ANALYT MESSTECHNIK



INSTRUCTIONS FOR USE

SKC PERMEA-TEC Pads for Aliphatic Isocyanates

How to test a glove against aliphatic isocyanates in real use with PERMEA-TEC pads 769-3003: where to place the pads, how to read a breakthrough, how to find the safe wearing time, and how to store the pads.

AMTC-IN-0027

About this document

SKC PERMEA-TEC pads for aliphatic isocyanates, catalogue no. 769-3003, show whether a chemical-protective glove lets aliphatic isocyanates through while it is actually worn. The pads sit on an inner glove, under the glove you want to test. If isocyanate permeates the test glove and reaches a pad, the pad turns red-orange. SKC also calls the pads PERMEA-TEC sensors.

At work, gloves are flexed, stretched, pressed and rubbed, and can let chemicals through sooner than laboratory breakthrough data suggest. Testing in real use tells you how long a particular glove protects your workers on their task.

Product and supplied items (p. 6) shows where the pads go. Before use (p. 7) covers what you need, shelf life and storage, Procedure (p. 8) gives the steps and After use and sample handling (p. 9) shows how to read the result. Specifications (p. 10) lists the detection limits and Ordering information (p. 11) the catalogue numbers.

Keep these instructions for the lifetime of the product. The current revision is on the product page at analyt-mtc.com.

The product

Product	Order code	Pack
SKC PERMEA-TEC Pads, Aliphatic Isocyanates	769-3003	20 pads

NOTICE

Check the expiry date on the packaging before use. Past that date the pads may not change colour reliably, so the result is then invalid.

⚠ CAUTION

Pads stored next to food can contaminate it, and eating contaminated food can harm you. Keep the pads at ambient temperature, away from food.

How these instructions mark information

⚠ CAUTION

A hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

Practices not related to personal injury — damage to the product, the process or the sample.

Document information

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Revision history

Rev.	Date	Change
2	October 2026	Quality programme: new document type, number and identity pages.
1	October 2026	First issue.

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CHAPTER 1

Safety

Read the safety message in this chapter before you test a glove.

Intended use

SKC PERMEA-TEC pads for aliphatic isocyanates are for testing, in real use, whether a chemical-protective glove lets aliphatic isocyanates through, and for finding a user-safe time period for that glove. The pads go on the outside of an inner glove, under the glove being tested. Never wear the glove under test without the inner glove.

Safety messages

The same messages also appear where they apply, before the step they concern.

NOTICE

Check the expiry date on the packaging before use. Past that date the pads may not change colour reliably, so the result is then invalid.

⚠ CAUTION

Pads stored next to food can contaminate it, and eating contaminated food can harm you. Keep the pads at ambient temperature, away from food.

⚠ CAUTION

Isocyanates can permeate the glove under test. Always wear two gloves, as SKC recommends: the pads go on an inner glove, and the glove under test goes over them.

NOTICE

The pads have a limited shelf life. Do not use a pack past the date printed on it. Past that date the pads may not change colour reliably, so the result is then invalid.

Protective equipment

SKC recommends double gloving for the test: the inner glove the wearer normally uses, and the glove under test over it.

CHAPTER 2

Product and supplied items

SKC PERMEA-TEC pads for aliphatic isocyanates show whether a chemical-protective glove lets aliphatic isocyanates (HDI, HDMI, IPDI) through while it is worn. A pad that comes into contact turns red-orange.

Supplied: a pack of 20 PERMEA-TEC pads, order code 769-3003.

Where the pads go

Place one pad on the thumb, one on the middle finger and one on the palm, on the outside of the inner glove. These are the areas of a glove that see the most contact and abrasion.

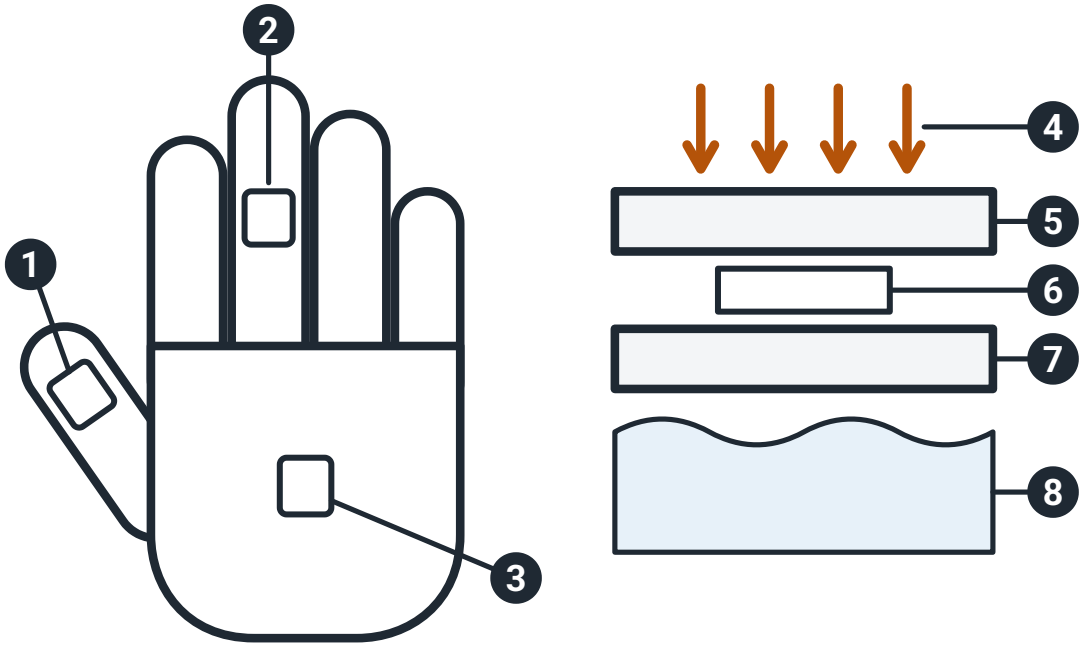


Figure 2-1. Left: pad positions on the inner glove. (1) Thumb. (2) Middle finger. (3) Palm. Right: the layers in section. (4) Aliphatic isocyanate on the outside. (5) Glove under test. (6) PERMEA-TEC pad. (7) Inner glove. (8) Skin.

CHAPTER 3

Before use

Before you start

⚠ CAUTION

Isocyanates can permeate the glove under test. Always wear two gloves, as SKC recommends: the pads go on an inner glove, and the glove under test goes over them.

NOTICE

The pads have a limited shelf life. Do not use a pack past the date printed on it. Past that date the pads may not change colour reliably, so the result is then invalid.

You need, for each round: three fresh pads, the inner glove the wearer normally uses, and the glove to be tested.

Storage and shelf life

Shelf life	Limited; the expiry date is printed on the packaging
Storage	At ambient temperature
Stability	Stable at ambient conditions
Known interferences	None

⚠ CAUTION

Pads stored next to food can contaminate it, and eating contaminated food can harm you. Keep the pads away from food and drink.

CHAPTER 4

Procedure

The test runs in one-hour rounds. After each hour you look at the pads for a colour change.

Run the test

> **⚠ CAUTION**
>
> Isocyanates can permeate the glove under test. Always wear two gloves, as SKC recommends: the pads go on an inner glove, and the glove under test goes over them.

1. Put on the inner glove.
2. Fix a PERMEA-TEC pad to the thumb, the middle finger and the palm of the inner glove, as in Figure 2-1 (p. 6).
3. Put the glove to be tested on over the inner glove and the pads.
4. Work as usual.
5. After one hour, take off the test glove.
6. Remove the three pads.
7. Look at the pads. A pad that has turned **red-orange** shows breakthrough: isocyanate has passed through the test glove.
8. If no pad has changed colour, fix three fresh pads to the inner glove.
9. Put the same test glove back on.
10. Wear it for another hour.
11. Repeat steps 5 to 7.
12. Continue hour by hour to determine the user-safe time period for the glove.

CHAPTER 5

After use and sample handling

Reading the result

Pads after a round	Meaning
No colour change	No breakthrough is indicated. Go on with the next round (step 8).
Red-orange on any pad	A positive indication of breakthrough.

Repeat the rounds to determine a user-safe time period for the glove (step 12). The smallest amounts the pads detect are listed in Detection limits (p. 10).

Disposal

Dispose of used pads and their packaging under local regulations.

CHAPTER 6

Specifications

Detection limits

The lowest detection limit (LDL) is the smallest mass of each isocyanate that turns a pad red-orange.

Aliphatic isocyanate	LDL, µg
Hexamethylene diisocyanate (HDI)	2
4,4-Diisocyanato methylenedicyclohexane (HDMI)	3
Isophorone diisocyanate (IPDI)	3

CHAPTER 7

Ordering information

Order from Analyt-MTC with the order codes.

Product	Order code
SKC PERMEA-TEC Pads, Aliphatic Isocyanates, pack of 20	769-3003
SKC D-TAM Skin Cleanser, personal size, 8 oz	769-5011

SKC lists the D-TAM skin cleanser with these pads, for removing chemical contamination from the skin. Its use is described in the *SKC D-TAM and D-TAM Gold Skin Cleansers — Instructions for Use*.

CHAPTER 8

Service and contacts

SKC PERMEA-TEC Pads for Aliphatic Isocyanates are made by SKC. Analyt-MTC is your contact for them.

Ordering and support

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Ordering and questions

Order PERMEA-TEC pads and the D-TAM skin cleanser from Analyt-MTC with the catalogue numbers in these instructions. Ask Analyt-MTC if you have questions about these instructions or the products. Warranty and returns follow the terms of Analyt-MTC.

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