


## Life Science Gloves Product Information - Global

**Product Family:** HALYARD\* PUREZERO\* MARIN\* Nitrile Exam Gloves  
**Produce Codes:** 48766 (XS), 48767 (S), 48768 (M), 48769 (L), and 48770 (XL)  
**Alt Codes:** LFS111XS, LFS111SM, LFS111MD, LFS111LG, LFS111XL

ISO 374-1/TYPE B  KTP EN ISO 374-1:2016+A1:2018	Permeation Test		Degradation Test
	EN 16523-1:2015+A1:2018		EN ISO 374-4:2019
	minimum breakthrough time (min)	Performance Level	Degradation (%)
Sodium Hydroxide, 40% (K)	>480	6	-39.6
Formaldehyde, 37% (T)	>480	6	32.4
n-Heptane, 99% (P)	>38.9	2	65.6

◆ ISO 21420:2020 Dexterity Classification = 5


### Protection against micro-organisms risks to EN ISO 374-5:2016

Bacteria and fungi (Test method EN ISO 374-2:2019) PASS  
 Viruses (Test Method ISO 16604:2004) PASS



◆ <b>Tested for Use with Chemotherapy Drugs: Per ASTM D6978</b> Standard Practice for Assessment of Resistance of Medical Gloves to Permeation by Chemotherapy Drugs	
<b>Indications of Use</b> The PUREZERO* MARIN* Nitrile Exam Glove with Chemotherapy Drugs, Fentanyl Citrate and Gastric Acid claim is a disposable device intended for medical purposes that is worn on the examiner's hand to prevent contamination between patient and examiner.	
<b>The following chemotherapy drugs and concentration had NO breakthrough detected up to 240 minutes:</b>	
Cisplatin (1 mg/ml) Cyclophosphamide (20 mg/ml) Dacarbazine (10 mg/ml) Doxorubicin HCl (2 mg/ml) Etoposide (20 mg/ml) Fluorouracil (50 mg/ml) Ifosfamide (50 mg/ml) Methotrexate (25 mg/ml)	Mitomycin (0.5 mg/ml) Mitoxantrone HCl (2 mg/ml) Paclitaxel (6 mg/ml) Vincristine Sulfate (1 mg/ml) Fentanyl Citrate Injection (100 mcg/2 ml) Simulated Gastric Acid Fluid/Fentanyl Citrate Injection Mix 50/50 Solution
<b>The following chemotherapy drugs and concentration showed breakthrough detected in less than 90 minutes:</b>	
Carmustine (3.3 mg/ml) Thiotepa (10 mg/ml)	55.2 minutes 88.6 minutes
<b>Warning: Not for use with Carmustine or Thiotepa</b>	

**Product Family: HALYARD\* PUREZERO\* MARIN-XTRA\* Nitrile Exam Gloves**  
**Produce Codes: 48761 (XS), 48762 (S), 48763 (M), 48764 (L), and 48765 (XL)**  
**Alt Product Codes: LFS121XS, LFS121SM, LFS121MD, LFS121LG, LFS121XL**

 ISO 374-1/TYPE B KTP EN ISO 374-1:2016+A1:2018	Permeation Test		Degradation Test
	EN 16523-1:2015+A1:2018		EN ISO 374-4:2019
	minimum breakthrough time (min)	Performance Level	Degradation (%)
Sodium Hydroxide, 40% (K)	>480	6	-39.6
Formaldehyde, 37% (T)	>480	6	32.4
n-Heptane, 99% (P)	>38.9	2	65.6

◆ ISO 21420:2020 Dexterity Classification = 5


**Protection against micro-organisms risks to EN ISO 374-5:2016**

Bacteria and fungi (Test method EN ISO 374-2:2019)      PASS  
 Viruses (Test Method ISO 16604:2004)                      PASS



<p>◆ <b>Tested for Use with Chemotherapy Drugs: Per ASTM D6978</b>                      Standard Practice for Assessment of Resistance of Medical Gloves to Permeation by Chemotherapy Drugs</p>	
<p><b>Indications of Use</b>                      The <b>PUREZERO* MARIN-XTRA* Nitrile Exam Glove</b> with Chemotherapy Drugs, Fentanyl Citrate and Gastric Acid claim is a disposable device intended for medical purposes that is worn on the examiner's hand to prevent contamination between patient and examiner.</p>	
<p><b>The following chemotherapy drugs and concentration had NO breakthrough detected up to 240 minutes:</b></p>	
Cisplatin (1 mg/ml) Cyclophosphamide (20 mg/ml) Dacarbazine (10 mg/ml) Doxorubicin HCl (2 mg/ml) Etoposide (20 mg/ml) Fluorouracil (50 mg/ml) Ifosfamide (50 mg/ml) Methotrexate (25 mg/ml)	Mitomycin (0.5 mg/ml) Mitoxantrone HCl (2 mg/ml) Paclitaxel (6 mg/ml) Vincristine Sulfate (1 mg/ml) Fentanyl Citrate Injection (100 mcg/2 ml) Simulated Gastric Acid Fluid/Fentanyl Citrate Injection Mix 50/50 Solution
<p><b>The following chemotherapy drugs and concentration showed breakthrough detected in less than 90 minutes:</b></p>	
Carmustine (3.3 mg/ml) Thiotepa (10 mg/ml)	55.2 minutes 88.6 minutes
<p><b>Warning: Not for use with Carmustine or Thiotepa</b></p>	

**Product Family: HALYARD\* PUREZERO\* LIMON\* Nitrile Exam Gloves**  
**Produce Codes: 48750 (XS), 48751 (S), 48752 (M), 48753 (L), and 48754 (XL)**  
**Alt Product Codes: LFS311XS, LFS311SM, LFS311MD, LFS311LG, LFS311XL**

ISO 374-1/TYPE B  KTP EN ISO 374-1:2016+A1:2018	Permeation Test		Degradation Test
	EN 16523-1:2015+A1:2018		EN ISO 374-4:2019
	minimum breakthrough time (min)	Performance Level	Degradation (%)
Sodium Hydroxide, 40% (K)	>480	6	-16.55
Formaldehyde, 37% (T)	>480	6	-14.1
n-Heptane, 99% (P)	>34.7	2	69.3

◆ ISO 21420:2020 Dexterity Classification = 5


**Protection against micro-organisms risks to EN ISO 374-5:2016**

Bacteria and fungi (Test method EN ISO 374-2:2019)      PASS  
 Viruses (Test Method ISO 16604:2004)                      PASS



<p>◆ <b>Tested for Use with Chemotherapy Drugs: Per ASTM D6978</b>          Standard Practice for Assessment of Resistance of Medical Gloves to Permeation by Chemotherapy Drugs</p>	
<p><b>Indications of Use</b>          The <b>PUREZERO* LIMON* Nitrile Exam Glove</b> with Chemotherapy Drugs, Fentanyl Citrate and Gastric Acid claim is a disposable device intended for medical purposes that is worn on the examiner's hand to prevent contamination between patient and examiner.</p>	
<p><b>The following chemotherapy drugs and concentration had NO breakthrough detected up to 240 minutes:</b></p>	
Cisplatin (1 mg/ml) Cyclophosphamide (20 mg/ml) Dacarbazine (10 mg/ml) Doxorubicin HCl (2 mg/ml) Etoposide (20 mg/ml) Fluorouracil (50 mg/ml) Ifosfamide (50 mg/ml) Methotrexate (25 mg/ml)	Mitomycin (0.5 mg/ml) Mitoxantrone HCl (2 mg/ml) Paclitaxel (6 mg/ml) Vincristine Sulfate (1 mg/ml) Fentanyl Citrate Injection (100 mcg/2 ml) Simulated Gastric Acid Fluid/Fentanyl Citrate Injection Mix 50/50 Solution
<p><b>The following chemotherapy drugs and concentration showed breakthrough detected in less than 90 minutes:</b></p>	
Carmustine (3.3 mg/ml) Thiotepa (10 mg/ml)	34.3 minutes 87.6 minutes
<p><b>Warning: Not for use with Carmustine or Thiotepa</b></p>	

**Product Family: HALYARD\* PUREZERO\* LIMON-XTRA\* Nitrile Exam Gloves**  
**Produce Codes: 48797 (XS), 48798 (S), 48799 (M), 48800 (L), and 48801 (XL)**  
**Alt Product Codes: LFS321XS, LFS321SM, LFS321MD, LFS321LG, LFS321XL**

ISO 374-1/TYPE B  KTP EN ISO 374-1:2016+A1:2018	Permeation Test		Degradation Test
	EN 16523-1:2015+A1:2018		EN ISO 374-4:2019
	minimum breakthrough time (min)	Performance Level	Degradation (%)
Sodium Hydroxide, 40% (K)	>480	6	-16.55
Formaldehyde, 37% (T)	>480	6	-14.1
n-Heptane, 99% (P)	>34.7	2	69.3

◆ ISO 21420:2020 Dexterity Classification = 5


**Protection against micro-organisms risks to EN ISO 374-5:2016**

Bacteria and fungi (Test method EN ISO 374-2:2019)      PASS  
 Viruses (Test Method ISO 16604:2004)                              PASS



<p>◆ <b>Tested for Use with Chemotherapy Drugs: Per ASTM D6978</b>          Standard Practice for Assessment of Resistance of Medical Gloves to Permeation by Chemotherapy Drugs</p>	
<p><b>Indications of Use</b>          The <b>PUREZERO* LIMON-XTRA* Nitrile Exam Glove</b> with Chemotherapy Drugs, Fentanyl Citrate and Gastric Acid claim is a disposable device intended for medical purposes that is worn on the examiner's hand to prevent contamination between patient and examiner.</p>	
<p><b>The following chemotherapy drugs and concentration had NO breakthrough detected up to 240 minutes:</b></p>	
Cisplatin (1 mg/ml) Cyclophosphamide (20 mg/ml) Dacarbazine (10 mg/ml) Doxorubicin HCl (2 mg/ml) Etoposide (20 mg/ml) Fluorouracil (50 mg/ml) Ifosfamide (50 mg/ml) Methotrexate (25 mg/ml)	Mitomycin (0.5 mg/ml) Mitoxantrone HCl (2 mg/ml) Paclitaxel (6 mg/ml) Vincristine Sulfate (1 mg/ml) Fentanyl Citrate Injection (100 mcg/2 ml) Simulated Gastric Acid Fluid/Fentanyl Citrate Injection Mix 50/50 Solution
<p><b>The following chemotherapy drugs and concentration showed breakthrough detected in less than 90 minutes:</b></p>	
Carmustine (3.3 mg/ml) Thiotepa (10 mg/ml)	34.3 minutes 87.6 minutes
<p><b>Warning: Not for use with Carmustine or Thiotepa</b></p>	

**Product Family: HALYARD\* PUREZERO\*ULTRA VIOLET\* Nitrile Exam Gloves**  
**Product Codes: 48771 (XS), 48772 (S), 48773 (M), 48774 (L), and 48775 (XL)**  
**Alt Product Codes: LFS511XS, LFS511SM, LFS511MD, LFS511LG, LFS511XL**

 ISO 374-1/TYPE B KTP EN ISO 374-1:2016+A1:2018	Permeation Test		Degradation Test
	EN 16523-1:2015+A1:2018		EN ISO 374-4:2019
	minimum breakthrough time (min)	Performance Level	Degradation (%)
Sodium Hydroxide, 40% (K)	>480	6	-2.15
Formaldehyde, 37% (T)	>480	6	-24.9
n-Heptane, 99% (P)	>33.9	2	59.0

◆ ISO 21420:2020 Dexterity Classification = 5

**Protection against micro-organisms risks to EN ISO 374-5:2016**

Bacteria and fungi (Test method EN ISO 374-2:2019)      PASS  
 Viruses (Test Method ISO 16604:2004)                      PASS



<p>◆ <b>Tested for Use with Chemotherapy Drugs: Per ASTM D6978</b>                      Standard Practice for Assessment of Resistance of Medical Gloves to Permeation by Chemotherapy Drugs</p>	
<p><b>Indications of Use</b>                      The <b>PUREZERO* ULTRA VIOLET*</b> Nitrile Exam Glove with Chemotherapy Drugs, Fentanyl Citrate and Gastric Acid claim is a disposable device intended for medical purposes that is worn on the examiner's hand to prevent contamination between patient and examiner.</p>	
<p><b>The following chemotherapy drugs and concentration had NO breakthrough detected up to 240 minutes:</b></p>	
Cisplatin (1 mg/ml) Cyclophosphamide (20 mg/ml) Dacarbazine (10 mg/ml) Doxorubicin HCl (2 mg/ml) Etoposide (20 mg/ml) Fluorouracil (50 mg/ml) Ifosfamide (50 mg/ml) Methotrexate (25 mg/ml)	Mitomycin C (0.5 mg/ml) Mitoxantrone HCl (2 mg/ml) Paclitaxel (6 mg/ml) Vincristine Sulfate (1 mg/ml) Fentanyl Citrate Injection (100 mcg/2 ml)
<p><b>The following chemotherapy drugs and concentration showed breakthrough detected in less than 90 minutes:</b></p>	
Carmustine (3.3 mg/ml) Thiotepea (10 mg/ml)	23.3 minutes 58.2 minutes

**Warning: Not for use with Carmustine or Thiotepa**

**Instructions of Use:**

To don glove, insert hand into cuff and pull up with even pressure over hand and wrist. Adjust as needed for comfort and dexterity. To remove, grasp the outside of the glove near the wrist; pull and peel the now inverted glove away from the hand. When donned properly, no interference issues should exist. Keep gloves in the original packaging for transportation.

**CAUTION:** The testing conditions used are intended to approximate the worst case conditions for clinical use. Testing was conducted on single layer glove material. It is the users' responsibility to determine the applicability of these gloves for their intended use with chemotherapy drugs.

**Storage Recommendations:** Store in a cool, dry place. Open box should be shielded from exposure to direct sunlight intense artificial light, x-ray machines and other sources of ozone. This information does not reflect the actual duration of protection in the workplace and the differentiation between mixtures and pure chemical.

The chemical resistance has been assessed under laboratory conditions from samples taken from the palm only (except in cases where the glove is equal to or over 400 mm where the cuff is tested also) and relates only to the chemical tested. It can be different if the chemical is used in a mixture.

It is recommended to check that the gloves are suitable for the intended use because the conditions at the workplace may differ from the type test depending on temperature, abrasion and degradation. When used, protective gloves may provide less resistance to the dangerous chemical due to changes in physical properties. Movements, snagging, rubbing, degradation caused by the chemical contact etc may reduce the actual use time significantly. For corrosive chemicals, degradation can be the most important factor to consider in selection of chemical resistant gloves.

Before usage, inspect the gloves for any defect or imperfection.

The penetration resistance has been assessed under laboratory conditions and relates only to the tested specimen.