



Laboratory Testing Report

<i>Company</i>	Noroo Paint And Coatings
<i>Contact Name</i>	Sung Woo Jung swjung@noroo.com Yun-jae So syj@noroo.com
<i>Report Date</i>	October 2, 2018
<i>Category</i>	Detailed Performance
<i>Category Type</i>	Initial
<i>IPS#</i>	3025-I-2018-77-15926
<i>MPI Category #</i>	77
<i>Product Label</i>	NOROO
<i>Product Name</i>	Cleanpoxy 3100
<i>Product Code</i>	NA
<i>Batch Number</i>	118APR8648a
<i>Testing Results</i>	PASS
<i>Approval Expiry Date</i>	Approximately 2 years
<i>Failure Notice</i>	
<i>Comments</i>	
<i>MPI Technical Director</i>	Bob Welch
<i>MPI Senior Admin Assistant</i>	Matt Jacobs
<i>MPI Invoice #</i>	D18-0342

A pass report is not the final approval.

**Final approval occurs when the product is published in the MPI Approved Products List.
The MPI Approved Products List is updated by the 5th of each month.**

*2800 Ingleton Avenue, Burnaby, BC V5C 6G7 Canada
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Toll-Free Tel: 1-888-674-8937, Toll Free Fax: 888-211-8708
October 2, 2018*

■GENERAL INFORMATION

Two-component epoxy-polyamide finish for chemical properties. Designed for use over the EVA-COAT PRIMER range, to give a coating system noted for its toughness, adhesion and resistance to corrosion by salt water and chemicals. It has good durability and chemical resistance to aggressive circumstances. When exposed to sunlight continuously, it will chalk slightly and decreases in some gloss but maintain its good properties.

■SUITABLE USE

top coat for concret substrate of interior

■SPECIFICATION

A. Type: Epoxy / Modified-Polyamide (2 package)

B. Flash point: Min 7 °C

C. Drying Times:

		10 °C	20 °C	30 °C
Set to Touch		3H	1H	30min
Dry Hard		20H	8H	6H
Pot-Life		16H	12H	8H
For Overcoat	Min	24H	8H	6H
	Max	30D	15D	7D

D. Thinner: DR-100

E. Specific Gravity: Appr. 1.1 (Green)

F. Dry Film Thickness: 40 μ m

G. Theoretical Coverage: 10 m²/ℓ - 40 μ m

H. Solid by Volume: Appr. 40 \pm 3%

I. Thinning Ratio(by volume)

Brush and roller: 15% Max.

Air spray: 10% Max

J. Shade: White, GREEN and many other colors.

K. Texture: Gloss

L. Mixing Ratio(By Vol) : Base/Hardener = 2/1

■DIRECTION FOR USE

A. Surface Preparation

1. Eliminate oil, water, grit, dirt, marking paint and any foreign matters.
2. Undercoat shall be dired.

B. Preparation of paint

1. Stir to be mixed uniformly before use.
2. Keep correct mixing ratio and add hardener slowly to base

3. Thin with water suitably for god work properties.

4. Slowly mix to prevent pirbubbles to the applied surface.

C. Suitable Undercoat

Epoxy Primer

: Concrete

MPI #101 or Epoxy primer

: Steel

■OTHER CAUTIONS -

1. Concrete must be dried at least 28 days before coating under the condition of 21 °C and 50% R.H.
2. This product should not be applied under the condition of lower than 5 °C
3. Do not use mixed paint after pot-life.
4. Avoid application on the substrate to be lighted directly by strong sunlight.
5. Keep it inside the room(5 °C~35 °C) and close up tightly after use.
6. Air day 7 days after final coating for immersion condition.
7. This product should be used within 12 months.
8. In case of repainting after long exposure, proper surface preparation is recommended to adhere closely befor finish.

* The information and date given herein are based upon tests and experiences considered reliable, and are believed to be accurate. The coverage depend on the shape of surface to be coated, surface roughness, weather conditions during application and application method, so that you are urged fully to re-view them prior to your practical application.

Material Safety Data Sheet

SECTION I General Information

SOLUBILITY(WATER)	Insoluble
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A. PRODUCT NAME:

CLEANPOXY 3100 (BASE)

B. MANUFACTURERS NAME:

NOROO Paint & Coatings Co., Ltd.

615 PARK DAL DONG, AN YANG CITY

KYUNG KI DO, KOREA

TEL: (031)467-6157

SECTION IV Fire And Explosion Hazard Data

Flammability Classification:

Flash Point: 15°C(MIN)

Autoignition temperature : 460°C(MIN)

Extinguishing Media: Foam, CO₂, Dry Chemical, Water Fog

SECTION II Composition

CHEMICAL NAME	CAS NO	CONTENTS
Epoxy Resin	25036-25-3	35~45
Calcium Carbonate	1317-65-3	10~15
Titanium Dioxide	98910-91-8	10~15
Xylene	1330-20-7	10~15
Butyl-Cellosolve	7795-91-7	1~5
S1	N/A	<5

*S1; Sales Secret

Unusual Fire And Explosion Hazards:

Liquid evaporates and forms invisible vapors which spread easily and can be ignited by many sources such as pilot lights, welding equipment, electrical motors and switches. fire hazard is greater as liquid temp. rises above 85 Deg. F.

Special Firefighting Procedures:

Use air supplied rescue equipment for enclosed areas. avoid spreading burning liquid with water used for cooling purposes.

SECTION III Physical Properties

BOILING RANGE	138°C(Ave)
VISCOSITY	60~100KU
SPECIFIC GRAVITY	1.1(Ave)

SECTION V – Health Hazard Data

Effects of Overexposure:

Eye contact–short term liquid or vapor contact may result in eye irritation. Skin contact–prolonged and repeated skin contact may cause defatting and Drying of the skin resulting in skin irritation and dermatitis. Inhalation–

Exposure to high vapor concentrations may be irritating to the mucous membranes.

Medical Conditions Prone To Aggravation

By Exposure:

Headaches, Dizziness, Nausea, And Loss Of Consciousness.

Primary Route Of Entry: Inhalation, Ingestion

Emergency And First Aid Procedures:

Eye contact—wash eyes with fresh water for at least 15 minutes. If irritation persists, see a doctor. Skin contact—wash thoroughly with soap and water. Inhalation—if affected by inhaling vapors, move person to fresh air. If breathing has stopped apply artificial respiration. Call a doctor immediately. Ingestion—if swallowed, do not make person vomit. Call a doctor immediately.

SECTION VI – Reactivity Data

Stability: Stable ()

Hazardous Polymerization: Will not occur
None Established.

Hazardous Decomposition Products:

Combustion can produce carbon dioxide, carbon monoxide, acrolein, smoke, acrid fume

Conditions To Avoid:

Direct heating, high temperature, poorly vented hot areas, flames and sparks.

Incompatibility (Materials To Avoid):

Strong oxidants. Will dissolve and soften some rubber and plastics.

SECTION VII Spill Or Leak Procedures

Steps To Be Taken In Case Material Is Released Or Spilled:

Remove all ignition sources, ventilate confined spaces, keep people away. Add absorbent sand, earth, or sawdust and recover into a suitable container.

Waste Disposal Method:

Dispose of spilled and absorbent material according to local, state, and federal regulations. Do not dump into lakes, streams, or other water supply. Consult with hazardous waste regulators regarding landfill dumping and or incineration.

SECTION VIII Safe Handling And

Use Information

Respiratory Protection:

Wear approved organic vapor respirator or an air supplying respirator unless ventilation equipment is adequate to keep airborne concentrations below the exposure standards. Other special precautions such as environmental containment devices may be required in extreme cases.

Ventilation:

General mechanical ventilation may be sufficient to keep product vapor concentrations below specified tlv ranges. If inadequate, use local exhaust.

Protective Gloves:

Use impermeable solvent resistant gloves to protect from

skin contact.

Eye Protection:

Use safety goggles, chemical safety glasses and or face shields to protect eyes

Other Protective Equipment:

Impermeable aprons and protective clothing are advised when working with this product. The use of head caps are recommended whenever possible.

Hygienic Practices:

Eye washes and safety showers in the workplace are recommended.

SECTION IX Special Precautions

Precautions To Be Taken In Handling And Storing:

Keep containers closed when not in use. Do not store or handle near heat, flames and strong oxidants. Inspect for leaks in all containers.

Other Precautions:

Do not store in freezing areas. Keep above 40 degrees F. Keep out of reach of children

- * Disclaimer- The Information Contained Herein Is Based On Data Considered
- * Accurate. However, No Warranty, Whether Expressed Or Implied Is MAE.

Material Safety Data Sheet

SECTION I General Information

A. PRODUCT NAME:

CLEANPOXY 3100 (HARDENER)

B. MANUFACTURERS NAME:

DPI Co. LTD. 615 PARK DAL DONG,
AN YANG CITY KYUNG KI DO, KOREA

TEL: (031)467-6157

Extinguishing Media: Foam, CO₂, Dry Chemical, Water
Fog

Unusual Fire And Explosion Hazards:

Liquid evaporates and forms invisible vapors which spread easily and can be ignited by many sources such as pilot lights, welding equipment, electrical motors and switches. fire hazard is greater as liquid temp. rises above 85 Deg.F.

SECTION II Composition

CHEMICAL NAME	CAS NO	CONTENTS
POLYAMIDE RESIN	13463-67-7	40~50
XYLENE	1330-20-7	40~50
S1	N/A	<5

*S1; Sales Secret

Special Firefighting Procedures:

Use air supplied rescue equipment for enclosed areas. avoid spreading burning liquid with water used for cooling purposes.

SECTION III Physical Properties

BOILING RANGE	138°C(Ave)
SPECIFIC GRAVITY	0.9~1.0
SOLUBILITY(WATER)	Insoluble

SECTION IV Fire And Explosion Hazard Data

Flammability Classification:

Flash Point: 27°C(MIN)

Autoignition temperature : 460°C(MIN)

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TEST REPORT

1. No :FWR1307003

2. Client

- o Name : NOROO Paint & Coatings Co., Ltd. Kim Soo Kyoung
- o Address : 615, Bakdal 2-dong, Manan-gu, Anyang-si, Gyeonggi-do, Korea
- o Date of Receipt : 2011/03/07
- o Date of Issued : 2011/04/21

3. Use of Report : Quality control

4. Test Sample : Cleanpoxy (MPI 77)

5. Test Results

Test Items	Unit	Sample	Test Results	Test method used
Dry time, Dry hard	min	1	8	MPI # 77 : 2009
Finess of Grind	NS	1	7	MPI # 77 : 2009
Gloss 60 degree	-	1	93	MPI # 77 : 2009
Total Volume Solid	%	1	47	MPI # 77 : 2009
Resistance to Solvent	-	1	H	MPI # 77 : 2009
Impact Resistance	-	1	pass	MPI # 77 : 2009
Adhesion	psi	1	512	MPI # 77 : 2009
Alkali Resistance	-	1	pass	MPI # 77 : 2009

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Affirmation	Tested by Lee, Sang Kook 	Technical Manager Koo, Wan Sik 
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Our report apply only to the standard or procedures identifide and to the sample(s) tested unless otherwise specified.
The test results are not indicative of reppresentative of the qualities of the lot from which the sample was taken or of apparently identical or similar products.

Korea Conformity Laboratories President Tae SI *TaeShik Oh*

Address : 805, Hyundai I-Valley, 14-1, Dang-dong, Gunpo-si, Gyeonggi-do, Korea 031-389-9150

Result Inquiry : Well-Being Materials Team ☎031-429-3453

KOREA CONFORMITY LABORATORIES

Add.: 805, Hyundai I-Valley, 14-1, Dang-dong, Gunpo-si, Gyeonggi-do, Korea

Tel.: 031-389-9150

Fax.: 031-389-9181

Url.: www.kcl.re.kr

Certificate of Testing (Inspection) Result

Sample No. of Issue : FWR1307002
 Name of Applicant : NOROO Paint & Coatings Co., Ltd. Kim Soo Kyoung
 Address of Applicant : 615, Bakdal 2-dong, Manan-gu, Anyang-si, Gyeonggi-do, Korea
 Date of Receipt : 2011-03-07
 Name of Test Sample : Cleanpoxy (MPI 77)

Result of Testing (Inspection)

Test Items	Unit	Sample	Results	Test Method
VOCs content	g/L	1	418.16	USEPA Method 24

※ Object of Test :Quality control

The above is the result of testing (inspection) specimen provided by the applicant, and the name of sample has been submitted by the applicant

Mar. 21 2011
 month day year

Signed :

W.S. KOO

The general manager of Korea Conformity Laboratories

