ANALYT MESSTECHNIK



INSTRUCTIONS FOR USE

SKC PERMEA-TEC Pads for Solvents

How to find out how long a glove protects against solvents in real use: wear PERMEA-TEC pads under the glove, check the indicator every hour and send the charcoal pad to a laboratory when the indicator cannot show the solvent.

AMTC-IN-0031

About this document

Laboratory permeation data do not tell you how long a glove protects in real work, where it is flexed, stretched and rubbed. SKC PERMEA-TEC Pads for Solvents answer that question on the job. The pads are worn under the glove you want to assess and checked every hour. Each pad has two parts. Its indicator turns from white to grey when many common polar organic solvents come through the glove. Its charcoal pad traps whatever solvent arrives, including nonpolar solvents that the indicator does not show, and can be analysed in a laboratory. SKC also calls the pads PERMEA-TEC sensors.

Product and supplied items (p. 6) explains how the test works and what you need. Procedure (p. 8) gives the steps and After use and sample handling (p. 9) shows how to read the indicator. Laboratory analysis (p. 9) explains when to send the charcoal pads to a laboratory, and Ordering information (p. 10) lists the products you need.

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

The product

Order code	769-3050, pack of 20 pads with charcoal pad

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

Title	SKC PERMEA-TEC Pads for Solvents — Instructions for use
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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 messages in this chapter before you test a glove.

Intended use

SKC PERMEA-TEC Pads for Solvents are for assessing, on the job, how long a glove keeps solvents away from the hand. The indicator shows many common polar organic solvents. It does not show nonpolar solvents and responds only poorly to benzene. For these solvents, and for any highly toxic solvent, the result comes from laboratory analysis of the charcoal pads, not from the indicator.

Safety messages

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

NOTICE

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

⚠ CAUTION

Solvents can permeate the glove under test. Keep the inner glove on: fix the pads to the outside of the inner glove, the glove the worker is already wearing, and put the glove to be assessed over it.

⚠ CAUTION

The indicator responds to many common polar organic chemicals, but not to nonpolar solvents, and only poorly to benzene. For these solvents, a white indicator does not show that the glove has held. For these solvents, and for any highly toxic solvent, base the result on laboratory analysis of the charcoal pads, not on the indicator.

⚠ CAUTION

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

Protective equipment

SKC recommends double gloving for the test: the glove the worker normally wears stays on as the inner glove, and the glove to be assessed goes over it.

CHAPTER 2

Product and supplied items

The worker wears two gloves with the pads between them. Every hour, the outer glove comes off and the indicators are checked for grey. The aim is to determine a user-safe time period for the glove.

How the test works

SKC recommends double gloving for this test. The glove the worker normally wears stays on as the inner glove and carries the pads on its outside. The glove you want to assess is pulled on over it. Solvent that permeates the outer glove reaches a pad.

One pad goes on the thumb, one on the middle finger and one on the palm, the parts of a glove with the most contact and wear. The solvent pads need no developing solution: you read the indicator as soon as the pad comes out.

What you need

Item	Order code	Used for
PERMEA-TEC Pads for Solvents	769-3050	Three pads for each hour of testing
The glove normally worn	—	Inner glove, carries the pads
The glove to be assessed	—	Outer glove
Airtight vials	—	Only if the charcoal pads go to a laboratory

CHAPTER 3

Before use

Before you start

NOTICE

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

⚠ CAUTION

Solvents can permeate the glove under test. Keep the inner glove on: fix the pads to the outside of the inner glove, the glove the worker is already wearing, and put the glove to be assessed over it.

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

⚠ CAUTION

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

CHAPTER 4

Procedure

Run the test

1. Fix one pad each to the thumb, the middle finger and the palm, on the outside of the glove the worker is wearing.
2. Pull the glove to be assessed on over the first glove. The worker then carries on with the normal task.
3. After **one hour**, take off the outer glove.
4. Remove the three pads underneath it. Keep the pads if their charcoal is to be analysed (see Laboratory analysis (p. 9)).

> **⚠ CAUTION**
>
> The indicator responds to many common polar organic chemicals, but not to nonpolar solvents, and only poorly to benzene. For these solvents, a white indicator does not show that the glove has held. For these solvents, and for any highly toxic solvent, base the result on laboratory analysis of the charcoal pads, not on the indicator.

5. Look at the indicators. A change from **white to grey** shows that solvent has broken through the outer glove (see Reading the pads (p. 9)).
6. If every indicator is still white, fix three fresh pads to the inner glove.
7. Put the same outer glove back on and work for another hour.
8. Repeat steps 3 to 5.
9. Repeat the hourly cycle to determine the user-safe time period.

CHAPTER 5

After use and sample handling

Reading the pads

An indicator that stays white shows no breakthrough of the solvents it responds to. A grey indicator shows that solvent has come through the outer glove. No interfering substances are known for these pads.

How much solvent it takes to turn the indicator grey depends on the solvent. It is normally between **0.5 and 5 mg**.

> **⚠ CAUTION**
>
> The indicator responds to many common polar organic chemicals, but not to nonpolar solvents, and only poorly to benzene. For these solvents, a white indicator does not show that the glove has held. For these solvents, and for any highly toxic solvent, base the result on laboratory analysis of the charcoal pads, not on the indicator.

Laboratory analysis

The charcoal pad on each PERMEA-TEC pad absorbs the solvent that reaches it and holds it for the laboratory. Gas chromatography then shows which solvent came through the glove, including solvents the indicator cannot show.

When to use the charcoal pad

Situation	What the charcoal pad does
The workers handle a solvent mixture	Identifies which solvent permeated the glove
Benzene or another nonpolar solvent	Primary result: the indicator responds poorly or not at all
A highly toxic solvent	Primary result: do not rely on the indicator alone

Sending pads to the laboratory

1. Take the charcoal pad off each PERMEA-TEC pad that is to be analysed.
2. Put it in an airtight vial straight away and close the vial.
3. Send the vials to the laboratory and ask for solvent desorption and analysis by gas chromatography (GC).

Disposal

Dispose of used pads and their packaging under local regulations.

CHAPTER 6

Ordering information

Order from Analyt-MTC with the order codes.

Table 6-1 Pads and related products

Description	Order code
PERMEA-TEC Pads for Solvents, with charcoal pad, pack of 20	769-3050
D-TAM Skin Cleanser, personal size, 8 oz, for removing water-insoluble contaminants from the skin	769-5011

CHAPTER 7

Service and contacts

SKC PERMEA-TEC Pads for Solvents 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 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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