

## INFORMS

February 2015

## Recommendation on chemical resistance

Protective gloves **Semperguard®** for single use have been tested in accordance with EN 374-3 "Determination of resistance to permeation by chemicals"

Chemical (synonyms)	CAS-Number	Semperguard® NITRILE Xpert	Semperguard® NITRILE Comfort	Semperguard® NITRILE Xtension	Semperguard® NITRILE Xtra Lite / Style	Semperguard® NITRILE Comfort Lite	Semperguard® NITRILE Xenon
Acetic acid (10%) (methyl carbon acid)	64-19-7	n.t.	Level 6	Level 6	Level 6	Level 6	Level 6
Acetone (2- propanone, methyl ketone)	67-64-1	X	X	X	X	X	X
Acetonitrile (cyanomethane, ethyl nitrile)	75-05-8	X	X	X	X	X	X
Acryl amide (40%) (acrylic acid amide)	79-06-1	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6
Ammoniumhydroxid (25 %)	1336-21-6	n.t.	A	A	n.t.	A	n.t.
Benzalconiumchloride liquid (Quats)	63449-41-2	n.t.	n.t.	n.t.	n.t.	n.t.	n.t.
Chlorhexidindigluconat (0,5%)	18472-51-0	n.t.	n.t.	n.t.	n.t.	n.t.	Level 6
Chloroform (trichloromethane)	67-66-3	X	X	X	X	X	X
Cyclohexanol (Hexalin / at 23°C)	108-93-0	Level 4	Level 3	Level 3	n.t.	Level 3	n.t.
Dichloromethane (methylene chloride, Freon 30)	75-09-2	X	X	X	X	X	X
Diethyl amine (DEA)	109-89-7	X	X	X	X	X	X
Diethyl ether (diethyloxid, ethoxyethane)	60-29-7	X	X	X	X	X	X
Dimethylsulfoxide DMSO (deltan, demasorb)	67-68-5	X	X	X	X	X	X
Ethanol (20%) (ethyl alcohol)	64-17-5	Level 6	Level 6	Level 6	Level 1	Level 6	Level 1
Ethanol (40%) (ethyl alcohol)	64-17-5	Level 1	Level 1	Level 1	A	Level 1	A
Ethanol (70%) (ethyl alcohol)	64-17-5	Level 1	Level 1	Level 1	A	Level 1	A
Ethanol (80%) (ethyl alcohol)	64-17-5	Level 1	A	A	A	A	A
Ethanol p.a. (ethyl alcohol)	64-17-5	n.t.	A	A	A	A	A
Ethidium bromide (1%) (homidium bromide)	1239-45-8	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6
Ethyl acetate (Aceto acid ether)	141-78-6	A	A	A	X	A	X
Formaldehyde (37%) with Methanol (10%) (formalin, methyl aldehyde) *	50-00-0	Level 6	Level 3	Level 6	Level 1	Level 3	Level 1
Gasoline (heavy, bp 150 – 190°C)	8032-32-4	X	X	X	X	X	X

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Glutaraldehyde (5%) (1,3- diformylpropane; Glutaral)	111-30-8	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6
Heptane – n	142-82-5	A	X	X	X	X	X
Hexane – n	110-54-3	A	A	A	A	A	A
Hydrochloric acid (10%) (muriatic acid, chlorohydric acid)	7647-01-0	n.t.	Level 6	n.t.	Level 6	Level 6	Level 6
Hydrochloric acid (36%) (muriatic acid, chlorohydric acid)	7647-01-0	Level 3	Level 2	Level 3	A	Level 2	A
Hydrofluoric acid (40%)	7664-39-3	Level 1	n.t.	n.t.	n.t.	n.t.	n.t.
Hydrogen Peroxide (30%)	7722-84-1	n.t.	Level 6	n.t.	n.t.	n.t.	n.t.
Isopropyl alcohol (40%) (2- propanol, isopropanol, IPA)	67-63-0	Level 1	Level 1	Level 1	Level 1	Level 1	Level 1
Isopropyl alcohol (70%) (2- propanol, isopropanol, IPA)	67-63-0	Level 1	Level 1	Level 1	Level 1	Level 1	Level 1
Isopropyl alcohol p.a. (2- propanol, isopropanol, IPA)	67-63-0	Level 1	Level 1	Level 1	A	Level 1	A
Methanol (5%) (methyl alcohol)	67-56-1	n.t.	Level 6	Level 6	n.t.	Level 6	n.t.
Methanol p.a. (methyl alcohol)	67-56-1	A	A	A	X	A	X
Nitric acid (10%) (Aqua fortis, spirit of nitre)	7697-37-2	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6
Nitric acid (36%) (Aqua fortis, spirit of nitre)	7697-37-2	Level 4	A	A	A	A	Level 6
Nitric acid (50%) (Aqua fortis, spirit of nitre)	7697-37-2	Level 4	A	A	A	A	A
Phenol (10%) (carbolic acid, benzenol, hydroxybenzene)	108-95-2	Level 2	A	A	A	A	A
Phenol (80%) (carbolic acid, benzenol, hydroxybenzene)	108-95-2	Level 2	A	A	A	A	A
Phosphoric acid (30%) (orthophosphoric acid)	7664-38-2	n.t.	Level 6	Level 6	Level 6	Level 6	Level 6
Potassium hydroxide (30%) (caustic potash, lye)	1310-58-3	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
Sodium hydroxide (40%)(caustic soda, lye, white caustic)	1310-73-2	Level 6	Level 6	Level 6	Level 6	Level 6	Level 6
Sulphuric acid (96%) (vitriol)	7664-93-9	Level 1	A	A	n.t.	A	n.t.
Toluene (methylbenzol, phenylmethan, toluol)	108-88-3	X	X	x	X	X	X
Trichlorethane (methyltrichloromethane)	71-55-6	X	X	x	X	X	X
Xylene (xylol, dimethylbenzene)	95-47-6	X	X	x	X	X	X

\* Only formaldehyde 37% is the challenge chemical which would have been detected.

<b>X not recommended</b>
<b>A for splash contact recommended – change glove immediately after contact</b>
<b>Level 1 for short contact up to 30 min recommended</b>
<b>Level 2 for contact up to 60 min recommended</b>
<b>Level 3 for contact up to 120 min recommended</b>
<b>Level 4 for contact up to 240 min recommended</b>
<b>Level 5 for contact up to 480 min recommended</b>
<b>Level 6 for contact longer than 480 min recommended</b>

**Disclaimer:** IMPORTANT NOTE: The latest product brochures can be found at [www.sempermed.com](http://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. 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. 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. In case of doubt, obtain expert advice before use.