

TOHMIDE 245-HS

TOHMIDE 245-HS is a fatty polyamide resin (polyaminoamide,) of very low viscosity with many other benefits as an epoxy curing agent of the polyamide nature.

It's major applications include high-build epoxy protective coatings, and structural adhesives.

1. SALES SPECIFICATIONS, AND PROPERTIES

Appearance	=	Brown-coloured viscous liquid
Viscosity(@25°C)	=	800 300 Centipoises
Colour(Gardner)	=	13 maximum
Acid Value	=	4.0 maximum
Amine Value (KOH-mg./ gr.)	=	400
Non Volatile %	=	96.0 minimum
Active Hydrogen Equivalent	=	90,
Therefore the standard ratio of	for	nulation of TOHMIDE 245-HS with the e

Therefore the standard ratio of formulation of TOHMIDE 245-HS with the epoxy resins of the "epoxy equivalent weight" are in the range of 190, us 40 to 50 parts by weight.

2. WHITE EPOXY ENAMEL BASED ON TOHMIDE 245-HS

(1) White Enamel Base	parts by wt.
"Epidote-828" (by shell chemical company,)	= 80
Titanium Dioxide	= 30
Talc	= 20
The "epoxy equivalent weight" of this base=310	

(2) Enamel Paint Formulation	parts by wt.
the above Base	= 40.0
Tohmide245-hs	= 11.6
Xylene	= 3.0

This enamel was painted on a flat, cleaned (= sand- blasted , and de-greased,) steel plate at the dry-film thickness of 70 to 80 microns, and was left to dry for seven days at 20 $^\circ\!\mathrm{C}$.

(3) The paint film has become set (or, dry,) after 10.5 hours showing certain extent of "blushing" on its surface.

(4) Physical Properties of the Dried Paint Film :

Pencil Hardness	=H
"Ericsen" Forming test (5 mm)	=Cracked
Bending test (at 10 mm radius)	=Cracked
Cross-Cut test (at 2 mm interval)	=25 / 25
"Izod" Impact test (1 / 2' x 500gr.)	=40 cm0.k.



(5) Chemical Resistance of the Paint Film :

Warm Water Immersion test (@60°C xone month)=Pass5% Nacl-Water solution (One month)=7 m10% NaOH-Water solution (One month)=Pass5% $h_{2}so_{4}$ -Water solution (One month)=6 mSalt Spray test (200 hours)=Blister , 4mWeathering test (One month, outdoor)=Chalking , with Loss of Gloss

3. PHYSICAL, AND CHEMICAL PROPERTIES OF THE CURED PRODUCT BY 245-HS

Test piece formulation ="Epikote-828" (Shell Chemical Company) : 245-HS = 100 : 50 parts by wt.,

Cure Schedule =24 hours at room temperature, then heating at 80° C for one hour.

(1) Physical Properties :

Tensile Strength	=	550 Kilograms / cm ²	
Elongation	=	6%	
Flexural Strength	=	890 Kilograms / cm ²	
Compressive Strength	=	760 Kilograms / cm ²	
"Izod" Impact test	=	2.88 Kilograms-Cm / cm ²	
Heat Distortion Temperature	=	47°C	
Rockwell Hardness (R - Scale,)	=	23	
Lap-Shear Strength;			
∂ Epikote-828 : 245-hs=60 : 4	10=16	0Kgr. / cm ²	
<i>ә</i> Ерікоte-828 ∶ 245-hs=70 ∶ 3	30=	$=200 \text{Kgr.} / \text{cm}^2$	

(B) Chemical Immersion Tests:

Change in the weight of cured product was measured in each case after 7 days of immersion into the test solutions :

Water	=0.65%
5% NaCl aqueous solution	=0.62%
5% NaOH aqueous solution	=0.60%
5% Liquid Ammonia	=1.03%
5% H ₂ SO ₄ aqueous solution	=1.45%
5% Acetic Acid solution	=3.25%
Isopropanol	=3.14%
Methyl-Isobutyl Ketone	=8.10%