



How to select the right **PROTECTIVE COVERALL**

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Total Protection Starts with Research

All New Zealand industries are obliged to identify risks in their workplace.

When those industries work with hazardous materials that can pose a risk to workers or the environment, they are required to investigate and supply the correct form of personal protective equipment.

Because not all coveralls are designed to protect against every chemical, or to work well in all environments, it's important to identify the right product for your specific application.

Key factors include identifying the type of hazardous material and whether the suit is to be used in conjunction with breathing apparatus, and where the suit is to be used.

It is also important for a company to undertake:

- A workplace programme to identify hazards and the risks associated with tasks and materials
- Maintenance and inspection of protective suits
- Training of those working with hazardous materials to recognise risks and understand the importance of correct protective coveralls



Current EU “Types” of Chemical Protective Clothing

Since there are no specific safety standards for protective clothing in New Zealand and Australia, Dalton International uses the European Norms (EN) “Types*” 1-6 of chemical protective coveralls.



TYPE 1

TYPE 1 (EN 943-1 &2)

Gas Tight Chemical Protective Clothing

Protect against liquid and gaseous chemicals, aerosols and solid particulates



TYPE 4

TYPE 4 (EN 14605)

Spray tight suits

Protect against saturation of liquid chemicals



TYPE 2

TYPE 2 (EN 943-1)

Non-Gas Tight Chemical Protective Clothing

Retain positive pressure to prevent ingress of dusts liquids and vapours



TYPE 5

TYPE 5 (EN ISO 13982-1)

Dry particulate protection

Protect full body against airborne solid particulates



TYPE 3

TYPE 3 (EN14605)

Liquid tight suits

Protect against strong and directional jets of liquid chemical



TYPE 6

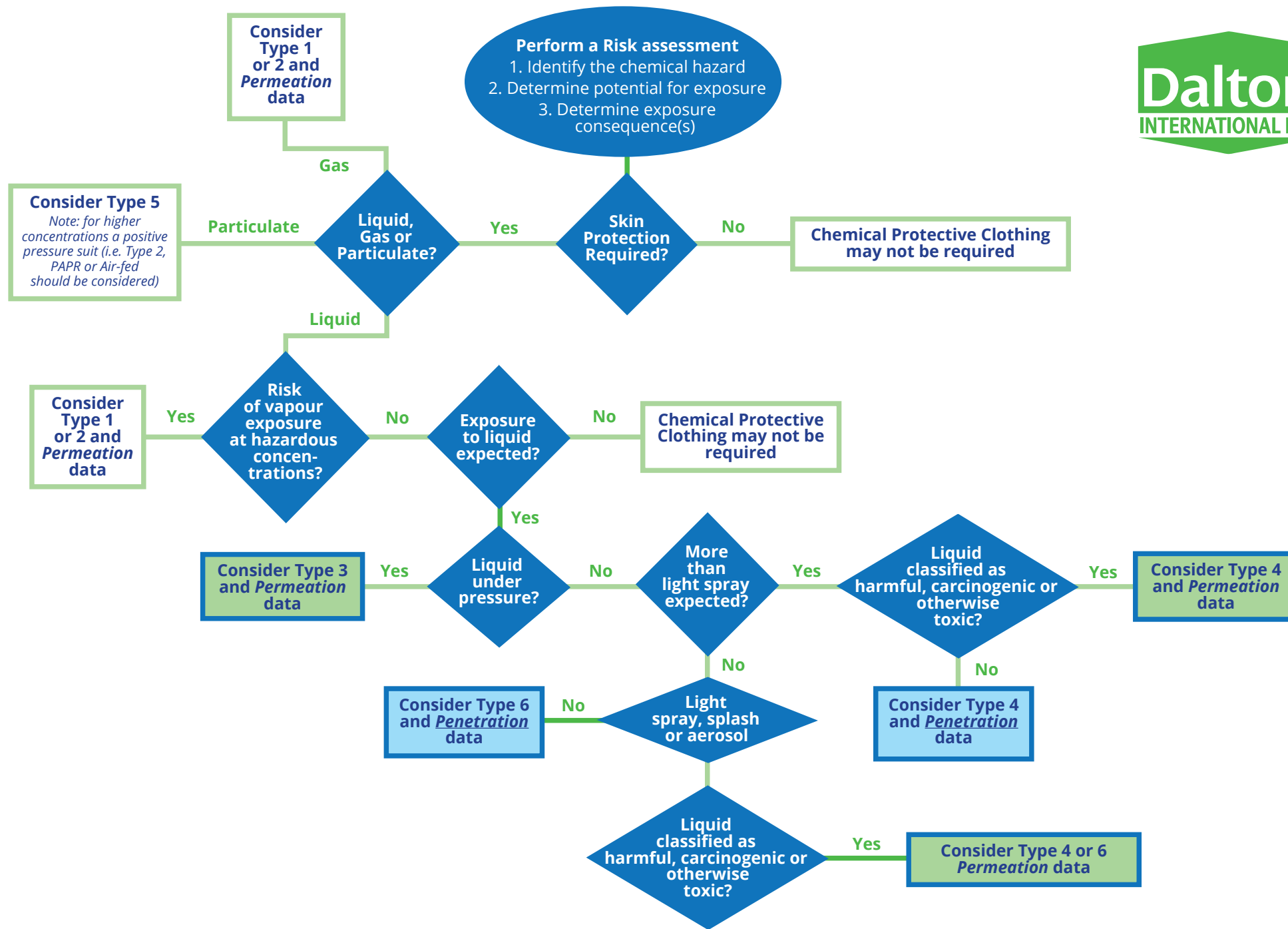
TYPE 6 (EN 13034)

Reduced Spray Suits

Limited protection against light spray off liquid chemicals

* Type approvals do not necessarily apply to accessories. Always refer to the garment label and instructions for use document which will indicate the protection level offered.

Coverall Product Selector



Types of Coveralls



Particulate and Light Chemical Coveralls

These coveralls are designed for protection in a dry environment and rely on comfort, wearability and include "breathable" coveralls that help reduce risk of heat stress.

These are divided into two categories:

- Coveralls that protect against light particulates and dust and are suitable for dry work such as asbestos removal, or powder coating.

Coverall example:
Microgard 1500 SMS Coverall

- Light chemical suits suitable for low-range wet environments eg fuels, oils, diluted pesticides or bio hazards such as contaminated blood.

Coverall example:
Microgard 2000

- **Suitable for:** Domestic, light industrial, asbestos removal, agricultural spraying, powder coating and paint spraying.



TYPE 5



TYPE 6





Chemical Coveralls

Chemical coveralls protect against a range of inorganic, organic and biological hazards ranging from the entry level Microgard 2300 Plus, the Microchem 3000 (which protects against 71 mainly inorganic chemicals such as acids), the Microchem 4000 (which is mechanically stronger and protects against more than 160 chemicals), to the Microchem 5000 (even more durable and with barrier protection against even more chemicals).

- **Features can include** dual zips, double cuffs, built-in socks, additional aprons, high-visibility colours and flame retardant treated fabric for applications where there's a risk of a flash-over.
- **Suitable for:** Chemical handling, oil based mud protection, oil and petrochemical industries, pharmaceutical, hazardous waste remediation, industrial tank cleaning, HAZMAT emergency response, sewage purification installations, mining and agriculture.



TYPE 3



TYPE 4



TYPE 5



PAPR & Airline Coveralls

In applications when there is a need for respiratory and chemical protection and there is a benefit to having them both combined rather than having to tape up respiratory equipment to a chemical suit. Airline suits pump air in from an uncontaminated source while PAPR suits filter the air from the immediate environment.

- **Important features** that increase wearability and safety include panoramic visors, emergency rip cords to allow rapid doffing in case of emergency or undue distress.
- **Suitable for:** Oil and petrochemical industries, pharmaceutical, industrial tank cleaning, mining.



TYPE 3



TYPE 4



TYPE 5



AIRLINE Coverall



PAPR Coverall



AIRLINE Coverall



Apollo SCBA Coveralls

Fully encapsulated liquid tight suits to be used alongside self-contained breathing apparatus and designed for fire and rescue applications.

- **The Microchem 4000 and 5000 Apollo suits** have been designed in cooperation with fire-fighting teams around the world and have differing levels of protection, high visibility and mechanical strength aimed towards specific industries.
- **Suitable for:** HAZMAT emergency response, pharmaceutical, chemical and petrochemical industries.



TYPE 3



TYPE 4



TYPE 5





Gas tight Coveralls

The Microchem 6000 is a fully encapsulated, extremely tough-yet-flexible, gas-tight suit designed to be used in conjunction with self-contained breathing apparatus for the most hostile of chemical environments.

- **Protects not just against solid particulates** and liquid splashes, but also hazardous gases including chemical warfare agents.
- **Suitable for:** HAZMAT emergency response



TYPE 1



Dalton
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FAQs

When should you use protective clothing?

Any time a worker is handling or exposed to hazardous materials they should wear the correct protective clothing that matches the specific risks posed by those materials. Although many safety data sheets will insist that workers using potentially hazardous materials must wear “appropriate chemical or PVC suits”, this is simply a generic term and doesn’t point to the specific or correct coverall for your application.

Check with the permeation database or contact Dalton International on **0800 323 223** (+64 9 263 3142 from overseas) or via the website and we will advise you on the best coveralls for the job so you can meet your obligations as set out in the Health and Safety at Work Act 2015.



What standard of protective clothing is required?

For those handling or working in areas with hazardous dusts, liquids or gases there are no specific New Zealand safety standards but businesses do have to meet their obligations under the Health and Safety at Work Act 2015.

The key factors are knowing what you’re handling, how and where you are handling hazardous materials and for how long.

Dalton International is committed to preventing harm from hazardous substances to people and the environment and uses the current European guidelines to determine the right suit for your industry.

Legally, do workers have to wear protective clothing?

The Health and Safety at Work Act stipulates that a **PCBU** (a person conducting a business or an undertaking) must supply the appropriate personal protective equipment. An employee can supply their own if they have a preference as long as it meets the required standards. The PCBU

FAQs

must be satisfied that the protective equipment the worker is providing is suitable for the application and the environment in which the worker is operating.

Who decides what protective clothing is right for the job?

The onus is on both the employer and the employee to identify the risks and to have the right mitigating procedures in place – whether that's having the right engineering controls in place, finding a less hazardous substance to work with or using the right type of personal protective equipment. The system is intended to be collaborative so all parties from the PCBU, to an officer or a worker all have an obligation to maintain a safe workplace.

Can workers refuse to wear protective clothing if it is uncomfortable?

This is a much-raised issue around protective clothing with heat stress being the main cause of workers not wanting to wear safety suits. A worker can't say they won't wear a suitable chemical suit simply because they get too hot – what must happen is that heat stress is identified as a risk and the PCBU is required to find a way of managing that, either through using cooling apparel, scheduling the work days into shorter shifts or avoiding the main heat of the day, ensuring workers are rehydrating, or finding an alternative non-hazardous

material to work with that doesn't require onerous protective apparel. For example, in the case of agricultural sprays, it may be decided that investing in an air-conditioned tractor with a spray boom mitigates the heat stress on individuals carrying out the same work in protective chemical suits.





Although this can be daunting as there are a lot of coverall choices, doing nothing is not an option.

Give us a call at 0800 323 223 or contact us via our website and we can help you select the best coverall for your requirements.



www.daltoninternational.co.nz