

Recommendation on Chemical Resistance

Below protective gloves have been tested in accordance with EN 374-3:2003 "Determination of resistance to permeation by chemicals" and EN 16523-1:2015+A1:2018 "Determination of material resistance to permeation by chemicals" and achieve following test results.

Caution: Damaged or swelling gloves shall be changed immediately!

For reason of precaution it is recommended to change gloves after 2 hours!

TEST RESULTS by:

- ProQares, Rijswijk, The Netherlands
- Respirex Testing Laboratory, UK
- SATRA Technology Centre, UK

Chemicals (synonyms)	Brand Name	sempermed® supreme green	sempermed® derma PF	sempermed® supreme plus	sempermed® supreme	semperclean MC	sempermed® syntegra IR	sempermed® syntegra green	sempermed® syntegra UV
	Cas-No. / Spec Code	LFM-091GR	LFM-097NA	LFG-110NA	LFM-110NA	LFM-110NA	PFM-116SC	PFM-116GR	PUM-118WH
Acetic acid (10%)	64-19-7	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 5
Acetic acid (99%)	64-19-7	A	A	A	A	A	A	A	A
Acetone (2-propanone, methyl ketone)	67-64-1	X	X	X	X	X	X	X	X
Acetonitrile (cyanomethane, ethyl nitrile)	75-05-8	A	A	A	X	X	X	X	X
Acryl amide (40%)	79-06-1	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6
Ammonium hydroxide (25%)	1336-21-6	A	A	A	A	A	A	A	Level 1
Benzalconiumchloride liquid (Quarts)	63449-41-2	n/a	n/a	X	X	X	Level 6	Level 6	Level 6
Chlorhexidindigluconat (0,5%)	18472-51-0	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6
Chlorhexidindigluconat (20%)	18472-51-0	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6
Chloroform (99%) (trichlormethan)	67-66-3	X	X	X	X	X	X	X	X
Cyclohexanol (Hexalin / at 23°C)	108-93-0	X	X	X	X	X	n/a	n/a	X
Dichlormethan (Methylenchlorid, Freon 30)	75-09-2	X	X	X	X	X	X	X	X
Diethyl amine (DEA)	109-89-7	X	X	X	X	X	X	X	X
Diethyl ether (diethyloxid, ethoxyethane)	60-29-7	X	X	X	X	X	X	X	X
Dimethylsulfoxid DMSO (deltan, demasorb)	67-68-5	Level 1	Level 1	Level 1	Level 1	Level 1	n/a	n/a	X
Ethanol (10%) (ethyl alcohol)*	64-17-5	A	A	A	A	A	Level 6	Level 6	Level 6
Ethanol (20%) (ethyl alcohol)*	64-17-5	A	A	A	A	A	Level 2	Level 2	Level 2
Ethanol (70%) (ethyl alcohol)*	64-17-5	X	X	A	A	A	A	A	X
Ethidium bromide (1%) (homidium bromide)	1239-45-8	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6
Ethyl acetate (Aceto acid ether)	141-78-6	X	X	X	X	X	X	X	X
Formaldehyd (37%) with Methanol (10%)	50-00-0	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6
Glutaraldehyde (5%) (Pentan-1,5- dial, Glutaral)	111-30-8	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6
Heptane - n	142-82-5	X	A	X	X	X	X	X	X
Hexane - n	110-54-3	X	X	X	X	X	X	X	X
Hydrochloric acid (10%) (muriatic acid, chlorhydric acid)	7647-01-0	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6
Hydrochloric acid (36%) (muriatic acid, chlorhydric acid)	7647-01-0	Level 3	Level 3	Level 3	Level 3	Level 3	Level 6	Level 6	Level 2
Hydrofluoric acid (40%)	7664-39-3	Level 5	Level 5	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6
Hydrogen peroxide (30%)	7722-84-1	Level 6	Level 4	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6
Isopropyl alcohol (60%) (2-propanol, IPA)*	67-63-0	n/a	n/a	n/a	n/a	n/a	Level 1	Level 1	Level 1
Isopropyl alcohol (70%) (2-propanol, IPA)*	67-63-0	A	A	A	A	A	Level 1	Level 1	Level 1

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	Cas-No. / Spec Code	LFM-091GR	LFM-097NA	LFG-110NA	LFM-110NA	LFM-110NA	PFM-116SC	PFM-116GR	PUM-118WH
Methanol p.a. (methyl alcohol)*	67-56-1	X	X	X	X	X	X	X	X
Methylmethacrylate (MMA)	80-62-6	X	X	X	X	X	X	X	X
Ninhydrin (0,2%)	485-47-2	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6
Nitric acid (10%)	7697-37-2	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6
Nitric acid (50%)	7697-37-2	Level 4	Level 4	Level 4	Level 4	Level 4	Level 6	Level 6	Level 5
Nitric acid (65%)	7697-37-2	Level 2	Level 2	Level 2	Level 2	Level 2	Level 5	Level 5	Level 5
Phosphoric acid (85%) (orthophosphoric acid)	7664-38-2	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6
Potassium hydroxide (50%) (caustic potash, lye)	1310-58-3	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6
Povidone iodine (10%)	25655-41-8	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6
Sodium hydroxide (30%) (caustic soda, lye, white caustic)	1310-73-2	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6
Sodium hydroxide (40%) (caustic soda, lye, white caustic)	1310-73-2	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6
Sodium hypochlorite (10%)	7681-52-9	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6
Sulfuric acid (30%) (vitriol)	7664-93-9	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6
Sulfuric acid (96%) (vitriol)	7664-93-9	Level 1	Level 1	Level 1	Level 1	Level 1	Level 1	Level 1	Level 1
Toluene (methylbenzol, phenylmethan, toluol)	108-88-3	X	X	X	X	X	X	X	X
Trichlorethane (methyltrichloromethane)	71-55-6	X	X	X	X	X	X	X	X
Xylene (xytol, dimethylbenzene)	95-47-6	X	X	X	X	X	X	X	X

X	Not Recommended	Level 3	> 60min
A	Splash Protection - change glove immediately after contact!	Level 4	> 120min
Level 1	> 10min	Level 5	> 240min
Level 2	> 30min	Level 6	> 480min

* Special caution advised in conjunction with concentrated alcohols and organic solutions.

n/a not available

IMPORTANT NOTE: The latest chemical resistance list can be found at www.sempermed.com. Please note that the product characteristics are directly dependent on the conditions of use and on the purity of the chemical substances concerned. The chemical resistance has been assessed under laboratory conditions and cannot reflect all actual conditions. When working with materials that are harmful to the skin, please always inspect the glove for any holes or tears prior to use. In principle, tests and certificates may only be regarded as general indications and do not exempt the user from the responsibility of making sure that the glove affords the protection requirements for the intended purpose prior to use. The chemical resistance recommendations do not form part of the specifications.

CAUTION: Failure to observe this information, in particular with regard to (chemical) resistance, frequency of use and tolerability of the gloves, can result in personal injury and/or material damage. HARPS does not accept any liability for incorrect use of the gloves. In case of doubt, obtain expert advice before use.

This document was issued electronically and is therefore valid without signature and has a validity of up to two years.

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