Product information

ANQUAMINE® 660

Curing Agent

DESCRIPTION

Anquamine 660 curing agent is a NPE-free (4-Nonylphenol, branched, ethoxylated) alternative to well established Epilink® 660 curing agent, a leading waterborne polyamine adduct epoxy curing agent used for a wide range of coatings applications. The product has low viscosity, offers high-solids content and provides broad formulating potential. Anquamine 660 curing agent has been developed primarily for use with liquid epoxy resin, offering the capability to formulate systems with zero VOC and without resin emulsifiers, although it can also be used with higher molecular weight resins if required.

TYPICAL PROPERTIES

Property	Value
Appearance	Amber liquid
Colour[1] (Gardner)	max 10
Viscosity[2] @ 25°C (mPa.s)	15000-27500
Solids Content (wt %)	60-72
Amine Value[3] (mg KOH/g)	180-210
Specific Gravity @ 21°C	1.10
Equivalent Wt/{H}	200
Recommended use Level[4] (PHR)	100-120

(1) ASTM D 1544
(2) Brookfield RVTD, spindle 4
(3) Perchloric Acid Titration
(4) Cured with bisphenol-A based epoxy resin (EEW=190)
(5) Cured with Epires ER-8 epoxy resin (EEW195)
(6) ASTM D 5895 - BK Drying Recorder, Phase 3
(7) ASTM D 4366

ADVANTAGES

- Excellent adhesion to a wide range of substrates including damp concrete
- Excellent scratch resistance
- Zero VOC

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APPLICATIONS

- Concrete Primers
- Concrete coating
- Institutional coatings

SHELF LIFE

At least 24 months from the date of manufacture in the original sealed container at ambient temperature. Store away from excessive heat and humidity in tightly closed containers.

STORAGE AND HANDLING

Refer to the Safety Data Sheet for Anquamine 660 curing Agent.

TYPICAL PERFORMANCE PROPERTIES[4]

Typical cure schedule: 2-7 days

TYPICAL HANDLING PROPERTIES[5]

Property	Value
Pot-life by viscosity-time @ 23°C (h)	2-4
Pot-life by gloss-time @ 23°C (h)	2-4
Thin Film Set Time[6] @ 23°C (h)	10
Persoz Pendulum Hardness[7] 1d/7d @ 23°C (s)	100/280

SUPPLEMENTARY INFORMATION

START FORMULATION – CLEAR COATING AND PRIMER (CONCRETE)

A-Component			
Curing Agent	Anquamine 660 curing agent	Evonik	50.0
Diluent	Water		50.0
B-Component			
Epoxy resin	Epires® ER-8 epoxy resin	Evonik	50.0
Total			150.00

After mixing the Components A and B, water should be added for required viscosity and application method.

TECHNICAL DATA

Mixing ratio - A to B	by weight	2:1
	by volume	100:46
Density	Part-A (g/ml)	1.03
	Part-B (g/ml)	1.12
	Mix	1.06
Theoretical spreading rate (50 µm dry coat)	m^2/kg	10.2
	m^2/l	10.8
Pot-life	h	3
BK drying time (Phase 3)	h	10
Persoz pendulum hardness	24h/7 days	100/280

START FORMULATION – HIGH GLOSS TOP COAT

A-Component			
1. Curing agent	Anquamine 660 curing agent	Evonik	35.0
2. Defoamer	Byk®-033	Byk Chemie	0.05
3. Wetting agent	Byk®-181	Byk Chemie	0.2
4. Thixotropic agent	Bentone® EW, 3% in water	Elementis Specialties	2.0
5. Pigment	Kronos® 2160	Kronos	35.0
6. Filler	Talc 10M2	Luzenac	3.0
7. Diluent	Water		24.75

Weigh Component 1, add 2-4 under stirring. Add Components 5-6 and part of 7.

Disperse the mixture at high speed for 15 minutes; then slowly add rest of Component 7.

B-Component			
8. Epoxy Resin	Epires® ER-8 epoxy resin	Evonik	33.3
Total			**133.3**

After mixing Components A and B, water should be added for required viscosity and application method.

TECHNICAL DATA

Mixing ratio - A to B	by weight	75:25
	by volume	70:30
Density	Part-A (g/ml)	1.46
	Part-B (g/ml)	1.12
	Mix	1.35
Theoretical spreading rate (50 µm dry coat)	m^2/kg	9.5
	m^2 /l	13
Pot-life	h	2-4
BK drying time (Phase 3)	h	10
Gloss at 20°C		95-100
Persoz pendulum hardness	24h	90

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