



# **SAFE-TAINER**

## **SYSTEMS**

### **SAFECHEM Service Elements**

**MAXICHECK test kits**

**MAXISTAB stabiliser concentrates**

**Laboratory analyses**

**Solvent training & chemical and technical consulting**

## Safe handling of chlorinated solvents with the SAFE-TAINER system



Through the development of an innovative closed-loop system, SAFECHEM Europe GmbH enables the safe and sustainable use of chlorinated solvents (CHC) which are essential in meeting the high-quality demands of today's surface cleaning sector. As a result, the product-specific risks associated with these products are virtually controlled.

The SAFE-TAINER™ system and associated service elements provide quality-oriented, legally compliant and economical cleaning, in addition to a very high level of process safety for the user.

[www.safechem-europe.com](http://www.safechem-europe.com)

## Optimum operational security with the MAXICHECK test kits and MAXISTAB stabiliser concentrates

for DOWPER™, DOWPER MC, DOWPER N, NEU-TRI™ E, HI-TRI™ SMG and MECTHENE™ MC

### Problem: acidification in chlorinated solvents (CHC)

The degreasing of metal surfaces with chlorinated solvents leads to a contamination of the solvent with lubricants, fats and their decomposition products.

To prevent rapid solvent stabiliser degradation, only the use of fresh Dow-branded products in the SAFE-TAINER system is recommended. However, under certain operating conditions (e.g. fully enclosed equipment, high temperature, high soil concentration), the contaminants may decompose further, leading to the formation of acid, hence reacting with the stabilisers of the solvent. This may result in an insufficiently stabilised solvent causing acid catalysed decomposition of chlorinated solvents.

### The consequence: corrosion damage

Acidification significantly reduces the effective life time of the solvent. In addition, it may cause the corrosion of the cleaned metal parts as well as damage to the cleaning equipment. Post-treatment of cleaned parts and equipment maintenance can increase operating costs substantially.

### The solution: testing and re-stabilisation

All chlorinated solvents contain application-specific stabilisers to avoid acidification. During normal use, the stabiliser concentration in the solvent decreases slowly. In many cases, re-stabilisation is necessary, particularly under high strain (internal distillation) in order to:

- protect both the cleaning system and the parts to be cleaned from corrosion
- maintain the high cleaning level
- increase the life of the solvent used.

The MAXICHECK™ test kits listed below enable rapid and effective control of the solvent stabilisation and also provide information on required re-stabilisation with MAXISTAB™ stabiliser concentrates. For reasons of product safety and process reliability, re-stabilisation of the solvent should only be carried out with MAXISTAB stabiliser concentrates from Dow.

This is how easy it is to find the right MAXICHECK test kits and MAXISTAB stabiliser concentrates:

Solvent	<b>MAXICHECK</b> MAXICHECK test kits For measuring ...		<b>MAXISTAB</b> stabiliser concentrates For stabilising ...	
	Alkalinity and pH-value	Acid acceptance (AA)	Alkalinity and pH-value	Acid acceptance (AA)
DOWPER	X	–	DK-2N	–
DOWPER MC	X	X	DK-2N	DJ-1N
DOWPER N	X	X	DM-4	DL-3
NEU-TRI E	X	X	NV-2	NT-1
HI-TRI SMG	X	–	NV-2	–
MECTHENE MC	–	X	–	MD-1

## MAXICHECK Alkali test kit



(Alkalinity and pH-value)



- Recommended in particular for use with alkaline metal processing oils and lubricants
- Measuring the alkalinity reserve and the pH-value of DOWPER, DOWPER MC, DOWPER N, NEU-TRI E and HI-TRI SMG
- Simple, direct measurement

Contents: padded, hard-shell case with solvent equipment and operating instructions  
 1 x 15 ml reagent I  
 1 x 250 ml reagent II  
 1 x 125 ml reagent III in dispensing  
 1 x 250 ml reagent III in refill bottle  
 2 Alkali slide rules

► Please order this item as well as all refill packs from your SAFE-TAINER system supplier.

### Refill pack I for MAXICHECK Alkali test kit



- For measuring the pH-value and the alkalinity

Contents: 1 x 15 ml reagent I  
 1 x 250 ml reagent II  
 1 x 250 ml reagent III  
 5 pipettes  
 2 suction cups

### Refill pack II for MAXICHECK Alkali test kit



- For measuring the pH-value

Contents: 1 x 15 ml reagent I  
 2 x 250 ml reagent II

### Refill pack III for MAXICHECK Alkali test kit



- For measuring the alkalinity

Contents: 3 x 250 ml reagent III

## MAXICHECK AA test kit



(Acid acceptance)



- Measuring the total acid acceptance of DOWPER MC, DOWPER N, NEU-TRI E and MECHENE MC

Contents: padded, hard-shell case with solvent equipment and operating instructions  
 1 x 100 ml titration solution - hydrochloric acid  
 1 x 100 ml titration solution - sodium hydroxide  
 1 x solvent analysis

► Please order this item as well as all refill packs from your SAFE-TAINER system supplier

### Refill pack I for MAXICHECK AA test kit



- Test with hydrochloric acid and sodium hydroxide

Contents: 4 x 100 ml titration solution - hydrochloric acid  
 6 x 100 ml titration solution - sodium hydroxide  
 5 pipettes  
 2 rubber suction cups

### Refill pack II for MAXICHECK AA test kit



- Test with hydrochloric acid

Contents: 6 x 100 ml titration solution - hydrochloric acid

### Refill pack III for MAXICHECK AA test kit



- Test with sodium hydroxide

Contents: 6 x 100 ml titration solution - sodium hydroxide

**MAXISTAB stabiliser concentrates**



For the re-stabilisation of chlorinated solvents in the SAFE-TAINER system, for reasons of product security, you should use exclusively MAXISTAB stabiliser concentrates. Our staff will be glad to advise you on use and dosage.

► Please order all stabiliser concentrates from your SAFE-TAINER system supplier.

MAXISTAB stabiliser concentrates are available in various packaging units. Please specify the desired packaging unit when ordering.



1-l-can

**MAXISTAB DJ-1N**

To increase the level of acid acceptance of DOWPER MC available as:

- 1-l-can
- 6 x 1-l-can
- 10-l-can

**MAXISTAB DK-2N**

To increase the alkalinity reserve and the pH-value of DOWPER and DOWPER MC available as:

- 1-l-can
- 6 x 1-l-can
- 10-l-can



6 x 1-l-can

**MAXISTAB DL-3**

To increase the level of acid acceptance of DOWPER N available as:

- 1-l-can
- 6 x 1-l-can

**MAXISTAB DM-4 / MAXISTAB DM-4N**

To increase the alkalinity reserve and the pH-value of DOWPER N (MAXISTAB DM-4N in special cases also for DOWPER MC) available as:

- 1-l-can
- 6 x 1-l-can

**MAXISTAB NT-1**

To increase the level of acid acceptance of NEU-TRI E available as:

- 1-l-can
- 6 x 1-l-can
- 10-l-can



10-l-can

**MAXISTAB NV-2**

To increase the alkalinity reserve and the pH-value of HI-TRI SMG and NEU-TRI E available as:

- 1-l-can
- 6 x 1-l-can
- 10-l-can

**MAXISTAB MD-1**

To increase the level of acid acceptance of MECTHENE MC available as:

- 1-l-can
- 6 x 1-l-can

### Professional protection for your cleaning plant

In most cases, fast on-site testing will provide adequate information for restabilisation. However, in some cases the cause for rapid loss of stabilisation and insufficient cleaning efficiency may only be determined by comprehensive laboratory testing.

For reasons of product safety and due to values determined from experience, a **regular, approximately biannual laboratory solvent analysis is advisable.**

As part of our range of services, we offer: checking your solvent and oil samples with laboratory tests (Solvent analysis / Oil compatibility / Special analysis).

#### Our services - your advantages

- Analysis in the modern research laboratory of Dow Europe GmbH, Horgen/Switzerland
- Various state-of-the-art analytical methods
- Detailed report of results by fax, e-mail or mail; where appropriate with recommendations for problem solution or methods for solvent maintenance
- Close cooperation with leading manufacturers of cleaning systems and lubricants in Europe

► Please order laboratory analyses from your **SAFE-TAINER** system supplier.

#### Solvent analysis

- Determination of important factors of solvent quality (such as water content, stabiliser profile, total acid acceptance, co-products, decomposition products)
- Measurement of the pH-value

Contents: 1 x 250 ml sample bottle  
1 application form  
1 pre-addressed shipping package  
shipping documents

#### Oil compatibility test

- Prognosis of how contaminants (such as oils, cooling lubricants, etc.) react with the solvent or stabiliser system under actual operating conditions

Contents: 1 x 250 ml sample bottle  
1 application form  
1 pre-addressed shipping package  
shipping documents

#### Special analysis

- Expanded analysis of the solvent or oil used and problem-oriented investigation after discussion with the customer

Contents: 1 x 500 ml sample bottle  
1 application form  
1 pre-addressed shipping package  
shipping documents



## Solvent training

SAFECHEM Europe GmbH offers you and your employees a comprehensive solvent training for the safe and responsible handling of CHC.

The topics and contents of this course are:

- Chlorinated solvents
- The safe handling of CHC
- Equipment protection and solvent maintenance: Solvent withdrawal at the cleaning machine  
accomplishment of the solvent maintenance with MAXICHECK test kits
- Use of MAXISTAB stabiliser concentrates for quality assurance and equipment protection
- Monitoring the alkalinity, pH-value and acid acceptance
- Handling of the SAFE-TAINER system

The solvent training takes place in-house.

For further information please contact your local supplier or contact us directly:

Phone: +49 (0)211 4389-300

Fax: +49 (0)211 4389-389

E-mail: [service@safecchem-europe.com](mailto:service@safecchem-europe.com)

## Chemical and technical consulting



The SAFECHEM and Dow Technical Service Departments provide consultation on all issues related to the use of chlorinated solvents, from handling practices to the optimisation of the cleaning process or implementation of new solvents and cleaning solutions.

Our fees for chemical and technical consultation depend on the scope and nature of the assistance provided.

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Fax: +49 (0)211 4389-389

E-mail: [service@safecchem-europe.com](mailto:service@safecchem-europe.com)

You can order the items in this catalogue from your SAFE-TAINER system supplier. He can also supply you with the current price list and delivery conditions.

**MAXICHECK test kits****MAXISTAB stabiliser concentrates****Laboratory analyses****Solvent training & chemical and technical consultation**

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You can order original accessories for the SAFE-TAINER system directly from SAFECHEM Europe GmbH. For further details, please see the "Catalogue of original accessories: SAFE-TAINER system for chlorinated solvents".

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Distributor stamp:

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