



SANHO CHEMICAL CO., LTD.

NO. 1, ZHONGSHAN S. RD., LUZHU DIST., KAOHSIUNG CITY, TAIWAN.
TEL : 886-7-6962211~3 http : // www.sanho.com.tw
FAX : 886-7-6976993 (Sales) E-mail : sanho@sanho.com.tw
FAX : 886-7-6961782 (Export) E-mail : sanho@so-net.net.tw

TOHMIDE 215-X

TOHMIDE 215-X is a typical polyaminoamide type epoxy curing agent. TOHMIDE 215-X has large molecular weight, it thus provide the cured products with an epoxy resin with high orders of flexibility and adhesive.

1 . SPECIFICATION

Appearance	: Brown-colored viscous liquid
Viscosity(mPa · s/40°C)	: 50,000 ~ 70,000
Amine Value(JIS)	: 245±10
Color (Gardner)	: 10 Max
Specific Gravity(25 / 25°C)	: 0.97
A.H.E.W.	: 175

2 . RECOMMENDED MIXING RATIO

- (1) 50~150 parts to 100 parts of bisphenol-a type epoxy resin whose epoxy equivalent weight is about 190
- (2) 30~50 parts to 100 parts of bisphenol-a type epoxy resin whose epoxy equivalent weight is about 490.

3 . CURING CHARACTERISTICS

Epoxy resin : employed bisphenol-a type epoxy resin whose epoxy equivalent weight is 190.

Total mass : 200gr. 23°C

Mixing Ratio	50 / 50
Peak exothermic time, min.	210
Peak exothermic temperature(°C)	29

4 . PHYSICAL PROPERTIES

Epoxy resin : employed bisphenol-A type epoxy resin whose epoxy equivalent weight is about 190.

Mixing Ratio : Epoxy resin / TOHMIDE 215-X = 50 / 50

Curing condition		80°C ×1 hour	80°C ×2 hours
Compressive strength	kgf/mm ²	5.9	5.9
Bending strength	kgf/mm ²	7.3	7.2
Flexural modulus	kgf/mm ²	2.9x10 ²	3.1x10 ²



SANHO CHEMICAL CO., LTD.

NO. 1, ZHONGSHAN S. RD., LUZHU DIST., KAOHSIUNG CITY, TAIWAN.
 TEL : 886-7-6962211~3 http : // www.sanho.com.tw
 FAX : 886-7-6976993 (Sales) E-mail : sanho@sanho.com.tw
 FAX : 886-7-6961782 (Export) E-mail : sanho@so-net.net.tw

5. DRYING PROPERTIES OF CURED FILMS

Epoxy resin : employ bispheno1-A type epoxy resin whose epoxy equivalent weight is about 190.

Mixtured resins of TOHMIDE 215-X and epoxy resin, based on following mixing ratio, were coated onto the mild steel plates with sand blast treatment.

A = Epoxy resin was dissolved with xylene. (Epoxy resin : Xylene = 70 : 30)

B = Solvents ; Xylene : Isobutanol = 80 : 20

Mixing Ratio	100 / 25 / 20	100 / 20 / 15
A / TOHMIDE 215-X / B		
DRYING PROPERTIES (by drying recorder, Dry film = 100μ, 22 ~23°C)		
Set to touch, h	1.7	1.2
Tack Free, h	10.2	10.9
Dry through, h	24	24
PHYSICAL PROPERTIES (Dry film = 100μ two times coatings, 23°C × 7days)		
Cross cut	25 / 25	25 / 25
Bending test (2mm Ø)	OK	OK
Du Pont Impact resistance test(1/2" x 500gr. X 50cm)	OK	OK
Pencil Hardness	F	2B

6. CHEMICAL PROPERTIES OF CURED FILMS

Epoxy resin : employ bispheno1-a type epoxy resin whose epoxy equivalent weight is about 190.

A= Epoxy resin was dissolved with xylene (Epoxy resin : Xylene = 70 : 30)

B= Solvents ; Xylene : Isobutanol = 80 : 20

Weight increase was measured after following chemical substances were permeated into cured products of TOHMIDE 215-X with epoxy resin.

MIXING RATIO : A / TOHMIDE 215-X / B	100 / 25 / 20				100 / 20 / 15			
Immersing days	7	14	30	60	7	14	30	60
5%Acetic acid solution	OK	6M	1L	---	OK	OK	2L	---
5%Sulfuric acid solution	OK	OK	OK	OK	OK	OK	OK	OK
5%Hydrochloric acid solution	OK	OK	OK	OK	OK	OK	OK	9S
10%Ammonia solution	OK	OK	OK	8VS	OK	OK	6VS	4S
10%Caustic soda solution	OK	OK	OK	OK	OK	OK	OK	OK
5%salt solution	OK	OK	OK	9VS	OK	OK	OK	OK
Tap water	OK	OK	OK	9VS	OK	OK	OK	9VS
Kerosene	OK	OK	OK	---	OK	OK	OK	---
Isopropanol	OK	OK	OK	---	OK	OK	OK	---
MIBK	OK	OK	OK	---	OK	OK	OK	---



SANHO CHEMICAL CO., LTD.

NO. 1, ZHONGSHAN S. RD., LUZHU DIST., KAOHSIUNG CITY, TAIWAN.

TEL : 886-7-6962211~3

[http : // www.sanho.com.tw](http://www.sanho.com.tw)

FAX : 886-7-6976993 (Sales)

E-mail : sanho@sanho.com.tw

FAX : 886-7-6961782 (Export)

E-mail : sanho@so-net.net.tw

Salt spray resistance after 70 hr	Cross cut	25 / 25	25 / 25
	Swelling width	1 mm	2 mm
	Scribed	Unaffected	Unaffected

Dry Film thickness : 100u (two times coatings)

Curing time : 7 days , at 23°C