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INTERTEK TEST REPORT
3933 US ROUTE 11 CORTLAND, NEW YORK 13045

REPORT NO.: 102180184CRT-001
QUOTE NO.: 500608000

RENDERED TO:

Radiation Shield Technologies, Inc.
PO Box 14-4254
Coral Gables, FL 33114

***Test report modified 4/20/2020: Changed material description of Red Demeron Ice to Red Demeron C as per client request.

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STANDARD(S) AND TEST USED:

NFPA 1994-12, Standard on Protective Ensembles for First Responders to CBRN Terrorism Incidents.

AUTHORIZATION:

The test was authorized by a signed quote: 500608000

SPECIMEN DESCRIPTION:

The test was performed on specimens identified by the client as Red Demron C Lot and Green Demron RS1. The samples previously described, were received in pristine condition on 07/16/15. The test was performed at Intertek located in Cortland, NY on 07/30-31/15.

CONCLUSION:

The samples submitted by Radiation Shield Technologies, Inc., were evaluated in accordance with NFPA 1994-12, Standard on Protective Ensembles for First Responders to CBRN Terrorism Incidents. Test data sheets are attached as an appendix.

Report Prepared by:



Adam Stringer
Chemist
Performance Group

Report Reviewed by:



Kristine Perrotti
PPE Reviewer
Performance Group

APPENDIX A
NFPA 1994**Standard on Protective Ensembles for First Responders to CBRN Terrorism Incidents.**

Red Demron C lot data

Challenge Chemical: Dimethyl sulfate (10g/m) CAS #: 77-78-1
 Source / Product #: Sigma Aldrich
 Challenge Length: 60 minutes Sampling Frequency: Once

Test Results	Cell 1	Cell 2	Cell 3	AVG	Std Dev
Cumulative Permeation Mass ($\mu\text{g}/\text{cm}^2$)	<0.1	<0.1	<0.1	0.10	0.00
Ave. Sample Thickness (mils)	23	24	24	24	1
Ave. Sample Thickness (mm)	0.58	0.61	0.61	0.60	0.01

Challenge Chemical: Chlorine (350 ppm) CAS #: 7782-50-5
 Source / Product #: AirGas
 Challenge Length: 60 minutes Sampling Frequency: Once

Test Results	Cell 1	Cell 2	Cell 3	AVG	Std Dev
Cumulative Permeation Mass ($\mu\text{g}/\text{cm}^2$)	<0.1	<0.1	<0.1	0.10	0.00
Ave. Sample Thickness (mils)	23	23	24	23	1
Ave. Sample Thickness (mm)	0.58	0.58	0.61	0.59	0.01

Challenge Chemical: Ammonia (350 ppm) CAS #: 7664-41-7
 Source / Product #: AirGas
 Challenge Length: 60 minutes Sampling Frequency: Once

Test Results	Cell 1	Cell 2	Cell 3	AVG	Std Dev
Cumulative Permeation Mass ($\mu\text{g}/\text{cm}^2$)	<0.1	<0.1	<0.1	0.10	0.00
Ave. Sample Thickness (mils)	23	23	23	23	0
Ave. Sample Thickness (mm)	0.58	0.58	0.61	0.59	0.01

Challenge Chemical: Acrolein (350 ppm) CAS #: 107-02-8
 Source / Product #: AirGas
 Challenge Length: 60 minutes Sampling Frequency: Once

Test Results	Cell 1	Cell 2	Cell 3	AVG	Std Dev
Cumulative Permeation Mass ($\mu\text{g}/\text{cm}^2$)	<0.1	<0.1	<0.1	0.10	0.00
Ave. Sample Thickness (mils)	23	24	24	24	1
Ave. Sample Thickness (mm)	0.58	0.61	0.61	0.60	0.01

Challenge Chemical: Acrylonitrile (350 ppm) CAS #: 107-13-1
 Source / Product #: AirGas
 Challenge Length: 60 minutes Sampling Frequency: Once

Test Results	Cell 1	Cell 2	Cell 3	AVG	Std Dev
Cumulative Permeation Mass ($\mu\text{g}/\text{cm}^2$)	<0.1	<0.1	<0.1	0.10	0.00
Ave. Sample Thickness (mils)	23	24	23	23	1
Ave. Sample Thickness (mm)	0.58	0.61	0.58	0.59	0.01

Green Demron RS1 date

Challenge Chemical: Dimethyl sulfate (10g/m) CAS #: 77-78-1
 Source / Product #: Sigma Aldrich
 Challenge Length: 60 minutes Sampling Frequency: Once

Test Results	Cell 1	Cell 2	Cell 3	AVG	Std Dev
Cumulative Permeation Mass ($\mu\text{g}/\text{cm}^2$)	<0.1	<0.1	<0.1	0.10	0.00
Ave. Sample Thickness (mils)	31	32	32	32	1
Ave. Sample Thickness (mm)	0.79	0.81	0.81	0.80	0.01

Challenge Chemical: Chlorine (350 ppm) CAS #: 7782-50-5
 Source / Product #: AirGas
 Challenge Length: 60 minutes Sampling Frequency: Once

Test Results	Cell 1	Cell 2	Cell 3	AVG	Std Dev
Cumulative Permeation Mass ($\mu\text{g}/\text{cm}^2$)	<0.1	<0.1	<0.1	0.10	0.00
Ave. Sample Thickness (mils)	32	31	32	32	1
Ave. Sample Thickness (mm)	0.81	0.79	0.81	0.80	0.01

Challenge Chemical: Ammonia (350 ppm) CAS #: 7664-41-7
 Source / Product #: AirGas
 Challenge Length: 60 minutes Sampling Frequency: Once

Test Results	Cell 1	Cell 2	Cell 3	AVG	Std Dev
Cumulative Permeation Mass ($\mu\text{g}/\text{cm}^2$)	<0.1	<0.1	<0.1	0.10	0.00
Ave. Sample Thickness (mils)	31	31	33	32	1
Ave. Sample Thickness (mm)	0.79	0.79	0.81	0.80	0.01

Challenge Chemical: Acrolein (350 ppm) CAS #: 107-02-8
 Source / Product #: AirGas
 Challenge Length: 60 minutes Sampling Frequency: Once

Test Results	Cell 1	Cell 2	Cell 3	AVG	Std Dev
Cumulative Permeation Mass ($\mu\text{g}/\text{cm}^2$)	<0.1	<0.1	<0.1	0.10	0.00
Ave. Sample Thickness (mils)	32	31	33	32	1
Ave. Sample Thickness (mm)	0.81	0.79	0.81	0.80	0.01

Challenge Chemical: Acrylonitrile (350 ppm) CAS #: 107-13-1
Source / Product #: AirGas
Challenge Length: 60 minutes Sampling Frequency: Once

Test Results	Cell 1	Cell 2	Cell 3	AVG	Std Dev
Cumulative Permeation Mass ($\mu\text{g}/\text{cm}^2$)	<0.1	<0.1	<0.1	0.10	0.00
Ave. Sample Thickness (mils)	32	32	31	32	1
Ave. Sample Thickness (mm)	0.81	0.81	0.79	0.80	0.01