



SANHO CHEMICAL CO., LTD.

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TOHMIDE 423

THOMIDE 423 is a polyamide-adduct type epoxy resin curing agent designed for coating (paint) and lining applications and is innovated purposefully to retain distinctive characters such as quick drying and excellent corrosion resistance derived from an amine adduct as well as flexibility and good adhesion of a polyamide resin.

When properly compounded with epoxy resins of higher molecular weight, 423 gives reliable performance in implementing successful painting and lining job.

1. DISTINCTIVE CHARACTERS

- (1) The surface of paint film becomes dry quickly, and gives good chemical and solvent resistance.
- (2) Excellent compatibility with coal tar
It is assured that neither blooming on the surface of cured coating film nor floating which is vulnerable to tar are occurred.
- (3) Excellent inter-coat adhesion
TOHMIDE 423 based coating surface renders good inter-film adhesion so that the second coat of other type paints (e.q., vinyl, phenol-type etc.) will not cause peeling in between the films.
- (4) Compared with conventional curing agents such as amine type and polyamide type, no vulnerability to lesser painting workability and to poor paint film are assured even with the short aging time in compounding TOHMIDE 423 with epoxy resins.

2. SALES SPECIFICATIONS OF TOHMIDE 423

Appearance	: Brown, viscous liquid
Solid content (%)	: 60 ± 2
Viscosity (Gardner Holdt/25°C)	: Z ~ Z ₃
Amine value (JIS)	: 145 ± 10
Color (Gardner)	: 9 Max.
A.H.E.W.	: 255
Solvent (ratio)	: Xylene / Isobutanol = 80 / 20

3. COMPOUNDING RATIO

- (1) Active hydrogen equivalent weight (A. H. E. W.) : 300
- (2) Epoxy resin
(Epoxy equivalent weight) (100 parts of resin)
175 ~ 195 not recommended
230 ~ 280 100 ~ 150
450 ~ 575 50 ~ 70



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4. PAINT TEST

(1) Test condition

Temperature	20°C
Humidity	60%
Cure schedule	7 days
Test piece	mild steel sheet

(2) Compounding ratio based on epoxy resin

CLEAR		TAR ENAMEL	
Epoxy Resin (EEW 450~575)	60.0	Tarclon 230	35.2
Xylene	28.0	Talc	18.5
Butanol	32.0	Barytes	15.1
<hr/>	<hr/>	Epoxy Resin(EEW 230 ~ 280)	20.1
Total	100.0	Xylene	7.6
		Butanol	3.2
		Aerosol	0.3
		<hr/>	<hr/>
		Total	100.0

	CLEAR	TAR ENAMEL
Compounding ratio(base resin / curing agent)	70 / 30	78 / 22
Pot life (20°C) whole quantity; 100gram	7 hr	7 hr
Drying time :		
Tack free	4 hr	14 hr
Dry hard	8 hr	33 hr
Coating thickness	30~40 μm	200 μm

(3) Physical property

	CLEAR	TAR ENAMEL
Impact resistance	>50 cm	35 cm
Cross cut	25 / 25	25 / 25
Flexibility	2 mm \$ OK.	5 mm \$ OK
Erichsen	>6 mm	7 mm OK
Scratch	2H	2B

(4) Chemical property

	CLEAR	TAR ENAMEL
Water	one month OK	6 month OK
5% salt water	one month OK	3 month OK



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5% caustic soda	one month OK	6 month OK
5%hydrochloric acid	one month OK	one month OK
Salt water spray	200 hr OK	300 hr OK

- (5) Drying time varied with specified temperature
(Comparison with that of TOHMIDE 415, based on Tar base)

Coating thickness	200 ~ 250 μ m
Compound	TOHMIDE 423 / Tar base = 22 / 78
	TOHMIDE 415 / Tar base = 20 / 80

- ◎ DMP-30 as accelerator is used 2% as much as whole quantity of epoxy resin and curing agent used.

Temperature	20°C		10°C	
	tack free	dry hard	tack free	dry hard
Drying time (hr)				
TOHMIDE 423	14	32	30	55
TOHMIDE 415	23	39	52	71
when accelerator is given				
TOHMIDE 423	8	16	25	45
TOHMIDE 415	14	28	40	60