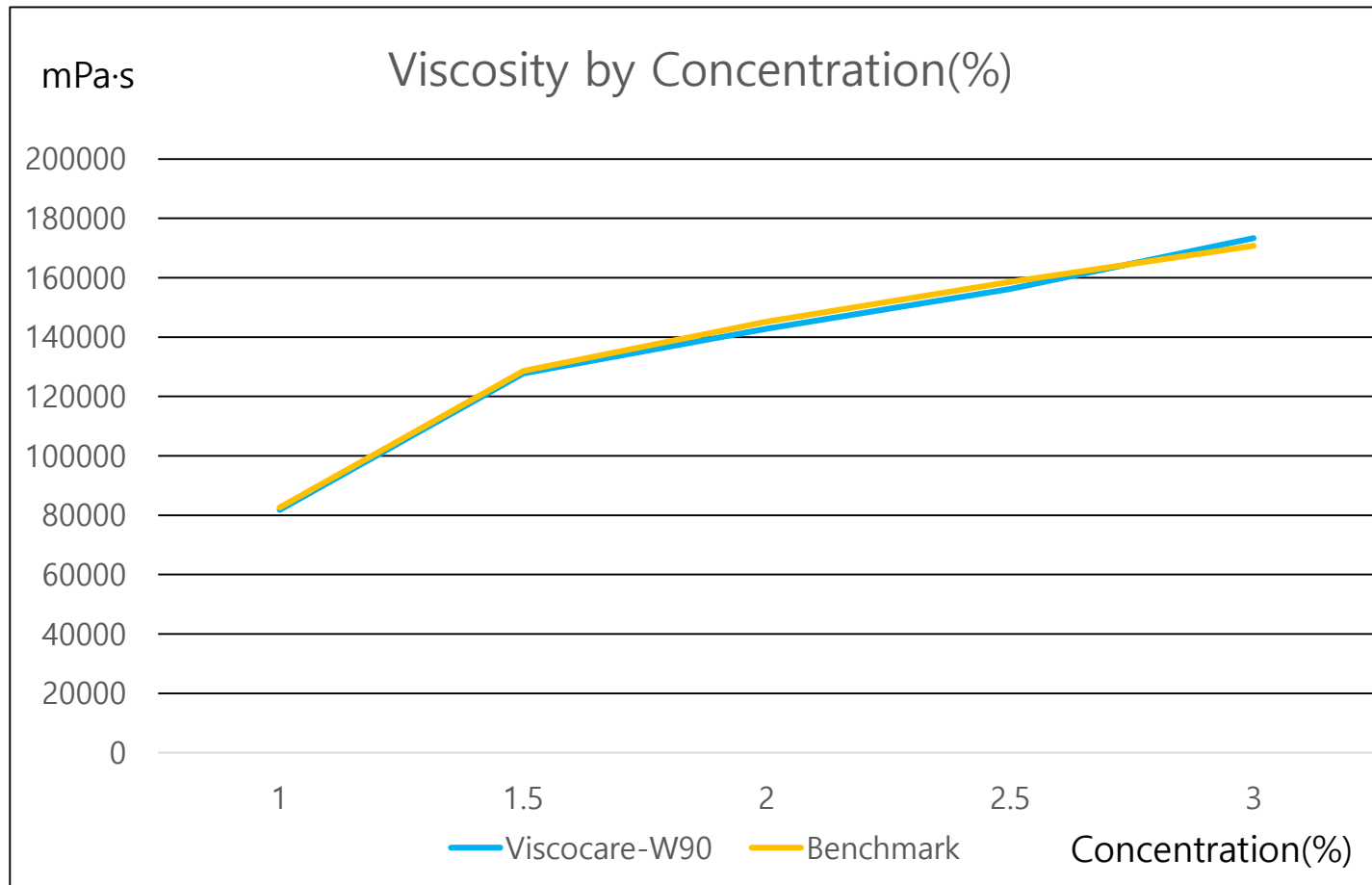
- It is a ready-to-use powder type polymer without E.O.
- Is an additive for opaque and transparent products.
- Is very easy to use, just add to your formulation after mixing oil and water phases to enhance stability and modify rheology.
- Is convenient emulsifier, rheology modifier, thickener, and acting as a stabilizer.
- Makes gel and cream easily without pre-neutralization process.
- Acts as a very good pigment dispersant and emulsifies various kinds of oil and pigment.
- Can be used to cold process.
- Improves emulsion stability of cosmetics.
- Acts as a conditioning agent for the hair and prevents static electricity to facilitate hair care.
- Self-emulsifying and emulsifying up to 40% of oil
- Is possible to increase the viscosity in the pH range of 3-11, and it has excellent thickening power even in the presence of special ingredients(DHA and AHA)

## Specification of FVC-W90(Viscocare-W90F)

Property	Unit	Specification	Method
Appearance	-	White powder	Visual
Odor	-	Characteristic	Sensory
Viscosity @1.5%	mPa.s	90,000 ~ 150,000	RVT, no6, 5rpm
Solid content	%	90 min	2g, 150°C, 1hr
0.1%NaCl Viscosity (1.5% Solution in H2O)	mPa.s	10,000 ~ 30,000	RVT, no4, 5rpm
pH @1.5% Sol'n	-	4.0 ~ 5.5	pH Meter

# Thickening capacity

## Viscosity curve with concentration in DI Water



### • Objectives

- Measure the viscosity at various concentrations and compare it to a benchmark

### • Methods

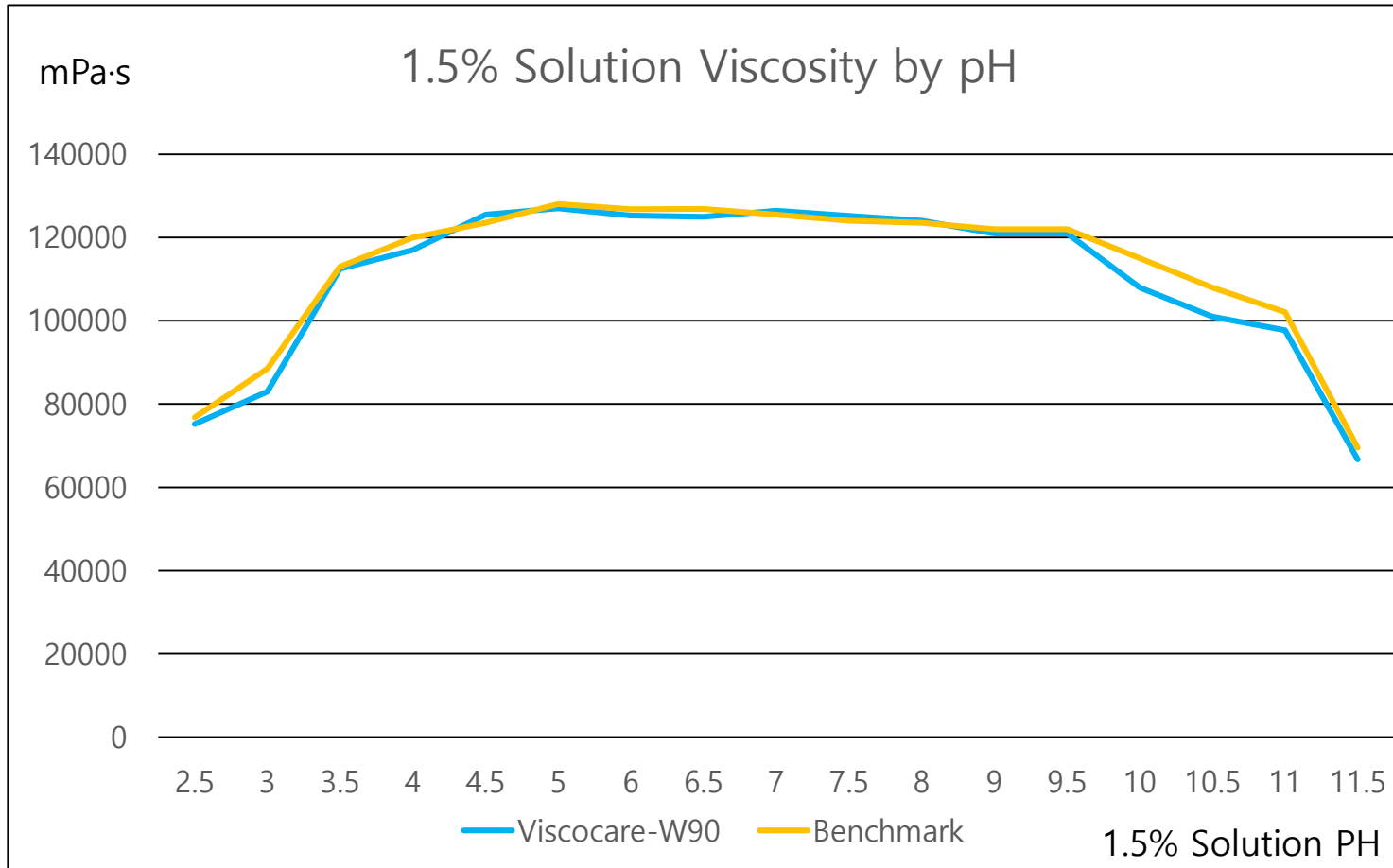
- Prepare solution of 1.0 – 3.0 % of FVC-W90 (Viscocare-W90F).
- Using automatic agitation in low concentration
- In high concentration, using manual agitation
- RVT Viscometer

### • Result

- The viscosity profile of FVC-W90(Viscocare-W90F) at various concentrations is very similar to the benchmark one

# Thickening capacity

## Thickening capacity over a wide pH range



- **Objectives**

- To check the viscosity according to the pH change and compare it with the benchmark

- **Method**

- 1.5% FVC-W90(Viscocare-W90F) solution in DI Water

- Add Lactic acid or 10%NaOH solution drop by drop to 1.5% FVC-W90(Viscocare-W90F) solution.

- Measure the viscosity and pH

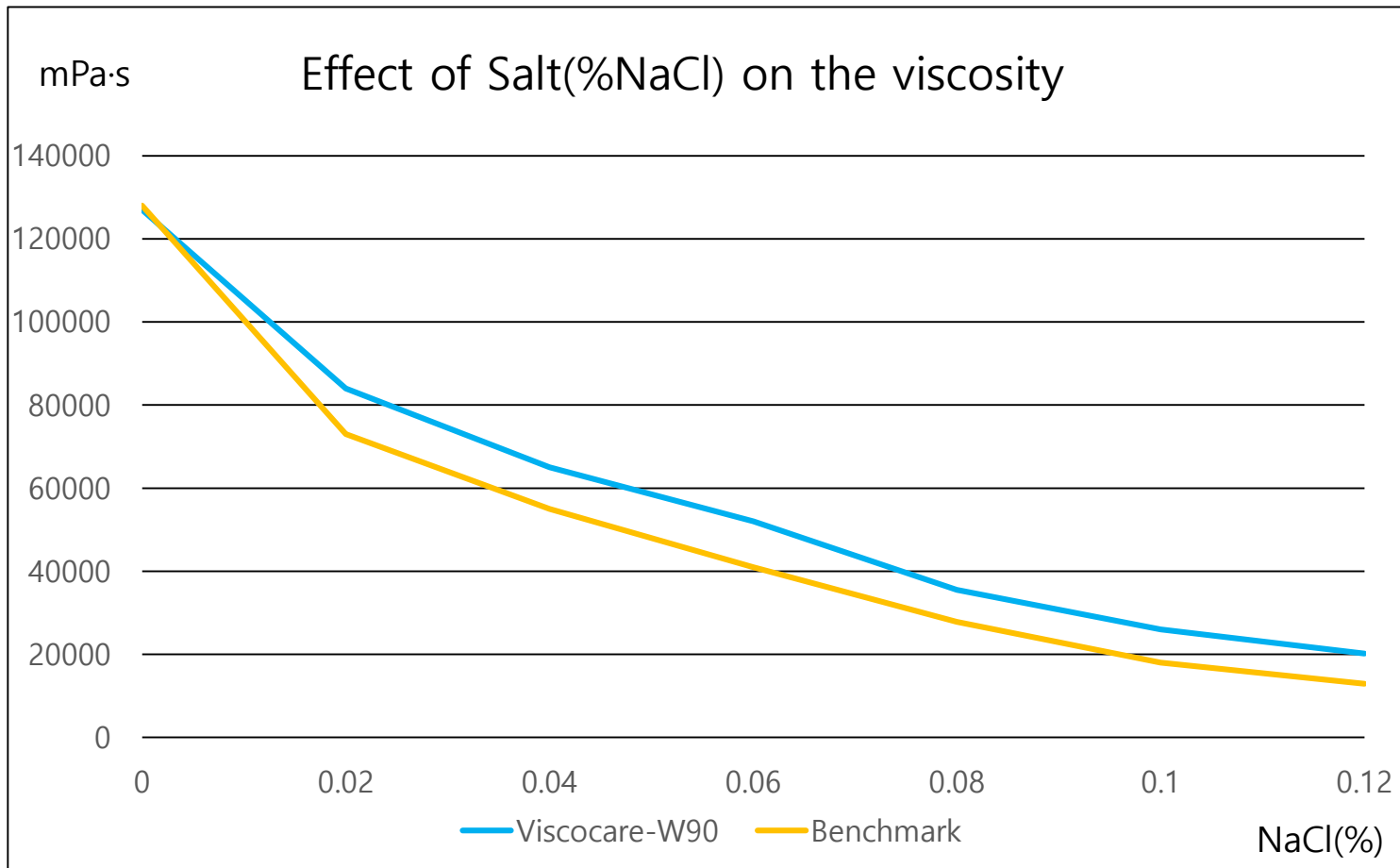
- **Test Result**

- Trend of viscosity variation is very similar

- Maintain high viscosity from pH 3 to 11 (wide range)

# Thickening capacity

## Thickening capacity in presence of electrolytes



### • Objectives

- For the purpose of checking the viscosity resistance to the electrolyte

### • Methods

- Prepare 1.5% FVC-W90(Viscocare-W90F) solution in DI water
- Add various weight of NaCl to 1.5% FVC-W90(Viscocare-W90F) solution.
- Mix well and measure the viscosity.

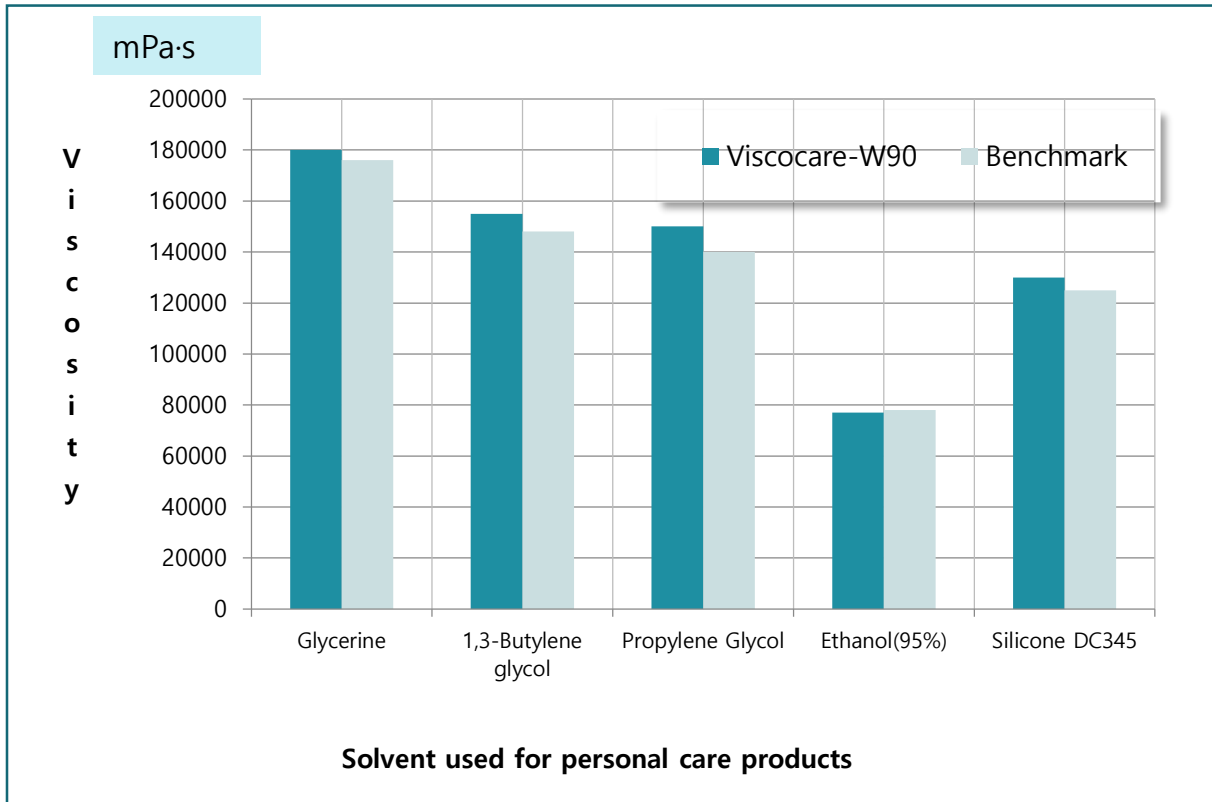
### • Test Result

- Decreasing trend of viscosity is similar to the benchmark one



# Thickening capacity

## Thickening effect according to solvents



Test of Viscosity : Brookfield RVT , 5rpm, spindle no 6

- **Objectives**

- Viscosity of FVC-W90(Viscocare-W90F) mixed with various solvents used in personal care/cosmetics.

- **Tested formula**

- Solvent 50% (Glycerine, 1,3-Butylene glycol, ethanol, propylene glycol)
- FVC-W90(Viscocare-W90F) 2%, Water 48%  
(Silicone DC345 10%, Thickener 2%, Water 88%)

- **Test Result**

- The viscosity properties are the same for FVC-W90 (Viscocare-W90F) and Benchmark.

- Foundations, colored gels
- Sun and after-sun products
- Mascaras
- Cleansing lotions
- Baby lotions
- Skin care products
- Products with heat-sensitive or pH-dependent active ingredients
- Skin whitening products
- Self-tanning products
- Bleaching agents
- Hair coloring products
- Gel-creams, emulsion-gels, etc.



# THANK YOU!

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