



Jackson Safety* G29 Solvent Glove

Chemical Resistance Guide



Exceptional
Workplaces*



Jackson Safety* G29 Solvent Gloves Chemical Resistance Guide



This guide presents the results of ASTM F739 standard permeation testing and degradation ratings for the Jackson Safety* G29 Solvent Gloves. It is intended as a tool to help you assess the chemicals for which the use of this glove is best suited.

This guide is not designed to consider every possible factor or circumstance relative to safety in every environment. To select the appropriate glove protection, a Hazards Analysis and Risk Assessment should be performed, including identification of the chemicals and chemical hazards related to the worker's task and work environment; determination of the potential for exposure and the type of exposure that is expected (i.e. splash, saturation, spray, immersion, etc.); and determination of the consequences related to exposure.

It is the responsibility of the user to assess the types of hazards and the risks associated with exposure and to make a final decision on the appropriate personal protective equipment needed for their specific circumstance.

Understanding Testing Terminology:

Permeation:

The process by which a chemical can breach a surface in which no perceptible openings are present. In permeation, the chemical's molecules actually slip between the molecules of the glove material and are detected. The results of the permeation process are undetectable by the naked eye.

Breakthrough Time:

Breakthrough time is measured in minutes. This is the amount of time between the initiation of the permeation test and analytical detection of the chemical on the reverse side of the sample material. Breakthrough times give an indication of how long a glove, that's totally immersed in the test chemical, can provide resistance to chemical permeation.

Permeation Rate:

The maximum rate at which a permeating chemical passes through the fabric as measured by the analyzer. It is reported as micrograms per square centimeter of fabric per minute.

Degradation:

This is the measurement of changes in the physical properties of a glove material, after contact with a chemical. The changes may include a stiffening of the material, becoming hard or brittle; or the glove material may swell and become softer and weaker.

Note: The combination of breakthrough time and permeation rate should be taken into consideration when making a glove selection. The goal is to provide the wearer with the least possible amount of chemical exposure for the duration of the task. Therefore, a long breakthrough time and a low permeation rate results in less chemical exposure over time — compared to a shorter breakthrough time and a higher permeation rate.

How to Utilize This Chemical Resistance Guide:

- Three categories of data are provided for each product and corresponding chemical:
1. Permeation breakthrough time;
 2. Permeation rate, and
 3. Degradation resistance rating.

Color Code Rating System

GREEN

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

A glove/chemical combination receives a **GREEN** rating if either of these conditions is met:

Condition A

- The permeation breakthrough time is 240 minutes or longer.
- The permeation rate is not specified.
- The degradation rating is Excellent or Good.

OR

Condition B

- The permeation breakthrough time is 30 minutes or longer.
- The permeation rate is Excellent or Good.
- The degradation rating is Excellent or Good.

RED

INTERPRETATION: Not recommended for use.

A glove/chemical combination receives a **RED** rating if either of these conditions is met:

The degradation rating is Not Recommended, regardless of the permeation time or rate, **OR...**

If the Breakthrough Time is less than 30 minutes and the Degradation rating is Poor.

YELLOW

INTERPRETATION: The results require additional consideration by a safety professional to determine suitability for use.

Any glove/chemical combination not meeting either set of conditions required for **GREEN** or **RED** receives a **YELLOW**, or cautionary rating.

Criteria for Chemical Resistance Guide

Permeation Breakthrough Time (PB)

Rating	Minutes
Excellent (E)	> 240
Good (G)	> 30
Poor (P)	≥ 10
Not Rated (NR)	< 10

Degradation (D)

Rating	Key
Excellent (E)	Excellent; fluid has very little degrading effect.
Good (G)	Good; fluid has minor degrading effect.
Poor (P)	Poor; fluid has pronounced degrading effect.
Not Recommended (NR)	NR – Fluid was not tested against this material or the fluid has excessive degrading effects.

Permeation Rate (PR)

Rating	µg/cm ² /min
Excellent (E)	< 1
Good (G)	< 100
Poor (P)	< 10,000

Degradation (D)

Rating	3rd Party Lab Comments
Excellent (E)	Material stained
Good (G)	Slightly wrinkled
Poor (P)	Wrinkled
Poor (P)	Material wrinkled
Poor (P)	Wrinkled and lighter
Not Recommended (NR)	Very wrinkled

Jackson Safety* G29 Solvent Gloves

Chemical Resistance Guide

Chemical Name and Concentration, if Applicable	Permeation Breakthrough Time (minutes) ASTM F739-12	Permeation Rate (µg/cm ² /min) ASTM F739-12	Degradation Rating	Color Code Rating
Acetone, 99.8%	1	466	Poor	Red
Acetonitrile, 50%	10	329	Poor	Red
Acetonitrile, 99.8%	6	329	Poor	Red
Alodine 1001	>480	ND	Excellent	Green
Alodine 1201	>480	ND	Excellent	Green
Ammonia (gas), 99%	38	121	Poor	Yellow
Cyclohexane, 99.7%	32	125	NR	Red
Dimethyl Sulfoxide (DMSO), 99.9%	31	97	NR	Red
Ethanol, 70%	68	29.2	Good	Green
Formaldehyde, 37%	>480	ND	Excellent	Green
FREKOTE 770-NC Mold Release	89	32.7	Good	Green
Hexane, 99%	41	53	Good	Green
Hydrofluoric Acid, 40%	>480	ND	Excellent	Green
Hydrogen Fluoride, 40%	14	50.1	Good	Yellow
Isopropyl Alcohol (IPA), 70%	160	10	Good	Green
Isopropyl Alcohol (IPA), 99%	192	9.9	Good	Green
Kerosene/Jet Fuel	73	74.3	Poor	Yellow
Methanol, 10%	>480	ND	Good	Green
Methanol, 99.8%	21	103	Good	Yellow
Methyl Cyclohexane, 99%	38	152	Good	Yellow
Methyl Ethyl Ketone (MEK), 99.7%	2	578	NR	Red
Mineral Spirits	3	802	NR	Red
Methyl n-Propyl Ketone (MPK)	NR	NR	NR	Red
n-Heptane, 99%	33	49	Good	Green
Oil/Grease/Lubricant Oil	>480	ND	Excellent	Green
o-Xylene, 97%	3	852	NR	Red
SKYDROL 5 Hydraulic Fluid	146	17.6	Poor	Yellow
SKYDROL 500-B4 Hydraulic Fluid	95	5.52	Poor	Yellow
SKYDROL LD-4 Hydraulic Fluid	127	20.3	Poor	Yellow
SKYDROL PE-5 Hydraulic Fluid	85	12.6	Poor	Yellow
Sodium Hydroxide, 40%	>480	ND	Excellent	Green
Stoddard Solvent/VARSOL 3139 Solvent, 99%	6	842	NR	Red
Sulfuric Acid, 96%	28	395	NR	Red
Trichloroethylene	NR	NR	NR	Red
Turpentine	61	>100	Poor	Yellow
Vesphen II SE	>480	ND	NR	Red
White Spirits	1	802	NR	Red

ND = Not Detected
NR = Not Recommended

Kimberly-Clark warrants that its products (1) comply with K-C's standard specifications as of the delivery date to K-C's authorized distributors/direct purchasers and are warranted for the following periods from end-user's date of purchase (verified by valid sales receipt) (a) five years for Balder* Technology auto-darkening filters; (b) two years for all other auto-darkening filters; and (c) one year for powered air-purifying respirators; (2) comply with all K-C labelling representations; and (3) are manufactured in compliance with all applicable federal, state, and local laws in effect at the time and place of manufacture of the products. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. K-C is not liable for any kind of special, incidental, or consequential damages. K-C's liability for breach of contract, tort or other cause of action shall not exceed the product purchase price. Purchasers and users are deemed to have accepted the above warranty and limitation of liability, and cannot change the terms by verbal agreement or by any writing not signed by K-C. To the extent required by applicable law, K-C does not limit its liability for death/injury resulting from K-C's negligence.