



Technical Data Sheet

Article:	2112	teXXor topline																																
Model:	Chemical-Protective Gloves PVC ROTBRAUN																																	
Sizes:	9, 10																																	
For details on product dimensions and weights see below (table).																																		
Colour:	maroon																																	
Length:	40 cm (approx.)																																	
Other variants:	2110 = 27 cm, 2111 = 35 cm, 2113 = 45 cm																																	
Material:	Polyvinylchloride (PVC) Lining: 100% cotton knit																																	
Mat. thickness:	1,10 mm (approx.)																																	
Packaging:	60 pair / carton																																	
Subpackaging:	12 pair, bundled																																	
Details of packaging are below mentioned (table)																																		
Care instructions:																																		
PPE-category:	Category III - includes risks that may lead to serious consequences such as death or irreversible damage to health, in accordance with PPE Regulation (EU) 2016/425, Annex I (published in the Official Journal of the European Union)																																	
Standardize:	EN ISO 21420:2020 - Protective gloves - General requirements and test methods EN 388:2016+A1:2018 - Protective gloves against mechanical risks																																	
	Abrasion resistance 4 Cut resistance (Coupe test) 1 Tear resistance 2 Puncture resistance 1 Cut resistance (TDM) according to EN ISO 13997:1999 X																																	
EN 13594:2015 - Impact protection	Test result: not assessed																																	
EN ISO 374-1:2016+A1:2018 - Protective gloves against dangerous chemicals and micro-organisms (Part 1: Terminology and performance requirements for chemical risks)																																		
	<table border="1"> <thead> <tr> <th>Typ A</th> <th>Chemicals:</th> <th>EN 374-4:2019</th> <th>Class</th> </tr> </thead> <tbody> <tr> <td></td> <td>Methanol (A)</td> <td>-19,8%</td> <td>2</td> </tr> <tr> <td></td> <td>40% Sodium hydroxide (K)</td> <td>-21,5%</td> <td>6</td> </tr> <tr> <td></td> <td>96% Sulphuric acid (L)</td> <td>-31,9%</td> <td>3</td> </tr> <tr> <td></td> <td>65% Nitric acid (M)</td> <td>-8,0%</td> <td>3</td> </tr> <tr> <td></td> <td>30% Hydrogen peroxide (P)</td> <td>-3,1%</td> <td>6</td> </tr> <tr> <td></td> <td>40% Hydrofluoric acid (S)</td> <td>not tested</td> <td>5</td> </tr> <tr> <td></td> <td>37% Formaldehyde (T)</td> <td>-16,6%</td> <td>6</td> </tr> </tbody> </table>	Typ A	Chemicals:	EN 374-4:2019	Class		Methanol (A)	-19,8%	2		40% Sodium hydroxide (K)	-21,5%	6		96% Sulphuric acid (L)	-31,9%	3		65% Nitric acid (M)	-8,0%	3		30% Hydrogen peroxide (P)	-3,1%	6		40% Hydrofluoric acid (S)	not tested	5		37% Formaldehyde (T)	-16,6%	6	
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EN ISO 374-5:2016 - Protective gloves against dangerous chemicals and micro-organisms (Part 5: Terminology and performance requirements for micro-organisms risks)																																		
	Resistance to bacteria and fungi: passed Resistance to virus: passed																																	
VIRUS																																		
(X = not tested)																																		
More detailed information on the standards can be found on the following pages.																																		



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Fittings:

Polyvinyl chloride (PVC), high quality, light cotton tricot lining, silicone free, low AQL value (0.65), glove length: approx. 40 cm, material thickness: approx. 1.10 mm (+/- 0,25 mm)


Characteristics:

Excellent abrasion resistance for an especially long service life. Extremely flexible, resistant to liquids and chemicals (see manufacturer's information).

Application:

Applicable for general work with high risks as well as when handling liquids and chemicals within the specified classification, paints, varnishes, oils, petrol, e.g. in the craft trade, construction sector, chemical industry, pharmaceutical industry, agricultural sector, facility management

Additional information regarding purpose, applications and risk assessment:

These gloves satisfy the requirements of the quoted standards. Please note that the actual conditions of use cannot be simulated and that the decision on the glove's suitability for its intended purpose therefore lies exclusively with the user. The manufacturer is not responsible for improper use. Hence, an assessment of the residual risk should be performed before use in order to determine whether this glove is suitable for its intended purpose.

Kindly note the printed pictograms and performance levels.

Precautionary measures during use:

- Only use gloves with a printed chemical pictogram when handling chemicals.
- Make certain that the selected glove is resistant to the chemicals being used.
- Do not use these gloves to protect against serrated edges or blades, etc.
- If gloves must be used in a hot environment, make certain that they satisfy the requirements of EN 407 and that they were tested as specified therein.
- Do not use the gloves close to moving machine parts.
- Check the gloves carefully before use to make certain there are no defects or imperfections.
- Take note that the gloves do not protect against sharp objects such as injection needles.
- Discard damaged, worn, dirty or soiled gloves, irrespective of the substance (including on the inside), as they may lead to skin irritation and rashes. Consult a doctor or dermatologist should such cases arise.

EN ISO 21420:2020 - Protective gloves - General requirements and test methods:

This standard specifies the relevant test methods to be used for all protective gloves and the general requirements for design principles, glove assembly, resistance of the glove material to water penetration, harmlessness, comfort and performance as well as the labeling to be carried out by the manufacturer and the information to be provided by the manufacturer.

EN 388:2016+A1:2018 - Protective gloves against mechanical risks:

Protective gloves against mechanical risks must achieve at least Level 1 or Level A in at least one of the properties (abrasion, cut, tear and puncture resistance) of the TDM cut resistance test according to EN ISO 13997:1999.

Abrasion resistance: The number of cycles needed to wear through the test glove.
 Cut resistance: The number of text cycles in which the sample is cut through at constant speed.
 Tear resistance: The force needed to continue tearing the cut sample.
 Puncture resistance: The force needed to puncture the sample using a standardized test stylus.

EN 388:2016+A1:2018

Test criteria	Rating	Article 2112
A = Abrasion resistance	0 - 4	4
B = Cut resistance (Coupe test)	0 - 5	1
C = Tear resistance	0 - 4	2
D = Puncture resistance	0 - 4	1
E = Cut resistance (TDM) according to EN ISO 13997:1999	A - F	X
F = Impact protection test according to EN 13594:2015	P	not assessed

The higher the test number, the better the test performance. X means 'not tested'. P means 'passed'.

Test	1	2	3	4	5
A = Abrasion resistance (number of abrasion cycles)	100	500	2000	8000	-
B = Cut resistance (index) Coupe test	1,2	2,5	5,0	10,0	20,0
C = Tear resistance (N)	10	25	50	75	-
D = Puncture resistance (N)	20	60	100	150	-

Test	A	B	C	D	E	F
E = Cut resistance according to EN ISO 13997:1999 (N)	2	5	10	15	22	30
Article 2112						


EN 13594:2015 - Impact protection:

Every area specified as providing protection against impact must be tested. The test method (dimensions of the test sample) does not permit impact testing of the finger protection. Gloves to protect against mechanical risks may be designed and manufactured in such a way that they offer specific impact damping (e.g. impact protection on the knuckles, the back of the hand, the palms). These gloves must satisfy the requirements of Level 1 according to EN 13594:2015.

The results of the Coupe test must only be taken as indications if blunting occurs during the cut resistance test (B), while the TDM cut resistance test (E) provides reference results in regard to performance.

WARNING:

The overall classification for gloves with two or more layers does not necessarily indicate the performance of the outermost layer. Gloves with mechanical resistance that achieve and demonstrate Level 1 tear resistance (C) or higher must not be worn if there is a risk of them catching when operating machines with moving parts. The tests refer to the palm of the gloves.

Protective gloves against dangerous chemicals and micro-organisms:

EN ISO 374-1:2016+A1:2018, Part 1:	Terminology and performance requirements for chemical risks
EN ISO 374-2:2019, Part 2:	Determination of resistance to penetration
EN ISO 374-4:2019, Part 4:	Determination of resistance to degradation by chemicals
EN ISO 374-5:2016, Part 5:	Terminology and performance requirements for risks by micro-organisms
EN 16523-1:2015+A1:2018, Part 1:	Determination of material resistance to permeation by chemicals - Part 1 Permeation by liquid chemicals under conditions of continuous contact

Definition of terms:

Degradation:	An adverse change in one or more properties of a material used in a protective glove due to contact with a chemical. NB: Examples of degradation include flaking, swelling, disintegration, embrittlement, discolouration, a change in appearance, hardening or softening etc.
Penetration:	Movement of a chemical through materials, seams, pinholes or other imperfections in the protective glove material at a non-molecular level.
Permeation:	Movement process of a chemical through the material of the protective glove material at a molecular level. NB: Permeation includes the following: Absorption of molecules of the chemical into the contacted (outside) surface of a material; Diffusion of the absorbed molecules in the material; Desorption of the molecules from the opposite (inside) surface of the material.

Terminology and performance requirements for micro-organisms risks EN ISO 374-5:2016:

Article	Result article 2112
Resistance to Bacteria & Fungi	passed
Resistance to Virus	passed

Resistance to penetration EN ISO 374-2:2019 - Acceptable quality limit (AQL):

Performance level	Acceptable quality limit (AQL)	Inspection level	Article 2112
3	< 0,65	G1	AQL = 0,65
2	< 1,50	G1	
1	< 4,00	S4	

Resistance to degradation EN ISO 374-4:2019:

Code letter	Test chemical	CAS-RN	Class	Article 2112
A	Methanol	67-56-1	Primary alcohol	swelling, -19.8%
K	Sodium hydroxide 40%	1310-73-2	Inorganic alkali	swelling, -21.5%
L	Sulphuric acid 96%	7664-93-9	Inorganic acid, oxidizing	swelling and hardening, -31.9%
M	Nitric acid 65%	7697-37-2	Inorganic acid, oxidizing	swelling, -8.0%
P	Hydrogen peroxide 30%	7722-84-1	Peroxide	swelling, -3.1%
S	Hydrofluoric acid 40%	7664-39-3	Inorganic acid	not tested
T	Formaldehyde 37%	50-00-0	Aldehyde	no change, -16.6%

Material resistance to permeation by chemicals EN ISO 374-1:2016+A1:2018:

Breakthrough time (min.)	Performance level for permeation
> 10	1
> 30	2
> 60	3
> 120	4
> 240	5
> 480	6


Protective gloves against chemicals are classified in three types, based on their permeation performance:

- Type A: The permeation performance must satisfy at least Level 2 for no less than six test chemicals according to the following table:
- Type B: The permeation performance must satisfy at least Level 2 for no less than three test chemicals according to the following table:
- Type C: The permeation performance must satisfy at least Level 1 for no less than one test chemical according to the following table:

List of test chemicals:

Code letter	Test chemical	CAS-RN	Class	Breakthrough time (min.) art. 2112	Level art. 2112
A	Methanol	67-56-1	Primary alcohol	> 30	2
B	Acetone	67-64-1	Ketone		
C	Acetonitril	75-05-8	Nitrile		
D	Dichloromethane	75-09-2	Chlorinated hydrocarbon		
E	Carbon sulphide	75-15-0	Sulphur-containing organic compound		
F	Toluene	108-88-3	Aromatic hydrocarbon		
G	Diethylamine	109-89-7	Amine		
H	Tetrahydrofuran	109-99-9	Heterocyclic and ether compounds		
I	Ethyl acetate	141-78-6	Ester		
J	n-heptane	142-82-5	Aliphatic hydrocarbons		
K	Sodium hydroxide 40%	1310-73-2	Inorganic alkali	> 480	6
L	Sulphuric acid 96%	7664-93-9	Inorganic acid, oxidizing	> 60	3
M	Nitric acid 65%	7697-37-2	Inorganic acid, oxidizing	> 60	3
N	Acetic acid 99%	64-19-7	Organic acid		
O	Ammonia water 25%	1336-21-6	Organic alkali		
P	Hydrogen peroxide 30%	7722-84-1	Peroxide	> 480	6
S	Hydrofluoric acid 40%	7664-39-3	Inorganic acid	> 240	5
T	Formaldehyde 37%	50-00-0	Aldehyde	> 480	6

Marking of the glove:
Type A:

The six tested chemicals must be identified by their code letter, positioned below the pictogram as shown below. If chemicals not included in the list are also tested, information on the performance levels must be made available in the user instructions.

EN ISO 374-1:2016+A1:2018/Type A



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WARNINGS:

- This information does not provide any details on the actual duration of protection at the workplace; it also does not distinguish between blends and pure chemicals.
- Resistance to chemicals was assessed using samples taken only from the palm and tested under laboratory conditions (apart from the glove measures 400 mm or longer, in which case the cuff is also tested); the stated resistance refers only to the tested chemicals. Resistance may differ if the chemical is present in a blend.
- Users are recommended to check whether the glove is suitable for its intended application, as the conditions at the workplace may differ from those during type testing, depending on the temperature, abrasion and degradation.
- Protective gloves that have already been used may provide less resistance to dangerous chemicals due to changes in their physical properties. The actual service life may be reduced significantly due to degradation, movement, stringing, abrasion and suchlike, caused by contact with chemicals. Degradation may be the most significant factor in regard to aggressive chemicals; this must be duly considered in the selection of protective gloves against chemicals.
- The gloves must always be checked for imperfections before use.
- The manufacturer must provide decontamination instructions for reusable gloves.
- Gloves are for single-use only if they do not include decontamination instructions, and the following warning must be added: To be used only once.

Protection against microorganisms (bacteria, fungi and viruses) according to EN ISO 374-5:2016
Marking of gloves that protect against viruses, bacteria and fungi

ISO 374-5:2016



VIRUS



The bacteriophage penetration test according to ISO 16604:2004 (method B) must be performed and passed if a protection against viruses be stated.

WARNING:

Resistance to penetration was assessed under laboratory conditions and refers exclusively to the tested samples.

Markings on the gloves:

Trademark, art.-no. of manufacturer, size, CE-icon, pictograms with the corresponding numbers of the relevant European PPE standards, i-mark, factory icon with date of manufacture: month/year, hourglass pictogram with expiry date: month/year

	Brand label of manufacturer
2112	Article no. of the manufacturer
10	Size (example)
	Pictograms with the corresponding numbers of the relevant European PPE standards (example, detailed pictogram see previous pages).
	The CE marking confirms compliance with the requirements of European Regulation 2016/425.
0598	Four-digit number of the testing institute, which monitors the quality assurance of the manufacturer. This will be attached to the CE mark on the product.
	i mark: Reference to the manufacturer's information.
	Date of manufacture month/year: 00/0000
	Expiry date month/year: 00/0000

Dimensions/weights article:

Size	Length in cm	Width in cm	Height in cm	Weight in g/pair
9	40	11,5	0,11	126
10	40	12	0,11	135

The above values are approximate and subject to slight variations.

Details of packaging unit:

Size	kg gross	kg net	Length in cm	Width in cm	Height in cm
9	17	15	40	26	40
10	17,7	15,2	40	26	40

The above values are approximate and subject to slight variations.

Hazardous ingredients - REACH (Registration, Evaluation, Authorization and Restriction of Chemicals):

The product is manufactured in compliance with Annex XVII of the European REACH regulation 1907/2006 and contains no hazardous substances in concentrations requiring declaration.

Declaration of Conformity

These gloves are classified as personal protective equipment (PPE). The CE mark confirms that the product satisfies the applicable requirements of Regulation (EU) 2016/425.

Identification and selection:

Selection of gloves must be made according to workplace requirements, type of hazard and relevant environmental conditions. The employer is responsible for choosing the right PSA. Therefore, it is necessary to check the suitability of the gloves for the needs needed before use.

Regulation for use:

The gloves fulfil the safety requirements only if they are worn in an entirely correct manner and in their best condition. Check the gloves for defects or flaws before use. If any tears or holes appear during use of the gloves, they must be disposed of immediately. Make sure that the gloves are not too large or too small and fit exactly. Modifications to this PPE are not permitted. Follow the instructions provided in the manufacturer's information and keep this information in a safe place during the entire service life of the PPE. We assume no responsibility for any damages and/or consequences resulting from improper use.

**Care instructions:**

Do not wash and bleach the gloves. Drying in tumbler is not possible. Do not iron. Professional dry and wet cleaning is not allowed.

Cleaning, care and disinfecting:

Both new and used gloves must be checked carefully for any damage before they are worn. Never store dirty gloves if they are intended for reuse. Users are advised to carefully remove the gloves on the right and then the left if it is not possible to remove the soiling or if doing so would present a danger. Here, use the hand wearing the glove in such a way that the other glove can be removed without coming into contact with the soiling.

Storage and aging:

The gloves should be stored in their original packaging in a dark, cool and dry place, away from direct sunlight and away from any sources of heat. Prolonged contact with direct sunlight or excessive heat will shorten the service life. Avoid any contact of the product with solvents which could result in changes to the product or its properties. The service life is generally up to 3 years when used and stored properly (see also expiry date on the packaging). The dispenser boxes are also marked with the production date (month/year).

Disposal:

Used gloves may be contaminated with environmentally harmful or hazardous substances. Dispose of the gloves in accordance with applicable local laws.

Health risks:

Allergies, caused by the proper use of the gloves, are not yet known. If an allergic reaction still occurs, consult a doctor or dermatologist.

First Aid:

Remove the gloves if they are contaminated with hazardous materials.
In case of contact with skin: immediately consult a doctor if an allergic reaction occurs.
In case of eye contact: wash out the affected eye with water. Consult a doctor immediately.

The notified body responsible for the EU Type Examination:

SATRA Technology Europe Ltd.
Bracetown Business Park
Clonee, Dublin D15 YN2P
Ireland
Kenn-Nr.: 2777

Notified body that monitors the manufacturer's quality assurance based on the production process (module D, in accordance with Annex VIII of PPE regulation (EU) 2016/425):

SGS Fimko Oy
P.O. Box 30 (Särkiniementie 3)
00211 Helsinki
Finland
Notified Body number: 0598

For the full Declaration of Conformity and manufacturer's information, please visit:
www.big-arbeitsschutz.de



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