

## PRODUCT SPECIFICATION

Product:	Flocklined Nitrile Glove
Article No.:	RNF 15
Material:	Acrylonitrile Butadiene Rubber
Colour:	Green, Blue
Lining:	Cotton
Size:	S, M, L, XL, XXL, XXXL (7, 8, 9, 10, 11, 12)
Applications:	Chemical handling, petrochemical industries, automobile industries, printing and food processing
Thickness (mm):	0.40 +/- 0.03
Length (mm):	330 +/- 10
Compliance with:	German Foodstuffs and Consumer Goods Act Personal Protective Equipment Directive 89/686/EEC under Complex Design Category FFDCA.21 CFR 177.2600

### TECHNICAL SPECIFICATION

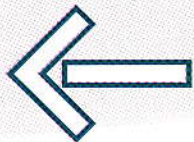
Tensile Strength	Unaged	Aged (22hr, 100c)
Tensile Strength at break	22 MPa (min)	18 MPa (min)
Elongation at break	350%	300%

EN 388-94	Level
Abrasion Resistance	4
Blade Cut	0
Tear Strength	0
Puncture Test	2

MANUFACTURER:	FILREX (M) SDN BHD Lot 138201, off 3/4 mile, Kawasan Perindustrian Bercham, Jalan Bercham, 31400 Ipoh, Perak, Malaysia. Tel. No.: 605-5482723 Fax No.: 605-5482726 e-mail address: rmsb@po.jaring.my
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Note: This specification replaces all previous issue of the product specification

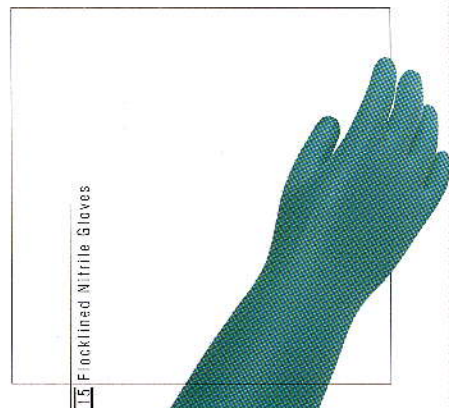
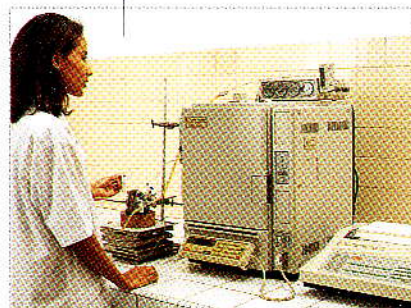
Compiled on : 1 June 1999



# RUBBEREX CHEMICAL RESISTANCE GUIDE

## DEGRADATION & PERMEATION TEST DATA

CHEMICAL AND CONCENTRATION	SUPER NITRILE RNF-15			
	En 374 Class.	Avg. Normalized B/T Time (Min)	Avg. Perm. Rate $\mu\text{g}/\text{cm}^2 \cdot \text{Min.}$	Avg. Degrd. Rate
1. Acetaldehyde, 99.5%	-	-	-	P
2. Acetic Acid, 99+%	3	80	50	G
3. Acetone, 99.5%	-	-	-	NR
4. Acetonitrile, 99%	2	<15	426	G
5. Acrylic Acid, 99%	3	75	8.3	F
6. Ammonium Fluoride, 40%	6	>480	<0.005	E
7. Ammonium Hydroxide, 85%	5	320	0.6	NR
8. Amyl Acetate, 100%	4	183	30.1	E
9. Amyl Alcohol, 99+%	6	>480	<0.04	E
10. Aniline, 99+%	-	-	-	NR
11. Aqua Regia	5	280	>16.45	E
12. Benzaldehyde, 99.5%	-	-	-	NR
13. Bromopropionic Acid, Sat.	6	>480	<0.033	E
14. Butyl Acetate, 99+%	3	66	57.6	F
15. Butyl Alcohol, 99%	6	>480	<0.07	E
16. Butyl Cellosolve, 99+%	6	>480	<0.04	E
17. Butyrolactone, 99+%	-	-	-	NR
18. Carbon Disulfide, 99.9%	1	14	C/B	F
19. Carbon Tetrachloride, 99+%	6	>480	<0.002	E
20. Cellosolve Acetate, 99+%	3	100	27.7	G
21. Chromic Acid, 50%	6	>480	<0.001	E
22. Citric Acid, 10%	6	>480	<0.013	NR
23. Cyclohexanol, 98%	6	>480	<0.001	E
24. Diacetone Alcohol, 99%	5	273	977.3	E
25. Dibutyl Phthalate, 99%	6	>480	<0.001	E
26. Diethylamine, 99+%	2	25	72.6	G
27. Diisobutyl Ketone, 80%	6	>480	<0.005	E
28. Dimethyl Acetamide, 99+%	-	-	-	NR
29. N,N-Dimethylformamide, 99+%	-	-	-	NR
30. Dimethyl Sulfoxide, 99+%	4	166	4.2	G
31. Dioctyl Phthalate, 99%	6	>480	<0.013	G
32. 1,4-Dioxane, 99.9%	-	-	-	NR
33. Epichlorohydrin, 99+%	-	-	-	NR
34. Ethyl Acetate, 99+%	-	-	-	NR
35. Ethyl Alcohol, 90+%	5	293	1.5	E
36. Ethyl Ether, 99+%	2	48	18.9	E
37. Ethyl Glycol Ether, 99%	4	151	21	F
38. Ethylene Glycol, 99+%	6	>480	<0.001	E
39. Formaldehyde, 99%	6	>480	<0.001	E
40. Formic Acid, 95+%	3	60	>16.45	P
41. Freon TF, 99+%	6	>480	<0.35	P
42. Furfural, 99%	-	-	-	NR
43. Gasoline, White, 100%	6	>480	<0.06	E
44. Hexamethyldisilazine, 97%	6	>480	<0.001	E
45. Hexane, 99+%	6	>480	<0.001	E
46. Hydrazine, 65%	5	388	3.2	E
47. Hydrochloric Acid, 10%	6	>480	<0.026	E
48. Hydrochloric Acid, 38%	6	>480	<0.026	E
49. Hydrofluoric Acid, 48%	6	>480	<0.010	G
50. Hydrogen Peroxide, 30%	6	>480	<0.002	E



RNF-15 Flocked Nitrile Gloves

Avg. ----- Average  
 B/T ----- Breakthrough  
 C/B ----- Catastrophic Breakthrough  
 Perm. ----- Permeation  
 Degrd ----- Degradation  
 En 374 Class. ----- European Classification  
 Min ----- Minutes  
 - ----- Not Tested

### KEY TO DEGRADATION RATINGS

% Weight Change (Gain)	Degradation Rating	
0 to 10	Excellent	E
11 to 20	Good	G
21 to 30	Fair	F
31 to 50, or small loss	Poor	P
Above 50	Not Recommended	NR

NR - Avoid use of the glove with this chemical.

En 374 Class	Permeation Time (Minutes)
0	<10 min.
1	>10 min.
2	>30 min.
3	>60 min.
4	>120 min.
5	>240 min.
6	>480 min.

# Rubberex Chemical Resistance Guide

RNF-15 Flocklined Nitrile Gloves



Data shown from the following charts are the result of laboratory tests and are intended to serve as a guide only. Results were arrived at by examination of new gloves samples selected at random.

This test data is not an absolute basis for glove selection as testing was done strictly in controlled laboratory conditions. Actual conditions will dictate other performance capabilities of the product. Factors such as glove use, thermal conditions, chemical mixtures, the products resistance to abrasion, cuts and punctures may also affect performance.

Therefore, when selecting a glove for its specific application, you must do your own evaluation based on actual working conditions.

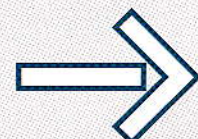
CHEMICAL AND CONCENTRATION	SUPER NITRILE RNF-15			
	En 374 Class.	Avg. Normalized B/T Time (Min)	Avg. Perm. Rate $\mu\text{g}/\text{cm}^2 \cdot \text{Min.}$	Avg. Degr. Rate
51. Hydroquinone, Sat.	6	>480	<0.033	E
52. Isobutyl Alcohol, 99+%	6	>480	<0.002	E
53. Iso-Octane, 99%	6	>480	<0.001	E
54. Isopropyl Alcohol, 99+%	6	>480	<0.001	E
55. Kerosene, 100%	6	>480	0.1	E
56. Lactic Acid, 85%	6	>480	<0.07	G
57. Lauric Acid, 36%	5	>450	<0.1	E
58. Maleic Acid, Saturated	6	>480	<0.1	E
59. Methyl Alcohol, 99.9+%	2	59	7.5	G
60. Methylamine, 40%	6	>480	<0.002	E
61. Methyl t-Butyl Ether, 99.8%	5	393	98.3	E
62. Methyl Cellosolve, 99%	3	80	19.9	F
63. Methyl Ethyl Ketone, 99+%	-	-	-	NR
64. Mineral Spirits, Rule 66,100%	6	>480	<0.004	E
65. Monoethanolamine, 99+%	6	>480	<0.001	E
66. Morpholine, 99%	-	-	-	NR
67. Muriatic Acid, 100%	6	>480	<0.026	E
68. Naphtha VM & P, 100%	6	>480	<0.002	E
69. N-Methyl-2-Pyrrolidone, 99+%	-	-	-	NR
70. Nitric Acid, 10%	6	>480	<0.039	E
71. Nitric Acid, 70%	-	-	-	NR
72. Nitrobenzene, 99%	-	-	-	NR
73. Nitromethane, 95.5%	0	7	6.3	NR
74. Nitropropane, 95.5%	-	-	-	NR
75. Octyl Alcohol, 99+%	6	>480	<0.002	E
76. Oleic Acid, 99+%	6	>480	<0.002	E
77. Oxalic Acid, 12.5%	6	>480	<0.039	E
78. Palmitic Acid, Sat.	4	236	0.2	E
79. Pentachlorophenol, 35%	4	160	7.58	E
80. Pentane, 98%	6	>480	<0.001	E
81. Perchloric Acid, 60%	6	>480	<0.005	E
82. Phenol, 90%	-	-	-	NR
83. Phosphoric Acid, 85%	5	450	0.849	E
84. Potassium Hydroxide, 50%	6	>480	<0.18	E
85. Propyl Acetate, 99%	1	28	105	F
86. Propyl Alcohol, 96+%	6	>480	<0.09	E
87. Pyridine, 99%	-	-	-	NR
88. Rubber Solvent, 100%	6	>480	<0.04	E
89. Sodium Hydroxide, 50%	6	>480	<0.022	G
90. Stoddard Solvent, 99%	6	>480	<0.002	E
91. Sulfuric Acid, 47%	6	>480	<0.018	G
92. Sulfuric Acid, 95%	-	-	-	NR
93. Tannic Acid, 37.5%	5	>325	0.3	E
94. 1,1,2,2-Tetrachloroethane, 99%	1	15	1337	NR
95. Tetrachloroethylene, 100%	5	350	0.6	NR
96. Toluene, 99+%	1	19	13.8	NR
97. 1,1,1-Trichloroethane, 99%	3	76	51	E
98. Trioresyl Phosphate, 90%	5	330	0.29	G
99. Triethanolamine, 85%	-	-	-	G
100. Turpentine, 100%	6	>480	<0.003	E
101. Xylene, 99%	3	64	3.6	E

NOTE: DATA IN THIS GUIDE REFERS TO RUBBEREX SUPER NITRILE RNF-15 ONLY  
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**FILREX MALAYSIA SDN. BHD.** (216855-X) **ISO 9002**

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 KAWASAN PERINDUSTRIAN BERCHAM, 31400 IPOH, PERAK, WEST MALAYSIA.  
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nitrile gloves

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# MATERIAL SAFETY DATA SHEET

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

### Introductory Details

Date of issue: 1 June 1999  
Edition: 1

### Product Details

Product Type: Nitrile Flocklined Glove  
Article No.: RNF 15  
Main polymer composition: Nitrile Synthetic Rubber  
Polymer name: Acrylonitrile Butadiene Rubber

Usage: Hand protection against oil, fats, solvents and chemicals  
Suitable for use in automobile, aircraft, printing, paint, food processing, and petrochemical industries.

Manufacturer's Name: Filrex (Malaysia) Sdn Bhd  
Manufacturer's Address: Lot 138201, off 3/4 mile, Kawasan Perindustrian Bercham, Jalan Bercham, 31400 Ipoh, Perak, Malaysia.  
Telephone No.: 605-5482723  
Fax No.: 605-5482726  
E-mail address: rmsb@po.jaring.my

## SECTION 2: INFORMATION ON INGREDIENT

Chemical composition: Acrylonitrile Butadiene Rubber  
Cotton flock  
Pottasium Hydroxide  
Antioxidant  
Rubber accelerator  
Colour Pigment  
Sulphur  
Titanium Dioxide  
Zinc Oxide

## SECTION 3 : PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Smooth finish with internal flock lining  
Colour: Green, Blue  
Thickness : 0.40 +/- 0.03 mm  
Length : 330 +/- 10 mm

Tensile strength at break: 20 MPa min (unaged)  
Elongation at break: 350% min (unaged)  
Tensile strength at break: 18 MPa min (aged at 100C for 22 hours)  
Elongation at break: 300% min (aged at 100C for 22 hours)

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**SECTION 4 : HAZARD IDENTIFICATION**

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Nil

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**SECTION 5 : FIRST AID MEASURE**

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Skin contact: If rashes appear on skin after contact, please seek medical advice and discontinue use (for those individuals who may have allergic response to cotton flock, carba and mercapto mix type of accelerators.)  
Suitable for individuals who are allergic to natural rubber and thiuram mix.

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**SECTION 6 : FIRE FIGHTING MEASURES**

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If the product caught fire, it will release dense black smoke.  
Extinguishing media: Carbon dioxide

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**SECTION 7 : ACCIDENTAL RELEASE MEASURE**

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Leak / Spill: Not applicable

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**SECTION 8 : HANDLING AND STORAGE**

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Handling: Worn by enduser for hand protection  
Storage: Packed in polyethylene or polypropylene bags in a cool, dry place, away from direct sunlight and heat.

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**SECTION 9 : EXPOSURE CONTROL AND PERSONAL PROTECTION**

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Exposure limit: Not applicable  
Personal protection: Not applicable  
Ventilation: Not applicable

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**SECTION 10 : STABILITY AND REACTIVITY**

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Conditions to avoid: Dry cleaning, direct heating and sunlight.  
Incompatibles: Nil  
Decomposition Products: Nil  
Hazardous Polymerization: Nil

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**SECTION 11 : TOXICOLOGY INFORMATION**

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Toxicity Data: Nil  
Carcinogenicity: Nil  
Reproductive effect: Nil  
Effects of overexposure: Nil  
Chronic effects: Nil  
Target organs: Nil  
Medical conditions generally aggravated by exposure: Nil

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**SECTION 12 : ECOLOGICAL INFORMATION**

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Biodegradability: No

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**SECTION 13 : DISPOSAL CONSIDERATIONS**

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Dispose in accordance with all applicable national environment laws and regulations

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**SECTION 14 : TRANSPORT INFORMATION**

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No special requirements

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**SECTION 15 : OTHER INFORMATION**

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This product carries the CE mark under the complex design category as per PPE directive 89/686/EEC.  
Complied to the German Foodstuffs and Consumer Goods Act as per directive 90/128/EC.  
Complied to FDA 21 CFR 177.2600

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**SECTION 16 : CONTACT POINT**

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In case of emergency or for further information, please contact the following

Filrex (Malaysia) Sdn Bhd

Lot 138201, off 3/4 mile, Kawasan Perindustrian Bercham,  
Jalan Bercham, 31400 Ipoh, Perak, Malaysia.

Telephone No.: 605-5482723

Fax No.: 605-5482726

E-mail address: rmsb@po.jaring.my

Note: This edition replaces all other previous edition of the MSDS  
This data given is based on our current experience and knowledge. This information is intended for guidance and should not be used as a warranty for the performance of this product.