

**7 YRDS**  
DECONSERVICE

**ECKHARDT**  
TEXTILREINIGUNG



**WE PROTECT  
FROM POLLUTANTS**

THE CLEANING AND DECONTAMINATION PROFESSIONALS



## OUR MISSION

**7YRDS DECONSERVICE AND  
TEXTILREINIGUNG ECKHARDT  
SHARE THE SAME PASSION  
FOR FULLY CLEANED, DECON-  
TAMINATED AND DISINFECTED  
WORKWEAR.**

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7YRDS Deconservice and Textilreinigung ECKHARDT are companies of the 7YRDS Group GmbH.  
The 7YRDS Group is awarded as „Innovation Champion 2023“.

The FOCUS BUSINESS Innovation Award honors outstanding innovative companies of the year.  
The 7YRDS Group GmbH convinced as an impulse generator through the development of new or the further  
development of existing products and services, through new business models and structures.

# EFFECTIVE CLEANING AND MAINTENANCE OF PROTECTIVE EQUIPMENT

## OUR EXPERTISE

7YRDS Deconservice is the first and largest German exclusive decontamination center for the cleaning and maintenance of personal protective equipment. Whether protective suits, gloves, boots or respirators – our cleaning procedures and maintenance processes meet the highest cleanliness standards as well as all regulations and requirements, such as the GefStoffV.



Textilreinigung ECKHARDT is a cleaning company specializing in protective clothing for firefighters and rescue services with a company history of more than 150 years at its location in Oldenburg.

**With more than 40 employees at both locations, we are the largest provider of professional cleaning and care of firefighters' protective clothing in Germany.**



## CLEANING AND DECONTAMINATION FROM THE PROFESSIONALS

For more information about 7YRDS Deconservice and Textilreinigung ECKHARDT, our service portfolio and other services, please visit our websites:

[7yrd-deconservice.com/en](https://7yrd-deconservice.com/en)  
[textilreinigung-eckhardt.de/en](https://textilreinigung-eckhardt.de/en)

# CANCER RISKS EFFECTIVELY MINIMIZE

## CLEAN IN COMPLIANCE WITH THE LAW

In Germany, more than 40,000 full-time and 1.3 million volunteer firefighters are active.

Extensive international studies, have now demonstrated **the clear link between cancers in firefighters who are exposed to hazardous substances** such as PAHs (polycyclic aromatic hydrocarbons) from flue gases, including other components, prolonged exposure to these pollutants through the wearing of contaminated protective equipment.

Canada, for example, introduced a first responder compensation law in 2003 that legally recognizes 17 types of cancer as occupational diseases. Pollutants are mostly contained in smoke gases, which penetrate the protective clothing during every indoor attack and accumulate in all clothing components – especially through the protective suit membrane.

The pollutants settle in the personal protective equipment of the emergency personnel during use. Conventional washing processes can reduce the concentration, but not to a legally prescribed pollutant value of 1 mg/kg for each individual substance (according to REACH regulation). As a result, exposure to pollutants remains at the expense of the wearer of the protective equipment throughout the entire service life of the clothing.

The European Union has already taken action with the Directive 2004 / 37 / EG of the European Parliament and of the Council of 29 April 2004 on the "Protection of workers from the risks related to exposure to carcinogens or mutagens at work", which the EU countries have transposed into national standards - in Germany, for example, into the Ordinance on Hazardous Substances (GefStoffV) and other legal regulations, which you can read on our websites at:

[7yrds-deconservice.com/legal-basis](http://7yrds-deconservice.com/legal-basis) or at [textile-cleaning-eckhardt.com/legal-basis](http://textile-cleaning-eckhardt.com/legal-basis).

**7YRDS Deconservice and Textilreinigung ECKHARDT use liquid CO<sub>2</sub> ("LCO<sub>2</sub>") in an innovative process to decontaminate PPE (protective suits, flame retardant hoods, gloves, boots, etc.) effectively and in a material-friendly manner and to reduce all hazardous substances to a level below the detection limit. This clearly fulfills the legal cleaning requirements.**

**We would be happy to provide you with detailed and personal information about the extensive legal obligations, technical requirements and documentation requirements, as well as our complete offerings.**



# OPTIMAL CLEANING IS THE BEST PREVENTION

7YRDS Deconservice and Textilreinigung ECKHARDT offer a comprehensive all-around service for the inspection, cleaning and repair of protective clothing for emergency forces. Cleanliness, reliability and punctuality are our top priorities. Our specially trained employees inspect and clean your protective equipment professionally, cooperation with leading protective clothing manufacturers.

**The result will convince you.** The protective equipment we clean complies with all legally regulated pollutant limits of the GefStoffV, the REACH regulation and other legal requirements.

## OUR SERVICE PROMISE

- 1. Decontamination of all pollutants** below legal limits
- 2. Gentle washing processes** with as little material wear as possible
- 3. Re-impregnation** according to EN 469
- 4. Testing of suitability for use** according to DGUV 205 - 035 (Annex 2)
- 5. Use of 100 % self-produced green electricity** at the site
- 6. Overall process according to ISO 9001** (quality management) **and ISO 14001** (environmental management) certified





# OUR WIDE RANGE OF SERVICE LEAVES NOTHING TO BE DESIRED



## 1. TRANSPORT

Collection of the PPE from the customer on site or at the Firestation, delivery by courier service or alternatively by the customer.



## 2. TEST

Checking the PPE for any major damage and forgotten items.



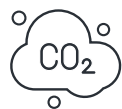
## 3. PREWASH

Depending on the degree of soiling Pre-treatment and washing in wet cleaning process. At the end of the washing process, a spray impregnation (in accordance with EN 469) is applied into the machine.



## 4. DRYING

Drying of the equipment in special drying cabinets and drying-lines. At the same time activation of the impregnation.



## 5. DECONTAMINATION

Material-friendly flooding with liquid CO<sub>2</sub> (LCO<sub>2</sub>) to remove all substances hazardous to health to a level below the legal limits.



## 6. MAINTENANCE / REPAIR

In consultation with the customer repair of damaged clothing (with manufacturer's certificate) according to legal requirements.



## 7. PROOF OF PERFORMANCE

**Option to have an annual maintenance and a "reset of PPE".**  
Testing according to DGUV.



## 8. RETURN TRANSPORT

Return shipment by courier service, collection by the customer or return transport by us.



"We can offer our customers a maximum level of service for the decontamination of their clothing, which is unique in Germany. The interaction of our outstanding washing processes and LCO<sub>2</sub>-technology offers maximum protection."

**MICHAEL WERNECKE**

Managing Director 7YRDS Deconservice GmbH and Textilreinigung ECKHARDT GmbH

"Our focus is on the processing of fire department protective suits and rescue clothing. This service is particularly appreciated by the Hamburg and Bremen fire departments, as well as many fire and rescue services around Oldenburg."

**MICHAELE WERNECKE**

Operations Manager  
Textilreinigung ECKHARDT GmbH

"The LCO<sub>2</sub> technology is the cleaning process that complies with legal requirements and allows our employees to work safely every day. For us, clean means really clean and without pollutants."

**GEERT JEUKEN**

Authorized signatory and head of sales and marketing  
Training Base Weeze GmbH & Co. KG

"The fire cancer occupies a high place in the working world of firefighters. We are pleased, that with 7YRDS Deconservice and Textilreinigung ECKHARDT we have found partners, which enable unencumbered work."

**DR. SEBASTIAN PAPST**

Managing Director Airport Weeze,  
Flughafen Niederrhein GmbH

"In order to exclude a latent carcinogenic hazard for the emergency forces, the emergency clothing must be subjected to the most effective cleaning possible. Here, decontamination – by liquefied carbon dioxide (LCO<sub>2</sub>) – is particularly recommended."

**UDO HERMANN**

Cologne-Bonn Airport Fire Department

The following are examples of customers who rely on the comprehensive all-round service for the inspection, cleaning and repair of protective clothing provided by 7YRDS Deconservice and Textilreinigung ECKHARDT verlassen:

- Fire department Hamburg
- Fire department Bremen
- Rescue service Friesland
- Rescue service Bremen
- Rescue service Ammerland
- and many more

You can find the detailed opinions of our interview partners at

**7yrds-deconservice/interviews** or **textilreinigung-eckhardt.de/interviews**.

# LCO<sub>2</sub> IS STATE OF THE ART

## PROVEN, ECO-FRIENDLY, ECONOMICAL

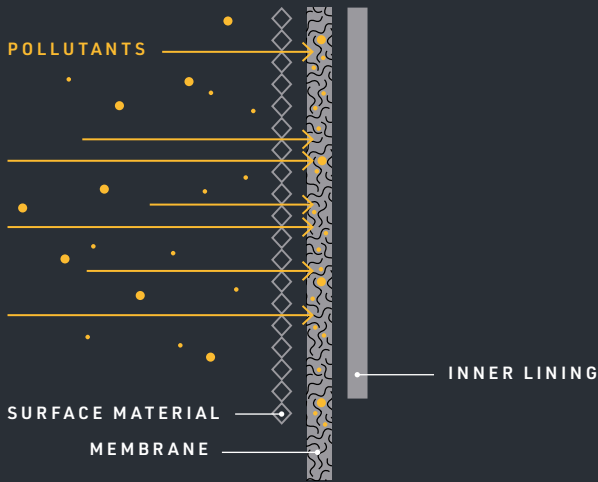
When it comes to selecting effective cleaning procedures to meet legal requirements for fire-fighters' PPE, LCO<sub>2</sub> technology represents the applicable state of the art.

The technology was originally developed by NASA to decontaminate protective suits and equipment after use in space. The cleaning process used by 7YRDS Deconservice and Textilreinigung ECKHARDT also uses carbon dioxide in its liquid phase as a solvent. For this purpose, it is compressed and liquefied under a pressure of up to 50 bar. Compressed carbon dioxide has a high dissolving

power. LCO<sub>2</sub> is nonpolar, with low density and low viscosity. It penetrates through the membrane of the protective equipment without damaging the material. This makes the process far more effective than all previous water-based cleaning methods, which cannot penetrate the membrane.

The LCO<sub>2</sub> technology used by 7YRDS Deconservice and Textilreinigung ECKHARDT thus frees the PPE from all chemical, physical and biological hazardous substances. Thus, all legally regulated pollutant limits of the GefStoffV, the REACH regulation and other legal bases are fully complied with.





### CLEANING WITH LCO<sub>2</sub>

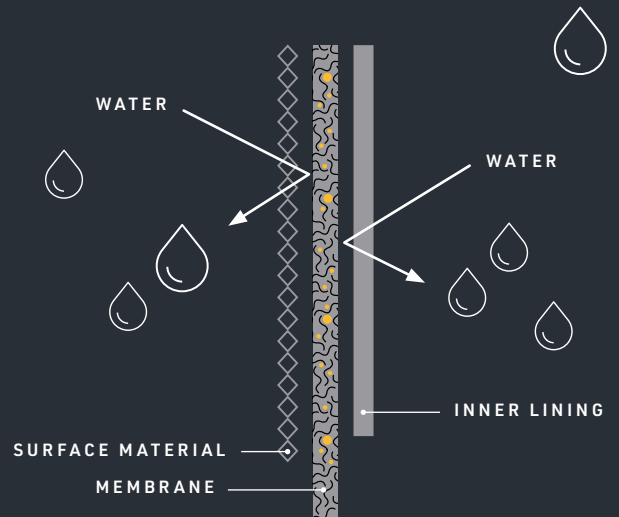
Liquid CO<sub>2</sub> (LCO<sub>2</sub>) cleans clothing contaminated by pollutants much more effectively than any other water-based cleaning process. Ultimately, **the LCO<sub>2</sub> washing process guarantees compliance with the statutory pollutant limits.**

**Our all-round service takes all the work off your hands.**

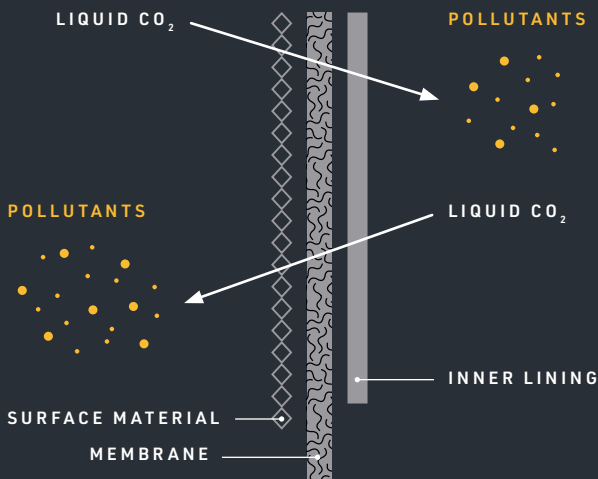
### 100% SUSTAINABILITY

At the end of the cleaning process with LCO<sub>2</sub>, only the pollutants removed from the PPE are disposed of properly. The liquid CO<sub>2</sub> is fed back into the cleaning cycle. Due to the use of green electricity produced by 7YRDS itself at the site, the **cleaning process of 7YRDS Deconservice and Textilreinigung ECKHARDT is the most environmentally friendly in Europe.**

### CONVENTIONAL WASHING PROCESS



### DEKONTAMINATION MIT LCO<sub>2</sub>



### MAXIMUM VALUE RETENTION

The temperature during the LCO<sub>2</sub> cleaning process is constantly around 15 degrees Celsius. Our material-friendly processes ensure the lowest possible mechanical stress on the PPE to be cleaned. In this way, the cleaning technology we use guarantees maximum longevity and investment security for your personal protective equipment.

# CONTACT PERSONS

## WER ARE HAPPY TO HELP YOU

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**7YRDS-DECONSERVICE.COM**

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**TEXTILREINIGUNG-ECKHARDT.DE**