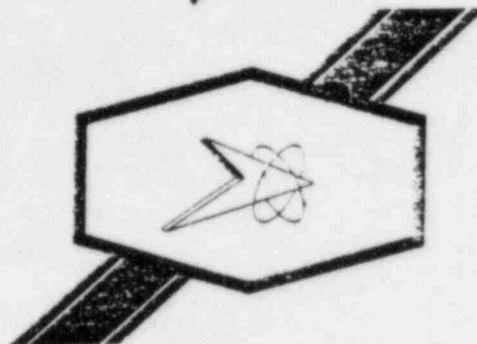


# Imperial



## TECHNICAL REPORT

NUMBER

115-3-78

TITLE

DBA, RADIATION, DECONTAMINATION, TEST RESULTS #10/11S/11/1201

FOR

SICC

CUSTOMER

Submitted by: Oak Ridge National Laboratories

Approved:

Date: 4/5/78

SOUTHERN IMPERIAL COATINGS CORPORATION, INC.  
P. O. Box 29077 • New Orleans, Louisiana 70189  
Phone: (504) 254-1433

The information contained in this report was prepared by Imperial Coatings Corporation without charge as part of our service to customers. It is intended for use by customers in the field only. It is not to be used for any other purpose. We assume no liability for information which is used for any other purpose. It is not intended as a license to operate under, nor a recommendation to, nor a warranty of any kind.

8511060169 851016  
PDR FOIA  
GARDE85-59 PDR

DEA AND RADIATION TOLERANCE TEST BLOCK

PREPARATION DATA

DBA AND RADIATION TOLERANCE

TEST PANEL PREPARATION DATA

1. PRODUCT TO BE TESTED: NUTEC #10/NUTEC #11S/NUTEC #11/REACTIC #1201
2. TYPE SUBSTRATE: Concrete - Bechtel CP-956 SIZE: 2" x 4" x 2"
3. SURFACE PREPARATION (Describe): All surfaces blasted with 100 psi compressed air.
4. PRODUCT DATA: SAMPLE NO.(s): 2377
5. DATE AND TIME CURING COMPOUND OR PRIMER APPLIED: 3/11/77

COAT	PRODUCT	PRODUCT CODES	BATCH #	APPLICATION METHOD	CONDITIONS R/M(°F)%R.H.	THICKNESS (ins.)	TIME & DATE APPLIED
1	NUTEC	#10	1297/1315/1347	Spray	75°F/78%	*	3/11/77
2	NUTEC	#11S	1310/1556/1312	Squeegee	75°F/58%	**	4/8/77
3	NUTEC	#11	1313/1314	Squeegee	78°F/64%	**	4/9/77
4	REACTIC	#1201	7497/7434	Spray	82°F/48%	**	4/11/77

\*Nutec #10 Spray Applied at 400 ft<sup>2</sup>/gal.

		NUTEC #11S	NUTEC #11	REACTIC #1201
** Minimum Thickness	Broomed Surface	.010-.015 in	.003-.005 in	.003-.005 in
Average Thickness	Sides adjacent to Broomed surface	.015-.020 in	.005-.010 in	.007-.008 in
Maximum Thickness	Side opposite Broomed surface	.025-.035 in	.015-.020 in	.010-.012 in

Total Dry Film Thickness Range - .016-.067 inches

6. CURING CONDITIONS: AMBIENT TEMP. 70-80 °F REL. HUMIDITY 40-65 %  
MINIMUM CURE 11 DAYS
7. TEST PROCEDURE: Radiation - DBA Bechtel CP-951 and CP-956
8. TESTING PERFORMED BY: Oak Ridge National Laboratories DATE SUBMITTED 4/22/77

APPROVED BY: [Signature]  
DATE: 4/5/78  
PREPARED BY: [Signature]  
DATE: 4/5/78  
TEST REPORT NO.: 115-3-78

# DBA AND RADIATION TOLERANCE

## TEST PANEL PREPARATION DATA

1. PRODUCT TO BE TESTED: NUTEC #10/NUTEC #11S/NUTEC #11/REACTIC #1201
2. TYPE SUBSTRATE: Concrete - Bechtel CP-956 SIZE: 2" x 4" x 2"
3. SURFACE PREPARATION (Describe): All surfaces blasted with 100 psi compressed air
4. PRODUCT DATA: SAMPLE NO. (s): 2379
5. DATE AND TIME CURING COMPOUND OR PRIMER APPLIED: 3/11/77

COAT	PRODUCT	PRODUCT CODES	BATCH #	APPLICATION METHOD	CONDITIONS R/M(°F)%R.H.	THICKNESS (ins.)	TIME & DATE APPLIED
1	NUTEC	#10	1297/1315/1347	Spray	75°F/78%	*	3/11/77
2	NUTED	#11S	1310/1556/1312	Squeegee	75°F/58%	**	4/8/77
3	NUTEC	#11	1313/1314	Squeegee	78°F/64%	**	4/9/77
4	REACTIC	#1201	7497/7434	Spray	82°F/48%	**	4/11/77

\*Nutec #10 Spray Applied at 400 ft<sup>2</sup>/gal.

		NUTEC #11S	NUTEC #11	REACTIC #1201
** Minimum Thickness	Broomed Surface	.010-.015 in	.003-.005 in	.003-.005 in
Average Thickness	Sides adjacent to Broomed surface	.015-.020 in	.005-.010 in	.007-.008 in
Maximum Thickness	Side opposite Broomed surface	.025-.035 in	.015-.020 in	.010-.012 in

Total Dry Film Thickness Range - .016 - .067 inches

6. CURING CONDITIONS: AMBIENT TEMP. 70-80 °F REL. HUMIDITY 40-65 %  
MINIMUM CURE 11 DAYS
7. TEST PROCEDURE: DBA - Bechtel CP-956
8. TESTING PERFORMED BY: Oak Ridge National Laboratories DATE SUBMITTED 4/22/77

APPROVED BY: [Signature]

DATE: 4/5/78

PREPARED BY: [Signature]

DATE: 4/5/78

TEST REPORT NO.: 115-3-78

DBA AND RADIATION TOLERANCE

TEST PANEL PREPARATION DATA

1. PRODUCT TO BE TESTED: NUTEC #10/NUTEC #11S/NUTEC #11/REACTIC #1201
2. TYPE SUBSTRATE: Concrete - Bechtel CP-956 SIZE: 2" x 4" x 2"
3. SURFACE PREPARATION (Describe): all surfaces blasted with 100 psi compressed air-
4. PRODUCT DATA: SAMPLE NO.(s): 2381
5. DATE AND TIME CURING COMPOUND OR PRIMER APPLIED: 3/11/77

COAT	PRODUCT	PRODUCT CODES	BATCH #	APPLICATION METHOD	CONDITIONS R/M(°F) & R.H.	THICKNESS (ins.)	TIME & DATE APPLIED
1	NUTEC	#10	1297/1315/1347	Spray	75°F/78%	*	3/11/77
2	NUTEC	#11S	131J/1556/1312	Squeegee	75°F/58%	**	4/8/77
3	NUTEC	#11	1313/1314	Squeegee	78°F/64%	**	4/9/77
4	REACTIC	#1201	7497/7434	Spray	82°F/48%	**	4/11/77

\* NUTEC #10 spray applied at 400 ft<sup>2</sup>/gal.

		NUTEC #11S	NUTEC #11	REACTIC #1201
** Maximum Thickness	Broomed Surface	.025-.035 in	.015-.020 in	.010-.012 in
Average Thickness	Sides adjacent to Broomed surface	.015-.020 in	.005-.010 in	.007-.008 in
Minimum Thickness	Side opposite Broomed surface	.010-.015 in	.003-.005 in	.003-.005 in

Total Dry Film Thickness Range - .016 - .067 inches

6. CURING CONDITIONS: AMBIENT TEMP. 70-80 °F REL. HUMIDITY 40-65 %  
MINIMUM CURE 11 DAYS
7. TEST PROCEDURE: Radiation - DBA - Bechtel CP-951 and CP-956
8. TESTING PERFORMED BY: Oak Ridge National Laboratories DATE SUBMITTED 4/22/77

APPROVED BY: [Signature]  
DATE: 4/5/78  
PREPARED BY: Gerald C. Arnold  
DATE: 4/5/78  
TEST REPORT NO.: 115-3-78

# DBA AND RADIATION TOLERAN

## TEST PANEL PREPARATION DATA

1. PRODUCT TO BE TESTED: NUTEC #10/NUTEC #11S/NUTEC #11/REACTIC #1201
2. TYPE SUBSTRATE: Concrete - Bechtel CP-956 SIZE: 2" x 4" x 2"
3. SURFACE PREPARATION (Describe): All surfaces blasted with 100 psi compressed air.
4. PRODUCT DATA: SAMPLE NO.(s): 2382
5. DATE AND TIME CURING COMPOUND OR PRIMER APPLIED: 3/11/77

COAT	PRODUCT	PRODUCT CODES	BATCH #	APPLICATION METHOD	CONDITIONS R/M(°F)%R.H.	THICKNESS (ins.)	TIME & DATE APPLIED
1	NUTEC	#10	1297/1315/1347	Spray	75°F/78%	*	3/11/77
2	NUTEC	#11S	1310/1556/1312	Squeegee	75°F/58%	**	4/8/77
3	NUTEC	#11	1313/1314	Squeegee	78°F/64%	**	4/9/77
4	REACTIC	#1201	7494/7434	Spray	82°F/48%	**	4/11/77

\* NUTEC #10 spray applied at 400 ft<sup>2</sup>/gal.

		NUTEC #11S	NUTEC #11	REACTIC #1201
** Maximum Thickness	Broomed Surface	.025-.035 in	.015-.020 in	.010-.012 in
Average Thickness	Sides adjacent to Broomed surface	.015-.020 in	.005-.010 in	.007-.008 in
Minimum Thickness	Side opposite Broomed surface	.010-.015 in	.003-.005 in	.003-.005 in

Total Dry Film Thickness Range - .016-.067 inches

6. CURING CONDITIONS: AMBIENT TEMP. 70-80 °F REL. HUMIDITY 40-65 %  
MINIMUM CURE 11 DAYS
7. TEST PROCEDURE: DBA - Bechtel CP-956
8. TESTING PERFORMED BY: Oak Ridge National Laboratories DATE SUBMITTED 4/22/77

APPROVED BY: [Signature]  
DATE: 4/5/78  
PREPARED BY: Donald C. Arnold  
DATE: 4/5/78  
TEST REPORT NO.: 115-370

DBA TEST RESULTS



Analytical Chemistry Division  
Oak Ridge National Laboratory  
Date: 5/31/77

System Identification:           Steel        X   Concrete Block

10/11S/11/1201 (7-day cure)

DBA Test Results:

ORNL Master Analytical Manual Method No. 2 0922;  
Bechtel Corp. Spec. No. CP-956;  
ORNL Log Book No. A 7562; 4-29-7

[illegible]

\*Irradiated.

\*\* (SA) = sand blast; (SH) = shot blast; (GR) = grit blast.

Evaluated

Approved



RADIATION TOLERANCE TEST RESULTS

Analytical Chemistry Division  
Oak Ridge National Laboratory  
Date: 5-31-77

10/11S/11/1201 (7-day cure)

ORNL Master Analytical Manual Method No. 2 0921;  
Bechtel Corp. Spec. No. CP-951;  
ORNL Log Book No. A 7562; 4-29-7

Initial Dose Rate: 1.55 x 10<sup>7</sup> rads/hr  
Test Conducted In: X air    water

<u>Sample No.</u>	<u><math>1 \times 10^8</math> rads</u>	<u><math>1 \times 10^9</math> rads</u>
<u>2377</u>	<u></u>	<u>Coatings intact; no defects.</u>
<u>2381</u>	<u></u>	<u>Coatings intact; no defects.</u>
<u></u>	<u></u>	<u></u>
<u></u>	<u></u>	<u></u>
<u></u>	<u></u>	<u></u>
<u></u>	<u></u>	<u></u>
<u></u>	<u></u>	<u></u>

Additional Comments:

Evaluated

Approved