



Product Information

Fluoro coating, weather resistant coating (Varnish)

ZEFFLE™ GK Series

1. Characteristics

- Copolymer of tetrafluoroethylene and vinyl monomer, and does not contain chlorine(chlorotrifluoroethylene).
- It shows excellent weather resistance, anti-corrosion, chemical resistance, and a stain elimination property.
- Various gloss and colors can be obtained.
- Usable at normal temperature.
- Isocyanate or melamin-type is used as a hardening agent.
- Various coating method, including spraying, brushing and rolling are available.

2-1. Product Grades and Properties

Items		GK-500	GK-510	GK-570	GK-580	
Solid content	mass%	60	50	65	50	
Viscosity	Gardner	Z-Z4	U-X	T-X	-	
	mPa-s	3000-5800	700-1100	-	200-500	
Hydroxyl Value	mgKOH/Resin g	55-65	55-65	55-65	39-45	
Acid Value	mgKOH/ Resin g	2 or lower	9-12	1.5-4.5	2 or lower	
Composition of solvent	Butyl acetate	40	50	35		
	Xylene	-	-	-	-	
	Coal-tar naphtha	-	-	-	50	
Film property	Crosslink density	Normal	Normal	Normal	Normal	
	Chemical resistance	Excellent	Excellent	Good	Good	
	Dirt resistance	Good	Good	Good	Good	
	Use/ characteristics	For Inorganic pigment dispersant		For Organic pigment dispersant	Standard type	Coal-tar naphtha base
		-		-	High solid	Low viscosity
-			-	Heavy Duty	-	

*The above values are not guaranteed.

2-2. Usable brand of hardener

			GK-500	GK-510	GK-570	GK-580
Air drying type	Asahi Kasei Chemicals Corp Duranate	THA-100	△	○	○	
		TPA-100		○	○	
		TLA-100			○	○
	Bayer Desmodur	N3300	△	○	○	
	Nippon Polyurethane Industry Co., Ltd. Coronate	HX	△	○	○	
	Mitsui Chemical Co., Ltd. Takenate	D-177N			○	○
		D-170HN		○	○	
		D-140N	○	○	○	
Forced air-drying type	Asahi Kasei Chemicals Duranate	TPA-B80X			○	
	Bayer Desmodur	BL-3175	○	○	○	
		BL-4265	○	○	○	

*Confirmation of the above hardener is not an assured value.

○: Usable for hardening agent.

△:Tends to cause slight turbidity.

Blank: Not evaluated.

3. Example of composing hardener

(Example) Asahi Kasei Chemicals Co., Ltd.: Duranate TPA-100

- Grams of poly isocyanate for 100 grams of GK-570 varnish

$$= \frac{100 \times (\text{solid content} / 100) \times \text{hydroxyl number} \times \text{NCO formula weight} \times (\text{NCO/OH mole ratio})}{(\text{KOH molecular weight}) \times 1000 \times (\text{NCO content in poly isocyanate} / 100)}$$

- Solid contents of GK-570: 65mass%
(In accurate, substitute value written in the certificate of analysis)
- GK-570 solid hydroxyl value: 64 mgKOH/g
(In accurate, substitute value written in the certificate of analysis)
- NCO formula weight: 42
- NCO/OH mole ratio: In general, 1.0
(An appropriate value according to your purpose may be set.)
- KOH molecular weight: 56.1
- NCO contents in poly isocyanate: 23mass%(ex. Duranate TPA-100)
(In accurate, substitute value written in the certificate of analysis)

$$= \frac{100 \times (65 / 100) \times (64) \times (42) \times (1.0)}{(56.1) \times 1000 \times (23 / 100)} = 13.6 \text{ g}$$

Note: In case of inaccurate hardener mass amount, it may have adverse effects on the coating workability and performance.

4. Handling method/Safety information

Be sure to read the cautions written on the MSDS and label before use.

5. Packaging

1kg, 16kg, 180kg

- The products described in this material are supplied for use by general industry, not designed and manufactured for medical purposes. Their adequacy and safety for medical use has not been tested, and cannot be assured by our company. With this in mind, for medical use, you must judge the applicability of use for medical purpose yourself based on testing, the views of medical experts, and legal restrictions of the authorities concerned. Also, if you use products for such purposes, we will only provide them if you consent to the conditions and contents of the contracts which we offer.
- The data released in this material represent one example of the actual value, and the example of usage written in this material does not guarantee the results of application of this product for such usage.

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