＜CONTACT ADDRESS＞
ADEKA Europe GmbH
Berliner Allee 48, 40212 Dusseldorf, Germany
Tel +49 (0) 211 179245-0   Fax+49 (0) 211 1710470
E-mail   info@adeka.eu

-Hydro gelator -

ADEKA NOL GT-930

ADEKA NOL GT-930 is a water soluble polymer which has urethane bond in the structure. It associates water molecule and show thickening effect on water by forming water gel. It is used for cosmetics as gelator, suspending agent and emulsion stabilizer.

Features

✔ High-elastic / Springy water gel   ✔ Salt tolerance   ✔ BHT free
✔ Good dispersibility of powders   ✔ Surfactant-free O/W emulsion

Table of ingredients

INCI NAME	Compositions (wt%)
POLYURETHANE-59	30
BUTYLENE GLYCOL	55
WATER	14.95
TOCOPHEROL[1]	0.05

1) Carry-over ingredient, Antioxidant

ADEKA CORPORATION

7-2-35 Higashi-ogu, Arakawa-ku, Tokyo, 116-8554   www.adeka.co.jp

Physical and chemical properties

Appearance   : Light yellow to light yellow-brown,
                                                  clear or slightly turbid, viscous liquid
Viscosity of aqueous solution   : 1000-5000
(3.3%aq) (mPa・s)
Cloud point (℃)   : ≥55.0

Dissolution method

1, Prescribed amount of ADEKA NOL GT-930 is added to the water kept at 50-80℃.

2, Stirred with a paddle or a dispersion mill.

3, Cool to room temperature with mixing.

Stirring device	Temp.(℃)	r/min (rpm)	Time
Paddle	25	250	>6hr
	50		3hr
	80		1hr
Homo-mixer	25	4000 - 6000	1hr
	50	3000-5000	20min
	80	2000-4000	10min
Disper	25	4000-6000	1hr
	50	3000-5000	20min
	80	2000-4000	10min

Gel properties

〇Viscosity vs. Concentration

GT-930 makes gel over *ca*.3.3%.

Viscosity (mPa・s) vs **Conc. (%)**
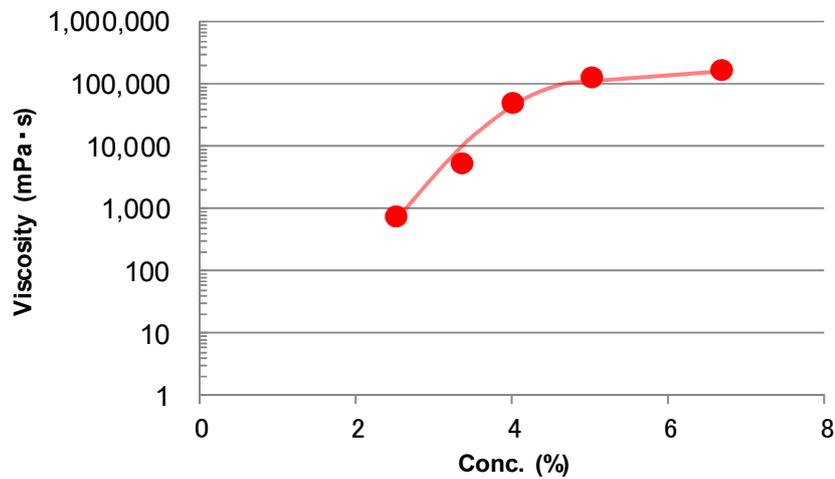
〇Viscosity vs. Shear　-GT-930 5% at 25℃-

The rheological property of GT-930gel is thixotropy.

Viscosity (mPa・s) vs **Shear rate (s-1)**

ADEKA CORPORATION
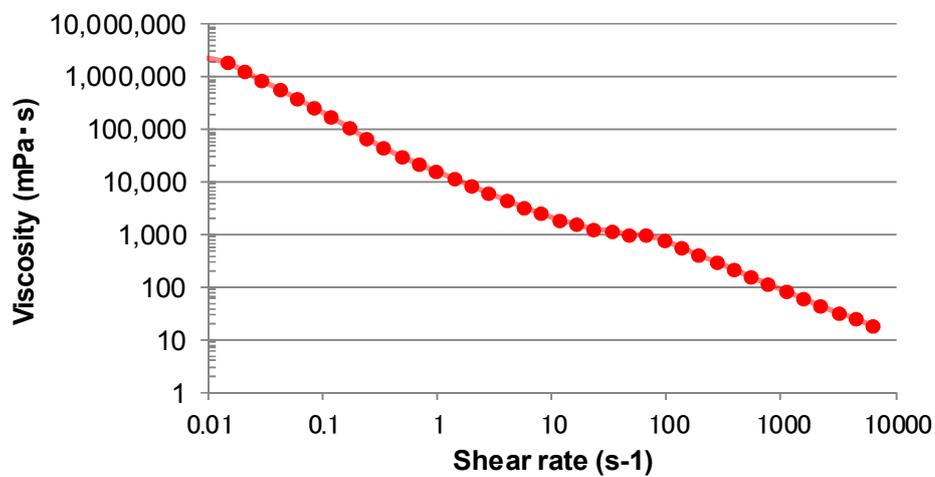
Application data of GT-930

○Dispersibility of powder

GT-930 is excellent in dispersibility of powder in water.

Ingredients

	(i)	(ii)
ADEKA NOL GT-930	2.7	-
ADEKA NOL GT-730	-	2.7
WATER	92.3	92.3
TITANIUM DIOXIDE	5.0	5.0

Stability test at 25°C

(i) GT-930   **(ii) GT-730**

>3Months   **<1 Week**
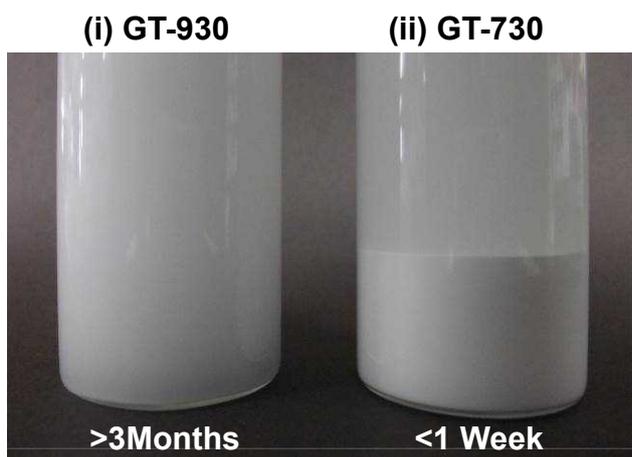
Procedure
  ・Make a gel by the prescribed method.
  ・Using a dispersion mill, heat it to 50°C at 3,000rpm.
  ・Add TITANIUM DIOXIDE and mix for 30 minutes at 3,000rpm.
  ・It cools to room temperature with mixing.

ADEKA CORPORATION

○Surfactant-free O/W emulsion [1]

GT-930 makes O/W emulsion without surfactant.

Ingredients (wt%)

		I	II	III
A	GT-930	3.3	1.0	-
	GT-730	-	-	3.3
	BG	3.2	1.0	3.2
	WATER	63.5	28.0	63.5
B	MINERAL OIL	30.0	70.0	30.0

Stability test

		I	II	III
1Week	40℃	Stable	Stable	Stable
	25℃	Stable	Stable	Stable

		I	II	III
3Months	40℃	Stable	Stable	Creaming
	25℃	Stable	Stable	Creaming

Procedure
・Make a gel by the prescribed method. (A phase)
・Using a dispersion mill, heat it to 50℃ at 5,000rpm.
・Slowly add B phase to A phase and mix for 10 minutes at 5,000rpm.
・It cools to room temperature with mixing.

ADEKA CORPORATION

Regulatory Information (for cosmetics)

We are investigating potential of this ingredient. If enough marketability will be confirmed, we are willing to register on global regulations.

	Available	Note
EU	Restricted	80MT/year as GT-930
USA	Yes	Cosmetics use only (NOT registered on TSCA)
Canada	No	NOT registered on DSL and NDSL
Australia	No	NOT registered on AICS.
China	No	New cosmetic ingredient/chemical substance.
Korea	Yes	**Cosmetics use only** (NOT registered on K-Reach)
Japan	Yes	**Cosmetics use only** (NOT registered on ENCS)

ADEKA CORPORATION