



CBRN protective system



Press Kit

2018

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New Web site

TABLE OF CONTENTS

EDITORIAL

« They put their lives in danger to protect ours, Ouvry provides them with the most innovative CBRN solutions » P. 03

1. COMPANY

Brand new CBRN products, developed and manufactured by Ouvry P. 04

2. CBRN PRODUCTS & SERVICES

How Ouvry meets defence, security and safety requirements P. 14

GLOSSARY

Learn more on CBRN challenges (Chemical, Biological, Radiological and Nuclear) P. 20

3. INDUSTRIAL & AGRICULTURAL USES

Ouvry products conceived for the management of hazardous chemical and biological agents, the remediation, the treatment of contaminated waste... P. 24

Cover page picture ©Ouvry: training at Paris fire fighters with Polycombi©

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EDITORIAL

« They risk their lives to protect ours, Ouvry provides them with the most innovative CBRN equipment»



Textile engineer, with a specialty in chemistry, it's a first experience in the manufacturing of technical textiles for the space industry which convinced me to create my own company in the CBRN personal protection and develop solutions based on innovative technological bricks experienced in this high tech industry.

Fifteen years later, Ouvry has specialized in personal and respiratory protection systems. Our innovative products are intended for all operators of defence, safety and security interventions, those who risk their lives to defend ours. Our field of expertise is perfectly dual. Our equipment and systems are also appreciated in case of health crisis, in case of industrial disaster as for a more frequent use of preventive personal protection for the industry, agriculture and critical infrastructure.

Head office is located in Lyon (France), a major industrial and technological centre whose history is strongly marked by textiles and chemistry, particularly in the Vaise district, in the former spinning mills of Rhodiacéta ... exactly where our offices and production facilities are today.

We are at the heart of a true industrial and technological ecosystem: weavers, finishers and suppliers of chemical products, garment manufacturers, technical centres and laboratories, research centres, centre of excellence clusters, universities... This fits perfectly with our DNA.

Today, Ouvry is more than ever a creator, knowing how to integrate innovative technological bricks designed with the partners of this ecosystem. Most of our production is located in France which gives us the necessary agility to adapt to the large variety of customers.

Ludovic Ouvry

Founder and director of Ouvry SAS, Ludovic Ouvry is auditor of the Institute of Higher Studies of National Defence (SR 194), co-founder and Vice President of the EDEN cluster and officer of the Air Force reserve.





1. COMPANY

**Brand new CBRN products,
developed and manufactured by
Ouvry**

Created in 2003, Ouvry specializes in CBRN personal protection systems and is located in LYON. The product portfolio covers both body and respiratory protection, as well as innovative products intended for a wide range of operators: soldiers and law enforcement staff, firefighters and rescue operators, first-responders, the public security, civil defence, ministry of health, industry, critical infrastructures and public transportation.

The two main product ranges of the portfolio are CBRN air permeable protective suits and O'C50® respiratory mask. Ouvry completes this offer with decontamination and disinfection solutions for both CWA issues (Chemical warfare agents) or for small equipment and polluted confined spaces.

Ouvry designs and manufactures in France all the product portfolio that meet ever-changing requirements. Being a creator rather than a follower, integrating innovative components designed with the partners of his "ecosystem", is part of the DNA of the company which will celebrate its 15th anniversary in 2018.

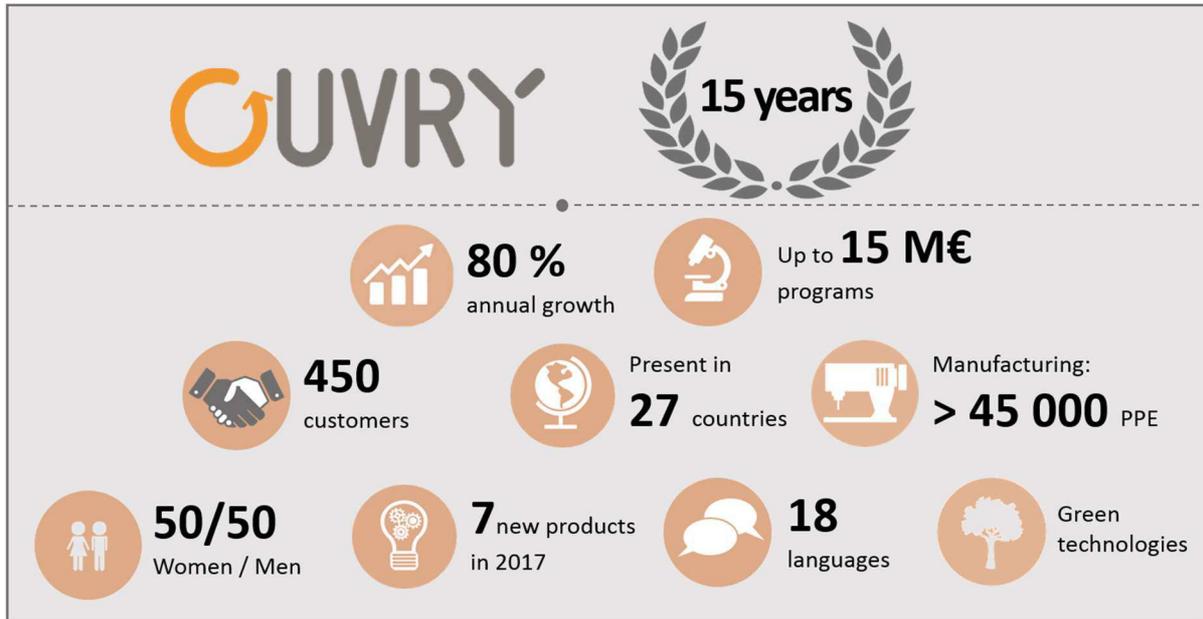
It is no coincidence that Ouvry chose Lyon to set up and grow. The city has history in the silk field and there are many companies which create innovative textiles. Ouvry has settled in buildings with the typical industrial architecture of the 20th century in the Vaise district that formerly were Rhodia's spinning mills of cellulose triacetate.

Ouvry is a founding member of the EDEN Cluster, member of GICAT, the DGA RAPID club of Innovative SMEs (DGA : Directorate General of Armament, Ministry of the Armed Forces) and the competitiveness cluster SAFE Cluster. Ouvry is a partner of the French Society of Disaster Medicine (SFMC) and the European CBRN Institute of Charleroi (ICI).



*Ouvry Villa
in Lyon*

Ouvry, key figures



Ouvry, core business

CBRN or CBRNe personal protective systems:

Nuclear Radiological



Nuclear fall-out particles

Biological



Bacteria, virus and spores

Chemical



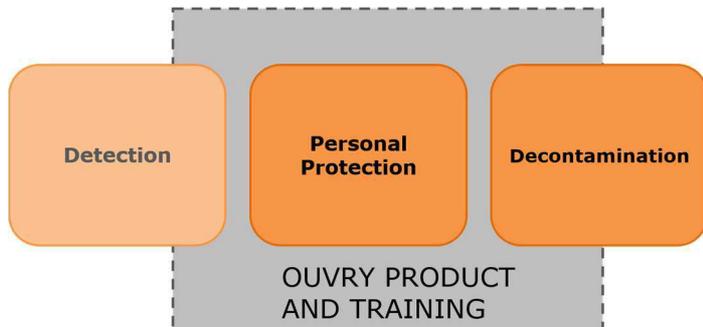
Chemical warfare agents (CWA) and TICs

explosives



Explosions

Specialized in CBRN protective systems design and manufacturing, as well as decontamination solutions, for both military and civilian applications, OUVRY covers partly the 3 pillars of the NATO CBRN triptych.



Our mission

Ouvry defines with its clients the CBRN protection and decontamination system that is the most appropriate to their work and environment. Then, Ouvry manufactures them while observing the current standards and regulations.

French domestic references

- Ministry of the Armed Forces - Directorate General of Armaments
- Ministry of the Interior - Directorate of Civil Security (DGSCGC) and Police (RAID, BRI)
- National Gendarmerie (GIGN, PSPG ...)
- Critical Infrastructure Security Services, Public Transport (RATP ...)
- Industry operators operating in a chemically hostile environment
- Firefighter brigade and Rescue Services
- Ministry of Health: SAMU, CHU, SMUR
- European innovation projects for AED (European Defence Agency).

A continuous growth



In 2015, Ouvry strengthened its position of CBRN new generation equipment leader enlarging the existing textile CBRN PPEs portfolio with respiratory products in order to commercialize a whole system especially with the investment in a new generation flexible mask manufacturing facility which is now in order.

22,000 FELIN CBRN PPEs, 15,000 Polycombi® for Civil Defence, and more than 4,000 O’C50® masks have been manufactured in Lyon since 2016 and sold in France and abroad.

PROCESS & ORGANISATION

Ouvry supply chain: innovation and quality to meet operational requirements

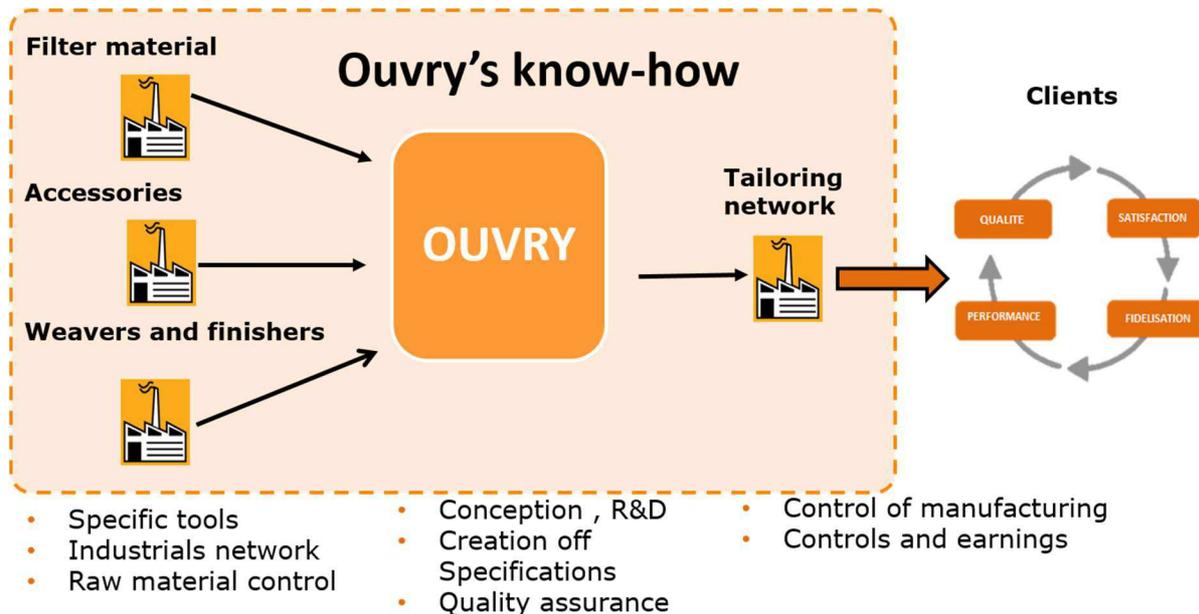
From the origin, Ouvry has constantly updated its process and manufacturing tools, controlling the entire supply chain in order to build a reactive, resilient and robust industrial organization.

Body personal protective equipment, controlled know-how and resilient production

Ouvry controls its *supply chain* which is mainly French, with an industrial tool able to meet both small and middle size productions, built in a resilient way:

- Weaving, dyeing and finishing activities are located in Lyon region.
- Filter materials based on a unique European source, and manufactured with very large capacity machines. Ouvry develops a new generation of filter material, MFE®.
- Ouvry manufactures components with specific properties.
- Tailoring and final assembly is performed either with a network of commission finishers or by Ouvry directly.

Ouvry textile industrial organization



Quality management: an integrated system, flow-downed to subcontractors and partners

Ouvry is fully responsible for the quality management system and actively collaborates with its suppliers, sub-contractors and industrial partners to flow down the requirements. Test plan and quality audits are defined and recorded at all steps of the supply chain. First article reviews in factories are systematically performed, as well as quality control before shipment at the end of the manufacturing process.

R&D: High internal capabilities and a large academic network

In order to permanently innovate, Ouvry invests in various R&D activities and programs in the field of its core business, CBRN PPEs and decontamination. The main activities are:

- Technical textiles (flame resistant, anti-trauma, self-detoxifying ...)
- Human factors with its 3 pillars: ergonomics, physiology and sensorial tolerance.
- Body and respiratory CBRN personal protective equipment
- Decontamination technologies (active, absorption, neutralisation) for chemical and biological agents.

Since its founding, Ouvry has created R&D capacity focused on several technological bricks depending on its internal knowledge completed with collaborations with its network of private scientific partners, institutional partners, centres of excellence and clusters.



Human resources: multidisciplinary competences



Technical teams are specialized in many domains such as materials, technical textiles, chemistry, microbiology, ergonomics, plastics, design, standard activities ...

These competencies are mainly distributed between: R&D department, technical department, logistics and quality control, as well as domestic or export sales ... The R&D staff is supported by post doc, scientific advisor and university professors.

What is the reason our customer trust us?

>> Because CBRN protection requires a system approach

Ouvry addresses all system dimensions:

- A whole system with optimized interfaces between the different equipment
- Training solutions
- Intuitive and didactic documentation

>> Because CBRN PPEs should reduce all types of burden

Thanks to air permeable technologies, OUVRY provides a PPE portfolio which is an alternative to impermeable plastic suits. They are robust and physiologically tolerant, especially because of the sweat and thermal exchanges.

The operational benefit is clear: operators can work longer even in hot climate which will reduce rotation of personal in a crisis management event or increase significantly the duration of the mission or task.

- Rotation of personal reduction will decrease the risk of secondary contamination when doffing, as there will be less personal that will doff!
- Less rotation means less PPEs.
- Less rotation involves less suits to be eliminated (incineration of plastic suit is generally the only way).
- On top of it, air permeable CBRN suits protect better than plastic suits as pumping effects are reduced.
- Finally, air permeable suits are the best compromise for protection, durability and comfort; even life cycle cost!

>> Because our respiratory protective system is particularly sturdy and comfortable

The skirt of O'C50® has been tested, its protection factor is unrivalled, the maintenance is reduced and has no side effects on the skin.

>> Because our decontamination immediate solutions solve existing gaps and weaknesses

Multipurpose solutions against biologicals and chemicals, environment-friendly, non-corrosive and some are biocompatible.

INNOVATIONS

Personal protective systems, respiratory protection and immediate decontamination

CBRN protective systems (suits, gloves, masks ...)

Ouvry equipment and systems of body protection, respiratory protection or decontamination benefit from peculiar efforts made on ergonomics and user comfort. The filtering materials we use allow air exchange and water vapor evacuation. The protection of the user is increased while the physiological burden of our CBRN is significantly decreased. These characteristics considerably improve the operators' work conditions.

These are all the reasons why our products equip army, law enforcement (RAID, GIGN, BRI ...) and first responders (Paris fire brigade, Marseille marine fire fighters...) and critical infrastructures (nuclear plants, RATP Paris subway ...).

Army FELIN program was the first major reference as leading provider for Sagem DS. More than 22,000 FELIN CBRN kits were delivered and are today in service. 20,000 Polycombi® were delivered within the last 2 years.

CBRN respiratory protection: a new challenge

Jet pilot CBRN masks

Ouvry is prime contractor of this major DGA French program, and responsible to develop, qualify and manufacture a complete CBRN jet pilot CBRN system. On top of it, OUVRY is responsible for maintenance, logistical support and training.



The supply chain is 100% local, and most of the production is located at the production facility in Lyon. The system is divided into two subsystems: above the neck protection with a specially designed integrated hood with oculars and demisting system, a CBRN reinforced oxygen mask; below the neck protective equipment made of O'CPU® (CBRN chemical protective undergarment), undergloves and socks.

Former Ouvry experience on previous EDA (European Defence Agency) contracts, internal R&D activities and human resources reinforcement were crucial to be awarded this contract.

O'C50®, adapted to Firefighters, Army and critical infrastructures

O'C50® is manufactured by Ouvry in France and was developed based on research and

innovations carried out by listening to the users and operators. This mask equips firefighters and military, security or intervention public, private or civil operators (RATP, SAMU...) in France and several other countries. More than 4000 masks already are operational.

In order to meet the challenging requirements, Ouvry manufactures components with its partners and subcontractors, and then assembles the final product with quality controls at every step before shipment. The company also provides periodical maintenance and revisions.

In 2013, Ouvry hired masks experts, invested in new facilities and launched the technical activities to develop and certify the new mask, and finally obtained the CE certification in September 2015. Ouvry has also conceived and produced equipment for tests and controls. The production line is located in Lyon, 50 meters away from the headquarters, with a full capacity of 3,000 masks per month since March 2016.

Ouvry wanted to render the best out of its research and studies about ergonomics, its technical innovations and also its discussions with operators. Ouvry could adapt O'C50® to customer requirements and to the entire Ouvry PPEs guaranteeing an optimal interface management, and therefore an improved protection factor.

The latest innovation for immediate or emergency decontamination to avoid cross contamination

In 2016, using technological innovations developed with scientific partners, Ouvry launched the DEC'POL® mitt, an emergency CBRN decontamination device that is a self-evident extension of CBRN personal protection. This emergency decontamination mitt combines absorption effects with hazardous chemical and biological compounds degradation by active agents.

The logo for DEC'POL® features the brand name in a bold, sans-serif font. The 'O' in 'POL' is a large, stylized orange circle with a white outline, and a registered trademark symbol (®) is positioned to its upper right.

DEC'POL® is made of an ultra-absorbent material containing catalysts that target chemical and biological toxics. The DEC'POL mitt can absorb a wide variety of contaminants and then destroy them. It is not in powder form and thus prevents cross contamination risks. It can be used on any kind of surface, equipment or undamaged skin. DEC'POL® can decontaminate up to 9m². So this mitt is a simple, quick and efficient solution in case of chemical or biological contamination and, at the same time, prevents cross contamination.

1. **Absorption by capillarity:** quick transfer of the contaminants in the microfibers. The contaminants will spread in the ultra-absorbent material, enabling an optimized surface of contact with the embedded catalysts.
2. **Destruction of the chemical and biological contaminants:** catalysts are homogeneously distributed in the ultra-absorbent material. They enable decontamination of chemical agents and disinfection of biological agents. The degradation produces nontoxic by-products.
3. **No re-spraying:** its physical design stops any release of powder which prevents cross contamination and possibly toxic powder inhalation.

DEC'POL® was developed in partnership with Institut des sciences Pharmaceutiques et Biologiques de l'Université Claude Bernard Lyon 1 (pharmaceutical faculty) and CEA (The French Atomic Energy and Alternative Energy Commission) of Grenoble.

The numerous research and studies on the degradation of CWAs and pathogen biological agents helped developing the active agents of DEC'POL® that target chemical and biological contaminants.

Last publication in 2016 focuses on the destruction of paraoxon (VX simulant) and bacteria by different metal oxides¹.

DEC'POL® was tested with North Paris fire fighters (SDIS 95), STAT (Technical Section of the Army), Serbian nuclear institute Vinča, and the Czech military institute of Brno.

A dual use device:

DEC'POL® mitt is designed to be used by military, SWAT and first-responders, particularly firefighters, who can be confronted with a chemical or biological attack or exposure.

Emergency decontamination is critical because it prevents risk of cross contamination by limiting the spread of toxics to other people, equipment or in the environment.

DEC'POL® is also designed for use in industries, laboratories or critical facilities that can be confronted to chemical or biological contamination.



¹ *Degradation of Paraoxon (VX Chemical Agent Simulant) and Bacteria by Magnesium Oxide depends on the Crystalline Structure of Magnesium Oxide.*



*RAID – SWAT
teams of the
Minister of interior
©Ouvry*

2. CBRN PRODUCTS & SERVICES

How Ouvry meets defence, security and safety requirements

A large portfolio for military, SWAT, first responders and specialists

CBRN Forces 24 hours	CBRN Firts-Responders 12 hours	CBRN Specialists 24 hours
 <ul style="list-style-type: none">  TTX® CBRN Combat suit  TFI® CBRN Intervention suit  TARGET® CBRN protective gloves <p style="text-align: center;"><i>Available in training version</i></p>	 <ul style="list-style-type: none">  Polycombi® CBRN coverall  Butyl gloves  O'BOOTS® butyl overboots <p style="text-align: center;"><i>Polycombi® available in training version</i></p>	 <ul style="list-style-type: none">  O'CPU® undergarment  FTC® CBRN hood  Second Skin® CBRN undergloves  CBRN socks



RAID – SWAT teams
of the Minister of
interior
©Ouvry

Focus on 3 equipment most representative of the 3 concepts:



TFI®: CBRN SWAT cover-all: developed for SF and SWAT teams – definitely mission oriented to meet GIGN and RAID challenges. CBRN coverall that protects against CBRN threat during 24h, flame, abrasion, perforation and cut as well as integrated anti trauma. TFI® Instruction for training.



Polycombi®: For those who do not need to continue their activities in a dirty environment, especially first responders, Polycombi® is the right solution, light and ergonomic. CE certified, category III, it protects against all CWA (HD, GD...) during 12h, but also against radiological particle, biological and spray. Polycombi® Instruction for training.



CBRN O'CPU® - chemical protective undergarment:

Ideal for personal who will not face a massive liquid threat: pilots, EOD teams... It protects against CWA vapour. Extremely light and comfortable.



Polycombi in the decontamination tent

©Ouvry

Respiratory protection: development, certification and manufacturing of the O'C50. Ergonomic, robust and comfortable.

Masks	Canisters and PAPR	Maintenance
 <ul style="list-style-type: none">  O'C50® CBRN mask and accessories  ST53 respirator  NH15 escape hood  Interface with MO helmet 	 <ul style="list-style-type: none">  CBRN filters canisters  EZAIR® airflow system 	 <ul style="list-style-type: none">  Respiratory protective equipment maintenance  Control and traceability



O'C50® mask: Ergonomic, improved protection, optimised interfaces management. Manufactured, tested and up-kept in our workshops in Lyon, the O'C50® enables a maintenance costs reduction thanks to its robustness. The O'C50 is CE certified for CBRN environments. Optional accessories are available to adapt the O'C50® to clients' peculiar requirements while optimizing interfaces management with CBRN protective suits: voice amplifier, electronic port, VDUM (Vision Device Under Mask), additional protective visors or harness specially conceived for comfort and compatibility with every CBRN PPE and helmets.

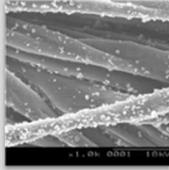


FM53 mask and dual ST 53°: A single mask for positive and negative protection.



NH15 immediate protection hood: Light, compact, ABEK NBC P3, without batteries... The NH15 hood provides quick and efficient protection to all personnel working in emergency situations (first-responders, industrial operators, security agents, VIP, etc)

Decontamination : innovative, simple and safe

Emergency decontamination	Skin	Surfaces	Self-decon
 <p>DEC'POL® emergency dry decontamination</p> <p><i>Available in training version</i></p>	 <p>RSDL® Reactive Skin Decontamination Lotion</p> <p><i>Available in training version</i></p>	 <p>Solutions DES'DEC® R2D2-R2D4</p> <p>Application : Nebulizer, Foamer, Sprayer</p>	 <p>SELDEC</p> <p>SAFECOAT</p>

DEC'POL®: DEC'POL® is a new generation bi-active mitt for emergency decontamination: it can absorb chemical and biological agents, and destroy them in order to prevent cross contamination. DEC'POL® is based on the synergy of several innovations, fast transfer inside a superabsorbent material, chemical and biological agents destruction by selected catalyzers and an homogenous incorporation process of catalyzers inside the absorbent material. DEC'POL® mitt is therefore a simple, fast and effective solution, in case of chemical or biological contamination of surfaces, equipment and non-injured skin for both civilian and military applications.

RSDL®: Reactive Skin Decontamination Lotion dedicated to skin decontamination. Training version also available.

DES'DEC®: a family of chemical and biological decontaminant (R2D2, R2D4), dedicated to infrastructure and sensible equipment, it can be nebulized, foamed or applied with sprayer. DES'DEC® is perfectly appropriate for microorganism disinfection, volatile organic compound deodorisation, TICs and CWAs decontamination.

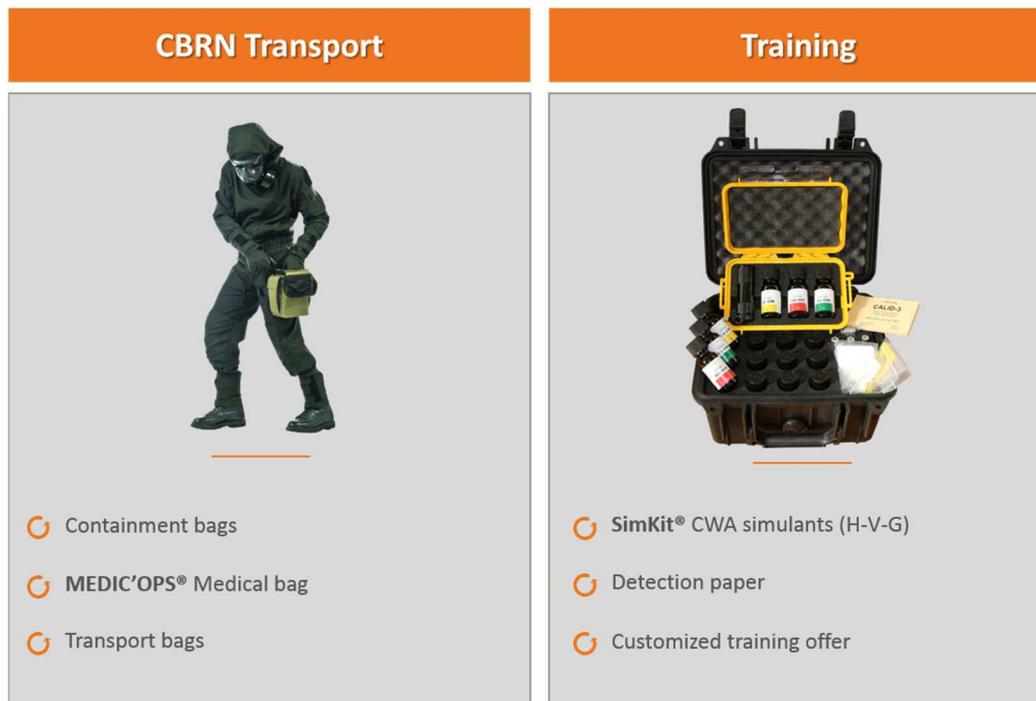
DES'DEC® is active on any material on which the contaminant is. As it has a weak corrosive power, it can be used on sensible materials like weapons or electronic devices. DES'DEC® is environment-friendly: it is non-corrosive, non-toxic and biodegradable. Other advantages: quick and simple implementing, and minimal transport logistics.

Services and support

Training

« Live Agent Test », training on risks and equipment use, train of trainee's sessions, expert and tutor training, specific training of operators on Ouvry's equipment and systems and maintenance training.

Ouvry has a training official homologation.



Training tools

- SIM KIT®: chemical war agents (CWA) simulants kit. Formerly distributor in France, Ouvry has now bought the patent in October 2017 from the Dutch company Hotzone Solutions Group. SIM KIT® simulants add realism to drills and trainings.
- PPE (personal protective equipment) adapted to training and tutoring, educational media and help (posters...)

Maintenance & services

- Maintenance and repair of CBRN masks, annual controls...
- Technical documentation
- Buffer stock (POLYCOMBI®, O'CPU®)
- Waste repurposing procedure support...

Accessories

- MEDIC'OPS® : medical equipment transport bag

Learn more on CBRN challenges (Chemical, Biological, Radiological and Nuclear)

Biological agents

Biological agents used in weapons against humans, animals or crops are produced from pathogenic microorganisms or their toxins. Living microorganisms can replicate themselves and so they can act at low concentrations: 1 gram of *Bacillus anthracis*, if properly and efficiently spread, could infect and kill one third of the USA's population.

As for toxins, they cannot replicate themselves and so have closer properties to chemical agents, but are far more toxic: the LD50 (lethal dose, 50%) of the botulinum toxin is 0.001 micrograms per kg and is only 15 micrograms per kg for the VX.

They are divided into 3 categories.

Category A agents, most dangerous, that could create mass destruction on population. High-protection measures are implemented to counter them. Common bacteria are *Bacillus anthracis* (anthrax), *Yersinia pestis*, *Francisella tularensis* or viruses like smallpox or Lassa & Marburg; finally toxins like *Clostridium botulinum* (botulism).

Category B agents can be used at a wide scale but are usually less potent. Bacteria are *Brucella*, *Burkholderia mallei*, *B. pseudomallei*, *Salmonella* sp. *Shigella* or toxins like ricin. The efficiency is better when deployed in aerosol form. As the incubation time can be long, the tactical interest is low, but terrorist could consider that as an advantage, which confirms the threat scenario.

Category C agents are not very dangerous. But genetic modifications could lead to weaponized dangerous versions



TFI© SWAT team ©Ouvry



CBRN training exercise in Nîmes (France) with Polycombi ©Ouvry

Chemical agents

Chemical warfare agents are liquid, solid or vapor that can be used for their toxic effects on human, animals or plants.

Any toxic chemical can potentially be used in an attack, however the risk is mostly present for those with high toxicity (minimal lethal doses). Chemical weapons (known as CBRNs or NRBCe) can have an incapacitating effect on humans and even, in some cases, be fatal.

The main chemical agents of the CBRN threat are neurotoxic organophosphorus (soman, sarin, tabun, VX) or vesicants (lewisite, yperite), followed by gaseous agents such as phosgene or hydrocyanic acid.

Two categories of chemical agents:

Chemical weapons, developed with a military purpose, to cause disorganization and major mortality in the opposing ranks. The collapse of the former USSR is likely to have fed parallel markets, but the production of CBRN chemical agents by competent chemists is also possible.

Industrial products are stored in fixed storage or transport container/tank (rail, road). They can be divided in two classes: those involving respiratory toxicity (chlorine, phosgene...) and those involving systemic toxicity (hydrocyanic acid...). Some chemicals such as thallium, cyanide or mercury salts could be ingested.

Classification of CRBN chemical weapons

Depending on the application:

Neutralizing agents - They quickly cause a disability that does not extend beyond exposure. In the context of a terrorist threat, they could be used for disorganization.

Disabling agents - Temporarily cause a mental or physical illness or disability that exceeds the exposure period. They can be used by terrorists.

Lethal agents - They cause death when the man is exposed to it in military or terrorist operations.

Depending on the mode of action:

Asphyxiating or Suffocating Gases - These are highly volatile liquids that, when inhaled as gases, attack the alveolar mucosa (chlorine and phosgene). They are not often used.

Vesicants - These are oily liquids that cause burns on the skin. The best known is yperite (mustard gas). Synthesized in 1822, yperite was used for the first time as toxic war-gas in July 1917 in Ypres in Belgium, which gave it its name of yperite. Colourless, odourless in the liquid state, it becomes gaseous when added to solvents. It can give off a smell of garlic or mustard and causes blisters on the skin, eyes and lungs. It can be responsible for blindness or cancer. Lewisite is also among the vesicants

Hemotoxic (toxic of oxygenation) – toxic against blood. When inhaled, they disrupt the use of oxygens in tissues (cyanhydric acid, cyanogen chloride).

Organophosphate neurotoxic agents (inactive agents) – It is the most powerful CWA category. These agents are colorless, odorless, tasteless, more or less viscous and volatile. They can be absorbed by inhalation or through the skin. They affect the nervous system and disrupt vital functions: sight darkening, breathing difficulties, important sweating, vomiting, confusion and death. A simple 1 to 2 minutes absorption through the skin can be lethal.

Main nerve agents :

Tabun - Discovered in 1937 by Gerhard Schader in Germany, tabun was first industrially produced in 1942. The tabun was used by Iraq during the Iran-Iraq war. When it is pure, the tabun is a colourless liquid with a fruity odor

Sarin - Discovered in Germany in 1939, sarin was used during the Second World War and during the war between Iraq and Iran. It is a colourless, non-persistent liquid, which emits no odor when vaporized. The steam is colourless. It evaporates 36 times faster than tabun and can be made more persistent by the addition of certain oils or petroleum products. Symptoms include nausea, coughing, diarrhoea, breathing difficulties, vomiting, muscle weakness, convulsions and death by choking in ten minutes.

VX - This is an "improved" version of the sarin. The symptoms and the mode of absorption are the same as for sarin but it can spread in the air and in the water and the fatal dose is 10 milligrams compared to 100 for the sarin

Soman - Discovered in 1944, it was never used in combat, but after the Second World War, the Soman was produced in large quantities by the Soviet Union. The soman is colorless when it is pure, but brown-yellow when it is produced industrially. This liquid substance has a fruity odour when vaporized, but the industrial product contains many impurities, which gives it a strong odour and a very high viscosity. The vapor is colourless.

The fatal dose on inhalation is about half that of sarin. It is, moreover, a much more persistent agent than sarin, so that it can remain several days in a particular zone.

French regulation

Circular n ° 800 / SGDSN / PSE / PPS of 18/02/2011, on the national doctrine of the use of the means of rescue and care in the face of a terrorist action involving radioactive materials.

Circular n ° 750 / SGDSN / PSE / PPS of 18/02/2011, concerning the discovery of folds, packages, containers and substances suspected of containing dangerous radiological, biological or chemical agents.

Circular n° 700 / SGDN / PSE / PPS of 7 November 2008, together with its annexes, on the national doctrine for the use of means of relief and care in the face of terrorist acts involving chemical materials.

Inter-ministerial Circular n° 007 / SGDN / PES / PPS of 8 October 2009 on the inter-ministerial response to the threat or execution of terrorist acts NRBC

Doctrine of the NRBC-E State of Prevention and Combating Terrorism (Prime Minister's Circular n° 747 / SGDN / PSE / PPS of 30 October 2009)



3. INDUSTRIAL & AGRICULTURAL USES

Ouvry products dedicated to chemical and biological risk management, remediation, and treatment of contaminated waste...

When traditional industrial and agricultural PPE do not adequately protect, are too hot or do not allow for long working time.

Ouvry offers products for body and respiratory protection and for the decontamination, efficient on a wide range of biological and chemical toxics.

These solutions provide at the same time ergonomic and operational solutions, and remedy public health issue by protecting more efficiently, particularly against emanations. Less personal protective equipment (PPE) needed, fewer personnel replacements, and ultimately less contaminated waste (soiled PPE or effluents). For the managers of its industrial clients, Ouvry solutions enable significant increase in productivity. Worksites are more quickly concluded, operating loss are reduced, the number of pieces of equipment to buy, keep up and store is greatly decreased. Moreover, the operators are very satisfied with the wearing comfort.

These products and services can remedy health issues and operational difficulties:

- Intoxication: illnesses, disability, faint...
- Lesions: burns, irritation and sensitivity, olfactory disturbance, irritation/aggression of the respiratory tract, the skin and the mucous membranes
- Infections: diseases, epidemics
- Crossed contamination: transfer and spread of the contamination
- Sauna effect, heatstroke
- Movement and mobility
- Wear duration of the protective gears and organization

Remediation intervention in the industrial field

Equipment are specially developed for the management of hazardous chemical and biological products, for the remediation and the treatment of contaminated waste... They are essential when usual personal protective equipment (PPE) are not sufficient or do not enable the user to work for a long time.

They are particularly appropriate for:

- Transport, handling, emptying
- Sampling, laboratory sampling
- Up-keeping, cleaning
- Storage, gathering and treatment of waste

Agricultural

With the same advantages with the products for the industrial field, Ouvry has specially designed products and services for agricultural activities, including the PolyAgri® suit, which meets the requirements of the new version of the ISO 27 065 standard, and DESDEC®. They are particularly appropriate to prevent emanation risks during:

- Transport, handling, storage of phytosanitary products
- Mixture, preparation, mixing of phytosanitary products
- Application, tractors, spray
- Up-keeping, cleaning, waste treatment

Products



PolyIndus® and PolyAgri®:

Filtering protective suits, perfect in case of:

- Chronic exposition to chemical emanations
- Work periods exceeding 30 minutes
- Hot and damp environments
- Confined spaces

These suits protect against risks in liquid, vapor or aerosol form

They can be completed with single-use accessories: apron, muffs, boot covers... over boots, gloves and containment bags are also available.



Dec'Pol®: emergency chemical and biological decontamination miff. Simple, fast and efficient, it is appropriate for the decontamination of all types of surfaces soiled by unidentified liquids. It does not leave contaminated effluents.

Read p.12 for further information on this innovation



O'PC 50®: respiratory mask for long duration work that calls for maximum protection or requires to be able to communicate clearly.

This mask does not leave any compression mark and prevents fogging.



DES'DEC®: solutions for the cleaning and the wide spectrum (chemical and biological) and polyvalent decontamination. It can be applied in a foam, spray or aerosol form. DES'DEC® is non-toxic, non-aggressive and biodegradable. It is perfectly adapted for the cleaning of premises, facilities and working tools.