



Laboratory Testing Report

Company	Noroo Paint And Coatings
Contact Name	Sung Woo Jung swjung@noroo.com Yun-jae So syj@noroo.com
Report Date	April 2, 2020
Category	Detailed Performance
Category Type	Confirmation
PS#	3025-C-2019-79-18167
MPI Category #	79
Product Label	NOROO
Product Name	Green Anti Corrosive Primer
Product Code	NA
Batch Number	119 NOV 1111A
Testing Results	PASS
Approval Expiry Date	Up to 2 years, based on the Call for Confirmation Schedule
Failure Notice	
Comments	
MPI Technical Director	Bob Welch
Technical Specialist	Terrance Mayes
MPI Invoice #	D19-1115

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.

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April 2, 2020*

■GENERAL INFORMATION

This primer is based on Alkyd resin and anti-corrosive pigment. It is economic class conventional primer with good anti-corrosive, fast drying, weather resistance, oil resistance to steel surfaces. It is easy to apply, has excellent adhesion to steel and conserves its flexibility to follow the expansion of the metal. We recommend this paint for primer which is not submerged in water. It is widely used for both newbuilding and maintenance coating.

■SUITABLE USE

Anti-corrosive primer for general superstructure for ferrous metal.

■SPECIFICATION

A. Type: Alkyd Resin/Anti-Corrosive Primer

B. Drying Times:	5℃	20℃	30℃
Set to Touch	3H	1H	1H
Dry Hard	18H	8H	6H
For Over coat (Min.)	32H	18H	10H

C. Solid Volum Ratio : Appr. 56%

D. Consistency: (Ku/25℃): 90~100

E. Thinner: DR-306 Thinner (5~10% by vol.)

F. Specific Gravity: Appr. 1.57

G. Theoretical Coverage: 12~13m²/L/1 coat/35μ
(Dry film thickness)

H. Non Voatile Content by Weight : 75±3%

I. Color: Reddish Brown

J. Texture: Flat

■DIRECTION FOR USE

A. Surface Preparation

1. Eliminate oil, water, grit, dirt, marked paint and any foreign matters.

B. Preparation of Paint

1. Stir to be mixed uniformly before use.
2. Avoid excessive thinning.

C. Application

1. Can be applied by brush, roller, airless spray, etc.
2. Take care of adequate ventilation, avoid any kinds of fire during and after application.
3. Additional touch-up on weld-seam and edges is preferable.
4. Suitable top coat.
oil paint

■OTHER CAUTIONS

1. Not to be used for continuous immersion in water.
2. Use paint within 6 months from the manufactured date.

3. This product should not be applied under the condition of lower than 5℃(41°F) or at humidities greater than 85% R.H.

* The information and data 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, weathe conditions during application and application method, so that you are urged fully to re-view them prior to your practical application.

* The date of issue: Dec.1999

MATERIAL SAFETY DATA SHEET

SECTION I GENERAL INFORMATION

A. PRODUCT NAME: GREEN ANTI-CORROSIVE PRIMER (MPI 79)

B. MANUFACTURERS NAME: NOROO paint & coating,.Ltd

615 PARK DAL DONG, AN YANG CITY

KYUNG KI DO, KOREA

TEL: (031)467-6150

SECTION II COMPOSITION

CHEMICAL NAME	CAS NO	CONTENTS
ALKYD RESIN	-	15 ~ 25
CALCIUM CARBONATE	471-34-1	40 ~ 50
IRON OXIDE	1309-37-1	5 ~ 15
DEODORIZED KEROSENE	8020-83-5	20 ~ 30
S1	N/A	<10

S1: SALE SECRET

SECTION III PHYSICAL PROPERTIES

BOILING RANGE	311~383 deg.F
VAPOR DENSITY	NONE
SPECIFIC GRAVITY	1.4±0.2
VISCOSITY	85±5KU

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION: COMBUSTIBLE LIQUID

FLASH POINT: (TCC) 105 Deg.F

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.

SPECIAL FIREFIGHTING PROCEDURES:

USE AIR SUPPLIED RESCUE EQUIPMENT FOR ENCLOSED AREAS. AVOID SPREADING BURNING LIQUID WITH WATER USED FOR COOLING PURPOSES.

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 AGGRAVATIO BY EXPOSURE:

HEADACHES, DIZZINESS, NAUSEA, AND LOSS OF CONSCIOUSNESS.

PRIMARY ROUTE(S) 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, ACRYLEIN, 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
ABSOBENT 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 SASTE 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.

KOREA CONFORMITY LABORATORIES

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Tel.: 031-429-2308

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Certificate of Testing (Inspection) Result

Sample No. of Issue : TSRB15006
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 : 2010-11-15
Name of Test Sample : Green Anti-Corrosive Primer (MPI 79)
Object of Test : Quality control
Test Result(s) : Please see the following page(s)

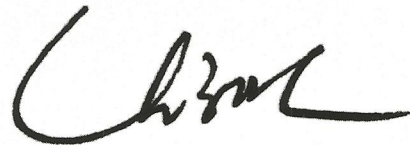
The above is the result of testing (inspection) specimen provided by the applicant, and the name of sample has been submitted by the applicant

Jan.
month

24
day

2011
year

Signed :



The general manager of Korea Conformity Laboratories



Certificate of Testing(Inspection) Result

Sample No. of Issue : TSRB15006

Date of Receipt : 2010-11-15

Name of Test Sample : Green Anti-Corrosive Primer (MPI 79)

Result of Testing(Inspection)

Test Items	Unit	Sample	Results	Test Method
Consistency	K.U.	1	141	MPI # 79 : 2010
Dry time, Dry hard	h	1	3	MPI # 79 : 2010
Finess of Grind	NS	1	6	MPI # 79 : 2010
Flash point	℃	1	41	MPI # 79 : 2010
Non volatile content by weight	%	1	85.3	MPI # 79 : 2010
Gloss 60 degree	-	1	2	MPI # 79 : 2010
Hiding Power	%	1	99.7	MPI # 79 : 2010
Corrosion Resistance	-	1	No blister	MPI # 79 : 2010
Flexibility	-	1	pass	MPI # 79 : 2010
Adhesion to Metal	-	1	5B	MPI # 79 : 2010
Topcoat compatibility	-	1	pass	MPI # 79 : 2010
Water Resistance	-	1	pass	MPI # 79 : 2010
VOCs content	g/L	1	222.48	EPA-method 24

