



# SYNPOL PRODUCTS PRIVATE LTD.

Regd Office & Factory: 77, G.V.M.S. AUDYOGIC VASAHA LTD.,  
ODHAV, AHMEDABAD – 382 415, INDIA

PRODUCT CODE : Hardener / 04.17

## Hardener 465

TYPE : Modified aliphatic polyamine based hardener.

DESCRIPTION : Ambient cure highly reactive hardener specially formulated for epoxy putty, having equal mixing ratio and High Solids epoxy coatings.

### SPECIFICATIONS :

1) Appearance	Clear colorless liquid.
2) Density @ 25° C.	1.04 – 1.06
3) Viscosity @ 25° C., poises	80 - 120
4) Colour, gardner	4 - 6
5) Amine value by HClO <sub>4</sub> method, mg. KOH / gm.	250 - 300
6) Mixing ratio with 100 parts of	100
1) Synpol 200	30
2) Synpol 450 XX	15 – 30
7) Pot life @ 25° C with Synpol 200 of 100 g mass, mts.	60 - 80
8) Thin film set time @ 25° C, minutes.	80 - 100
9) Hard dry @ 25° C, minutes.	

COMPATIBILITY : Hardener 465 is compatible with all types of modified and unmodified liquid epoxy resins based on Bisphenol A & Bisphenol F, and all types of reactive diluents and plastisizers. It can also be used as co-hardeners with reactive polyamide resins.

APPLICATIONS : Hardener 465 is a fast curing hardener and imparts a very good chemical and high heat resistance on ambient & elevated temperature cure. It is specially formulated for epoxy putty, having equal mixing ratio.

When Hardener 465 is used in High solids epoxy coatings, it offers excellent resistance against mineral acids, aqueous alkali solutions, water and aromatic hydrocarbons, good against alcohol and certain chlorinated hydrocarbons, moderate against dilute organic acids and poor against ketones & glycol ethers.

### SUGGESTIVE FORMULATION :

#### *Equal Mixing ratio Epoxy putty*

<b>Base</b>		Kgs.	
Synpol 200		17.0	
Epoxy Phenol CNSL		2.0	
Micronised Barytes		60.0	
China clay		10.0	
Talc		10.8	
Aerosil 200		<u>0.2</u>	100.0
<b>Hardener</b>			
Hardener 465		22.0	
Micronised Barytes		51.0	
Talc		26.3	
Carbon black		0.1	
Aerosil 200		<u>0.6</u>	<u>100.0</u>
		Total	200.0

Mixing ratio by weight	1 : 1
Cure time, minutes	20 – 40

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DISCLAIMER: Above Specifications are subject to change without prior notice and company reserves the right to modify the same at any time

## MATERIAL SAFETY DATA :

Product name	Hardener 465
Flash point ° C. (Abel closed cup)	103
Flammability	Combustible.
Toxicity	Toxic. Avoid direct contact with skin.
Handling	Keep away from sources of ignition, provide all electric connections of flame-proof design. Wear safety glasses, rubber gloves and protective clothings.
Emergency treatment and measures	
1 Hygienic precautions	Adequate ventilations.
2 Hygienic treatments (First Aid)	Flush eyes thoroughly with water. Apply ophthalmic cortisone for conjunctivitis and keratities. Wash out contaminated skin with soap and water. Gastric lavage (stomach wash), if swallowed, followed by saline catharsis.
3 Fire precautions (in case of outbreaks)	Use dry chemical or carbon dioxide. Water spray may help to keep containers cool, to dilute leaked resins and to diffuse vapours.
Spills and leakage	Absorb liquid materials in sand and collect solid material and burn under hood in incinerator.
Disposal and waste treatment	Spray into furnace under controlled conditions.

### STORAGE :

Hardener 465 should be stored in cool place under shade. The properties are so adjusted to have storage stability of minimum 6 months.

### PACKING :

25 kgs. M.S. drums, 50 kgs. Plastic carboys and 200 kgs. M.S. barrels.

### DISCLAIMER :

Information in this literature is to the best of our knowledge true and accurate. However, since conditions under which our products may be used are beyond our control, recommendations are made without warranty or guarantee.

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