



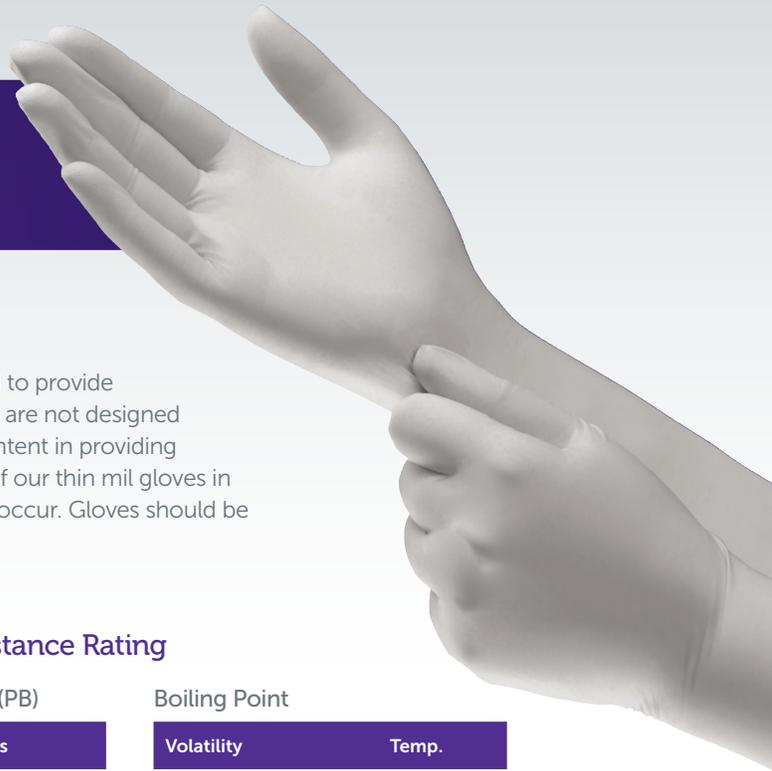
Kimberly-Clark* Nitrile Gloves

Chemical Resistance Guide



Exceptional
Workplaces*

Kimberly-Clark* Nitrile Gloves Chemical Resistance Guide



Incidental Exposure Only

Kimberly-Clark* Nitrile Gloves are thin gauge disposable gloves designed to provide barrier protection and tactile sensitivity to the wearer. Our thin mil gloves are not designed for applications involving prolonged, direct exposure to chemicals. Our intent in providing this chemical compatibility information is to provide a guideline for use of our thin mil gloves in applications where incidental splash exposure to various chemicals may occur. Gloves should be removed and replaced immediately if incidental splash exposure occurs.

How to Use this Guide:

Two categories of data are used Boiling Point to determine a color code for each chemical:

1. Permeation Breakthrough Time

2. Chemical Boiling Point

Criteria for Chemical Resistance Rating

Permeation Breakthrough Time (PB)

Rating	Minutes
Excellent (E)	60-480
Good (G)	10-59
Poor (P)	1-9
Not Recommended (NR)	< 1

Precaution: This data was generated from the Kimberly-Clark* Sterling* Nitrile Exam Gloves. This data does not represent gloves thinner than the Sterling* Nitrile Exam Gloves, such as Kleenguard* G10 Artic Blue Nitrile Gloves.

Boiling Point

Volatility	Temp.
High Volatility	< 24° C
Low Volatility	> 24° C

The following gloves are applicable to this guide:

- Kimberly-Clark* Blue Nitrile Exam Gloves
- Kimberly-Clark* Forest Green Nitrile Exam Gloves
- Kimberly-Clark* Purple Nitrile Exam Gloves
- Kimberly-Clark* Spring Green Nitrile Exam Gloves
- Kimberly-Clark* Sterling* Nitrile Exam Gloves

Color Code Rating System:

A glove/chemical combination receives a **GREEN** rating if:

- The permeation breakthrough time is excellent or good and the chemical has high volatility.
- OR —
- The permeation breakthrough time is excellent and the chemical has low volatility.

A glove/chemical combination receives a **YELLOW** rating if:

- Any glove/chemical combination does not meet either set of conditions required for a **GREEN** or **RED** rating.

A glove/chemical combination receives a **RED** rating if:

- The permeation breakthrough time is poor and the chemical has low volatility.
- OR —
- The permeation breakthrough time is not recommended and the chemical has either high or low volatility.

Interpreting Chemical Resistance Ratings:

GREEN

The results for this specific chemical suggest that the glove would provide an adequate barrier for use in most applications.

YELLOW

The results require additional consideration to determine suitability for use.

RED

Not recommended for use.

For more information on choosing the right glove for your application, visit www.kimtech.com

Kimberly-Clark* Nitrile Gloves

Chemical Resistance Guide

Chemical Name	Permeation Time (minutes) ASTM F739-99A	Permeation Rate (pg/cm ² /min) ASTM F739-99A	Concentration	Color Code Rating
Acetaldehyde	<1	353	99.5%	Red
Acetic Acid	5	482	99.7%	Red
Acetone	1	466	99.5%	Red
Acetonitrile	1	329	99%	Red
Acrylic Acid	1	57.8	99%	Red
Ammonium Hydroxide	7	395	30%	Red
Amyl Acetate	4	261	99%	Red
Aniline	7	74.7	99.5%	Red
Benzaldehyde	78	0.57	99.5%	Yellow
Benzene	<1	627	99.8%	Red
Benzyl Alcohol	5	86.8	99%	Red
n-Butanol	10	5.99	99.8%	Yellow
Butyl Acetate	3	233	99%	Red
Carbon Disulfide	2	3.81	99%	Red
Carbon Tetrachloride	5	48.9	99.5%	Red
Chloroform	1	958	99%	Red
Citric Acid	>480	Not Detected	50%	Green
Cyclohexane	>480	Not Detected	99.7%	Green
Cyclohexanol	112	1.18	99%	Green
Cyclohexanone	1	787	99.8%	Red
d-Limonene	107	0.157	97%	Green
n-Dibutyl Phthalate	>480	Not Detected	99%	Green
1,2-Dichlorobenzene	<1	1179	99%	Red
Dichloromethane	1	2006	99.9%	Red
Diesel Fuel, mixture	160	0.63	Mixture	Green
Diethyl Ether	1	595	99.9%	Red
Diethylamine	<1	587	99.5%	Red
Di-isobutyl Ketone	10	1141	80%	Yellow
Dimethyl Sulfoxide	8	501	99.90%	Red
Dibutyl Phthalate	>480	Not Detected	99%	Green
1,4-Dioxane	<1	707	99.4%	Red
Ethanol	7	296	99.5+%	Red
Ethanolamine	>480	Not Detected	99%	Green
Ethidium Bromide	90	0.68		Green
Ethylene Glycol	>480	Not Detected	99.8%	Green
Formaldehyde	110	0.172	37%	Green
Formic Acid	6	0.554	88%	Red
2-Furaldehyde	<1	385	99%	Red
Glutaraldehyde	>480	Not Detected	50%	Green
Heptane	145	0.73	99+%	Green
n-Hexane	16	55.3	99+%	Yellow
Hydrazine	31	40.2	98%	Yellow
Hydrochloric Acid	16	29.2	37%	Yellow
Hydrochloric Acid	>480	Not Detected	10%	Green

Kimberly-Clark* Nitrile Gloves

Chemical Resistance Guide

Chemical Name	Permeation Time (minutes) ASTM F739-99A	Permeation Rate (pg/cm ² /min) ASTM F739-99A	Concentration	Color Code Rating
Hydrogen Peroxide	>480	Not Detected	30%	Green
Isopropyl Alcohol (IPA)	29	38.6	99.50%	Yellow
Jet Fuel (Kerosene)	82	0.259	Mixture	Green
Lactic Acid	>480	Not Detected	85%	Green
Methanol	<1	257	99.8%	Red
1-Methoxy 2-Propanol	>480	Not Detected	99.5%	Green
1-Methyl 2-Pyrrolidinone	3	398	99%	Red
Methyl Methacrylate	<1	803	99%	Red
Mineral Spirits	105	1.6	mixture	Green
Morpholine	1	349	99%	Red
Naphtha	122	0.139	99%	Green
Nitric Acid	1	197	70%	Red
Nitric Acid	277	197	10%	Green
Nitromethane	<1	490	99%	Red
Nitropropane	<1	715	98%	Red
Octane	>480	Not Detected	99%	Green
Octanol	235	0.85	99+%	Green
Oleic Acid	>480	Not Detected	99%	Green
Pentane	208	0.118	99%	Green
Phenol	6	120	99%	Red
Phosphoric Acid	>480	Not Detected	85%	Green
Potassium Hydroxide	>480	Not Detected	50%	Green
Propyl Acetate	<1	819	99.5%	Red
Propylene Glycol	>480	Not Detected	99%	Green
Pyridine	<1	635	99%	Red
Sodium Hydroxide	>480	Not Detected	50%	Green
Sodium Hypochlorite (Bleach)	>480	Not Detected	10-13%	Green
Stoddard Solvent	207	0.78	mixture	Green
Styrene	<1	836	99%	Red
Sulfuric Acid	>480	Not Detected	47.0%	Green
Sulfuric Acid	1	197	95-98%	Red
Tetrachloroethylene	3	11	99.9%	Red
Trichloroethylene	<1	1054	99%	Red
Triethanolamine	>480	Not Detected	98%	Green
Turpentine	115	0.361	Mixture	Green
o-Xylene	1	852	98%	Red

It All Adds Up



RightCycle* by Kimberly-Clark Professional* is an innovative recycling program that diverts waste from landfills and helps you achieve, or even exceed, your organization's sustainability goals. RightCycle* will turn your used garments and gloves into raw materials to create eco-friendly consumer products and durable goods. Take the next step in your waste reduction journey and choose RightCycle*. It all adds up to zero landfill and a more efficient workplace.

For more information, ask your distributor sales professional or visit www.kimtech.com/rightcycle.