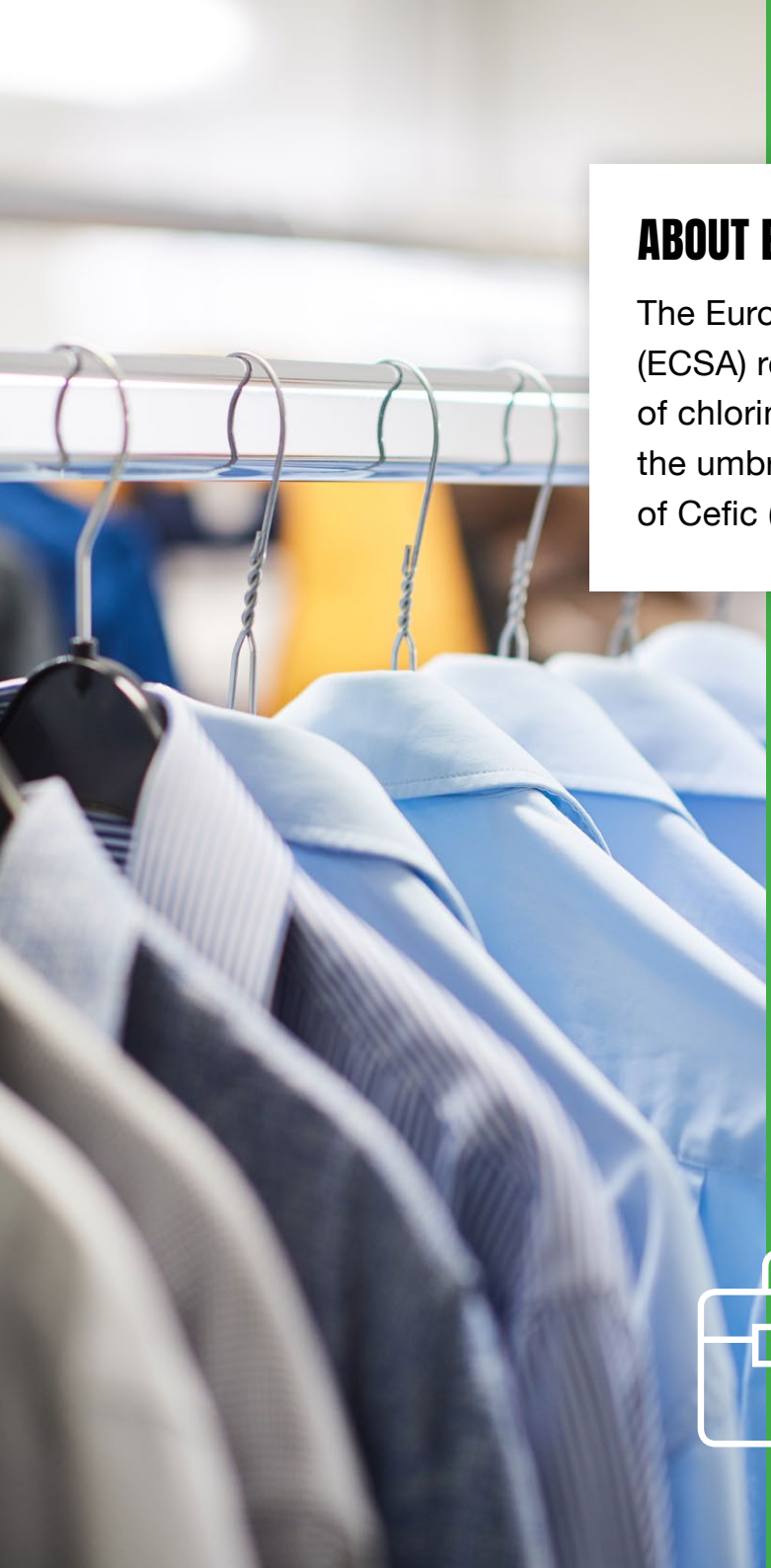
www.chlorinated-solvents.eu

ecsa

european chlorinated solvents association

INFORMING, PROMOTING AND DEFENDING THE SAFE, SUSTAINABLE AND SUCCESSFUL USE OF CHLORINATED SOLVENTS



ABOUT ECSA

The European Chlorinated Solvents Association (ECSA) represents the European manufacturers of chlorinated solvents. ECSA operates under the umbrella of the Euro Chlor sector group of Cefic (European Chemical Industry Council).

ECSA OBJECTIVES

Inform, promote and defend the safe, sustainable and successful use of chlorinated solvents.

ECSA aims to proactively inform its key audiences - predominantly its downstream users and regulators at EU and national level - about the benefits and safe use of chlorinated solvents.

To support this work, ECSA has developed an online Product & Application Toolbox available directly from the homepage of www.chlorinated-solvents.eu, to provide users with comprehensive information about the safe and sustainable use of the products.

BENEFITS OF CHLORINATED SOLVENTS

1. They are vital to society

2. They are well suited to the circular economy

3. They can be used safely and sustainably

1. THEY ARE VITAL TO SOCIETY

Chlorinated solvents can help to save lives and improve human health, for example in the development of pharmaceuticals and precision cleaning of medical devices.

New life-saving pharmaceuticals are synthesised using methylene chloride. This molecule is also a feedstock for fluorinated propellants for asthma inhalers crucial to countless patients across the world.

Chlorinated solvents also play a key role in various other beneficial applications. Trichloroethylene even helps in the preparation of **high-tech innovations** such as flexible ceramic sheets and fuel cells to improve their performance.

2. THEY ARE WELL SUITED TO THE CIRCULAR ECONOMY

Chlorinated solvents have **unique recycling properties,** which makes their eco-efficiency in modern equipment unrivalled.

Methylene chloride, for instance, is an extraction medium to produce pharmaceutical active substances (APIs). It can often be reused in these processes, and spent solvents can be recycled in other applications after simple distillation.

Perchloroethylene can be used for many cleaning cycles in today's high-performance cleaning machines, meaning less solvent is needed. Spent solvents can be easily and efficiently recycled in the same applications, while certified recyclers ensure the safe disposal of cleaning residues.

3. THEY CAN BE USED SAFELY AND SUSTAINABLY

Chlorinated solvents are **well studied substances** that have been used for decades. REACH and other regulations, distributor assessments and ECSA guidance, such as the ECSA Safe Handling Brochure, support the safe handling along the supply chain. Chlorinated solvents have also led to the development of state-of-the-art handling and storage technologies for **emission and contact free solvent transfer.**

Perchloroethylene, for example, helps to **save water and energy** in professional textile cleaning. Unlike many other solvents, it improves safety in handling as it is non-flammable. Furthermore, new technology is being developed that recycles the solvent on-site, meaning a reduced carbon footprint and increased safety due to less handling.

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ABOUT CHLORINATED SOLVENTS

There are currently three chlorinated solvents; Methylene chloride, Perchloroethylene and Trichloroethylene. The three related co-products Methyl chloride, Chloroform and Carbon tetrachloride are also recognised by ECSA.

Methylene chloride

Also known as dichloromethane, this clear non-flammable liquid is mainly used as a solvent in closed industrial systems to produce pharmaceuticals, fine chemicals, agrochemicals, cellulose acetate, etc. This molecule can also be a feedstock for the refrigerant R 32 and a laboratory agent. It can even help to decaffeinate unroasted coffee beans and tea.

Perchloroethylene

Perchloroethylene, a clear non-flammable heavy liquid, is the solvent choice for most dry cleaners and is also employed in industrial textile treatment, metal surface cleaning and catalyst regeneration for oil refinery applications. In addition, it is a raw material for fluorinated hydrocarbons, fluorinated polymers and other fluorinated derivatives.

Trichloroethylene

Previously used as a solvent in metal cleaning, today this clear non-flammable heavy liquid mostly serves to produce other chemicals, for instance fluorinated hydrocarbons for refrigeration or air conditioning systems and as a laboratory solvent.

Methyl chloride

Methyl chloride is a highly flammable gas, which features almost exclusively as an intermediate in closed industrial systems. It can be used to produce methyl celluloses, silicone resins, agrochemicals, water treatment chemicals, pharmaceuticals, surfactants and metal organic reagents.

Chloroform

A clear non-flammable liquid used mainly as an industrial intermediate to manufacture fluoropolymers, chloroform can also be an industrial extraction solvent or laboratory agent.

Carbon tetrachloride

A clear non-flammable heavy liquid, which is applied almost exclusively as a chemical intermediate. It has found use as the building block for innovative refrigerants called HFOs, and bulletproof fibres.

ECSA MEMBERS

INOVYN, UK
(producing in France & Italy)

Olin Corporation (producing in USA and Blue Cube Assets producing in Germany)

KEM ONE, France
(producing in France)

Spolchemie, Czech Republic
(producing in Czech Republic)

Nouryon, Netherlands
(producing in Germany)

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