socomore



VOC Reduction solutions

Do you know how to reduce your VOC emissions?

The Surface Company

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SOCOMORE has been developing Specialty Chemicals since 1972 . For over 10 years we have been combining our chemical solutions with textiles for surface preparation and protection operations.

Our chemical expertise and constant monitoring of HS&E (Health, Safety and Environment) regulations enables us to offer customers a wide range of solutions that help to reduce environmental impact and improve safety in the workshop.

VOC Reduction

Our objective

Help to reduce your VOC (Volatile Organic Compound) emissions at source and improve operator safety *while taking into account your:*

- *regulatory constraints*
- *requirements: application, soils, material compatibility, approvals, etc.*
- *process limitations: cycle duration, equipment, etc.*

What is a VOC?

According to European regulation, a VOC (Volatile Organic Compound) is defined as an organic compound that contains carbon and has a a vapor pressure higher than 10 Pascal (0.01 kPa) at 20°C (293.15 K). Examples of VOC products are Acetone, MEK and Butyl acetate.

The VOC rate can be expressed:

- in %: percentage of VOC weight compared with the product total weight
- in grams / litre: weight of VOC contained in one litre of product

➤ ***Example:***

DIESTONE SR	100% VOC	910 g/litre
DIESTONE DLS	100% VOC	900 g/litre
BUTYL ACETATE	100% VOC	886 g/litre
DIESTONE DLV	70% VOC	693 g/litre
SOCOCLEAN A2501	29% VOC	287 g/litre
SOCOCLEAN AQUAFORTE	3% VOC	32 g/litre
DIESTONE A8284 / ZERO HD	0% VOC	0 g/litre

To check the VOC content of a product, ask the supplier or refer to chapter 9 in the SDS (Safety Data Sheet) .

Since VOC emissions have a direct or indirect impact on the environment and health, the European Union has several directives (1999/13/CE & 2001/81/CE) aimed at reducing VOC emissions in relevant sectors. National and local authorities may also impose restrictive measures on production and maintenance sites.

➔ ***Refer to product TDS for further information.***
To view our full product range visit our website www.socomore.com.

A wide range of solutions to reduce your VOC emissions

To reduce VOC emissions, we can look at 3 different factors:

- the product's volatility
- the rate of VOC contained in the product
- the application process

AMOUNT OF VOC EMISSIONS = Amount of solvent used x VOC rate
(for preparation of a given surface)

Lower VOC Solvents

1 - 100% VOC SOLVENT WITH LOWER VOLATILITY

This type of solvent has a controlled evaporation rate, significantly reducing consumption and VOC emissions during application.

Volatility is measured by the evaporation rate and is based on the evaporation speed of the product in comparison with butyl acetate. At a given temperature, a solvent with a higher evaporation rate will evaporate quicker than a solvent with a lower evaporation rate. Consequently, the solvent does not remain on the surface for as long so a larger volume has to be used to obtain the same cleaning result. Therefore, more solvent is consumed during the cleaning operation.

Example: replacing MEK with DIESTONE DLS (which has an evaporation rate 7 times lower than MEK) allows a significant reduction in VOC emissions.

EVAPORATION RATE 100% VOC PRODUCTS	
Acetone	5.6
MEK	3.8
Butyl acetate	1
DIESTONE DLS	0.5
DIESTONE A8290	0.24
DS 108	0.22
DIESTONE SR	0.12

2 - SOLVENT WITH A LOWER VOC RATE

This type of product is partially formulated with components that are non VOC. Per one litre of product, the VOC's emitting source is reduced.

Example: with SOCOCLEAN A2501 (30% VOC) the amount of VOC emitted is divided by 3.3 compared with a 100% VOC product. Furthermore, its evaporation rate of only 0.24 allows further VOC reductions.

- SOCOCLEAN A2501 (30% VOC)
- DIESTONE DLV (70% VOC)
- DIESTONE G11 (70% VOC)

Non VOC solvents

Classified as non **VOC according to European regulation** as the saturated vapor tension is < 10 Pa at 20°C. Allows complete elimination of VOC emissions in the relevant application.

Example:

- DIESTONE ZERO HD
- DIESTONE A8284
- HYSO 93
- SOCOSOLV A3582

Aqueous cleaners

Water-based, VOC free cleaners can replace solvents in some processes, helping to achieve zero carbon emissions. They are suitable for inter-operation or general cleaning operations prior to treatments such as NDT and painting, etc. They can be applied by immersion (with or without ultrasound), spray or wipe.

Example:

- SOCOCLEAN AQUAFORTE
- SOCOCLEAN EXTERIOR AIRCRAFT CLEANER
- SOCOCLEAN APC
- SOCOCLEAN A2519
- SOCOCLEAN PC1
- COMORAL DXP
- D5 CLEAN 2A



Lower VOC Solvents | *Aqueous cleaners* | *Non VOC solvents*

VOC EMISSION LEVEL

Our solutions are also available in pre-saturated wipes which help to reduce product consumption (see next page).

Pre-saturated wipes

SOCOMORE offers a wide range of wipes pre-saturated with formulated solvents, chemicals or water-based solutions. Supplied pre-impregnated with a measured quantity of cleaning solution per wipe, pre-saturated wipes standardize cleaning operations and offer economic, environmental and safety advantages over bulk liquids. They reduce solvent consumption, VOC emissions, health & safety risks and operational costs.

Controlled evaporation rate

- **Reduction in solvent consumption**
- **Reduction in fire risks**

- **Reduction in VOC emissions**
- **Improved quality & production performance**
- **Reduction in waste**
- **Improved working conditions**

See our *Pre-Saturated Wipe Solutions* brochure to learn more.



Our ready-to-use pre-saturated wipes avoid contamination risks and, depending on the cloth, meet a range of requirements from low lint to lint free. Various packaging options are available to facilitate ease of use, transport and storage on site including single use, refillable and reusable packaging.

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Supporting our customers worldwide is our priority. We have sales and technical teams, subsidiaries and strategic partnerships located around the world to service our customer's needs.

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