WATERBORNE COATINGS GUIDE FORMULATIONS



LOW VOC, WATERBORNE CONTAINER MIDCOAT WITH NX-8401

- Waterborne system with VOC < 75 g/L</p>
- Excellent adhesion to various metal substrates
- Long pot life at high temperature (45°C)
- Excellent corrosion protection at low film thickness

Guide Formulation

Ingredients	Formulation 1 (Weight/g)
Part A	
NX-8401 ¹ (Waterborne curing agent)	13.99
Water	20.28
TPnB (co-solvent)	0.98
BYK 1640 ² (Defoamer)	0.17
DOWANOL PM (Co-solvent)	2.24
Ti-Pure R-706 ³ (Pigment)	6.99
Cimbar EX ⁴ (Filler)	9.79
Zeeospheres G 600⁵ (Filler)	13.99
Wollastonite 10ES ⁶ (Filler)	16.78
HALOX SW-111 ⁷ (Inhibitor)	12.59
MICA WG-325 ⁶ (Filler)	0.98
HALOX 550WF ⁷ (inhibitor)	0.84
Flash X-150 ⁷ (Flash rust inhibitor)	0.38
Total Part A	100.00
Part B	
DER 915 ⁸ (Solid epoxy dispersion)	63.30
Total Part B	63.30

 $^1\mbox{Cardolite}~^2\mbox{BYK}~^3\mbox{Chemours}~^5\mbox{Zeeospheres Ceramics}~^6\mbox{Imerys}~^7\mbox{ICL}$ Phosphate Specialty $^8\mbox{Olin}$

WATERBASED EPOXY COATINGS

AMBIENT-CURE, SUITABLE FOR INDUSTRIAL APPLICATIONS

BASED ON RENEWABLE, CNSL-BASED TECHNOLOGY

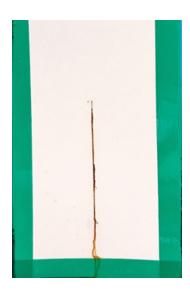
Formulation Properties

Properties	Formulation 1
VOC (gm/l)	70.43
% wt NVM	60.32
% wt Volatile	39.68
% vol NVM	45.99
% vol Volatile	54.01
% PVC	37.93
Epoxy/amine	1.25

Formulation Performance

Performance Tests	Formulation 1
Mandrel Bend	1/8"
Cross-hatch adhesion over S-36 CRS	5B
Cross-hatch adhesion over AA 2024 T3	5B
Cross-hatch adhesion over galvanized steel	5B
Pot life at 45°C	> 6 hours

SALT SPRAY RESULTS FOR FORMULATION 1



767 hrs salt spray exposure DFT = 2.2 mils over SA 2.5 blasted steel panels 7 day RT cure Blister: none Creep: < 2mm

PROCESSING

- 1. Mix dispersant, defoamer, rheological additive and solvents into water in a metal vessel (having a water cooling system) with low speed agitation until uniform. Turn on the water cooling system to keep the vessel temperature under 55°C.
- 2. Add filler(s) and pigment(s) into water one by one at medium speed agitation to obtain a uniform paste.
- 3. Add NX-8401 into the paste at low speed agitation, gradually increase agitation speed to medium to obtain a uniform mixture of Part A.
- 4. Mix Part A with solid epoxy dispersion at low speed agitation, then add water, and gradually increase agitation speed to medium to obtain a uniform mixture of paint.
- 5. Please refer to each supplier's material safety data sheet (MSDS) for the most current safety and handling information.

DISCLAIMER

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