

<p><b>SAFETY REGULATION VV14</b></p> <p style="text-align: center;"><b>Rinsing - cleaning</b></p>	
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## **1 PURPOSE**

When rinsing and cleaning including high-pressure cleaning, environmental pollutants must also be taken into account in addition to the hazard aspect.

## **2 SCOPE**

The requirements of this safety regulation apply to the premises of Nyrstar Belgium.

The requirements apply to:

- performing high pressure spraying work with small equipment (< 10 kW motor power at pressures > 25 bar).
- cleaning with chemicals

The rule shall not apply:

- on the use of high pressure equipment with a power > 10 kW at pressures > 25 bar.
- use of pressures greater than 250 bar

In these cases, the guidelines of the Industrial Cleaning Foundation (S.I.R.) must be followed.

## **3 DEFINITIONS**

TRIE: Task risk inventory and evaluation

High pressure spraying: application of high pressure equipment inside

## **4 PRESCRIPTION**

### **4.1 Spraying work**

#### **4.1.1 Training and instruction**

High-pressure spraying work may only be carried out by personnel who have been demonstrably instructed. The instruction should include: the safe handling of high-pressure equipment in general and the safe execution of the task-specific work. The requirements in this regulation are part of the instruction.

Points of attention are:

- The sprayer must always be able to interrupt the jet in a safe manner.
- The work pressure may not be set higher than is necessary for the work;
- When spraying out pipes, one must take into account contamination on the other side of the pipe (also sufficient deposits!)
- When retrieving, one should pay close attention to the marking of the nozzle;
- Make arrangements to deal with the risks of using a creeper hose which can be inadvertently squeezed back in the event of dirt accumulation;

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**4.1.2 Requirements for the design of the workplace**

- The spraying area must be clearly demarcated (at least 6 meters from the nozzle, this should also include platforms / work floors above and below the spraying place) if the distance is less than 6 meters, the environment must be shielded so that the environment no longer suffers from splashing dirt or mist. This may be deviated from if a TRIE has been drawn up for this purpose.
- Electrical equipment must be shielded within this deposit;
- The work floor must be non-slip, draining and free of obstacles to prevent slipping or tripping;
- When spraying from a scaffolding, it must be built for this work.
- The objects to be sprayed must not move unintentionally. One may never stand on a separate piece of work;
- During work with multiple sprayers, the distance between two sprayers must be at least 6 meters;
- A maximum of one sprayer may operate in a confined space;
- [When working in an ex-zone, the safety regulation VV16 - working in ex-zones must be taken into account;](#)

**4.1.3 Requirements for the equipment**

The equipment used must be in good condition and be part of a periodic inspection and maintenance program that ensures the maintenance of a good condition.

Before the start of the works, the operators of the works check the equipment for visible defects (e.g. defective cable, hose, couplings).

[The hose couplings must be equipped with a breakage protection.](#)

**4.1.4 Personal protective equipment**

- Hearing protection
- Face shield [and safety glasses](#), in combination with safety helmet;
- Respiratory protective equipment in case of danger of inhaling (dangerous) substances. Type should be recorded in the TRA.
- When using pressures > 150 bar: high pressure safety spray boots. [For short-term interventions, safety shoes with metatarsal protection are sufficient](#)
- Waterproof spray suit with hood and tight-fitting cuffs [are recommended](#)
- Waterproof gloves with grip low on the inside [are recommended](#)

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**4.1.5 How to act in case of injuries**

The risk of high-pressure spraying is that a jet of water hitting the body outwardly causes only a minor injury but can cause major damage internally. Therefore, alertness is required and particular attention should be paid to injuries.

- Any injury caused by high-pressure liquid, no matter how small, should be treated immediately by our Medical Department. Outside the hours that the Medical Department is occupied, a victim should always be taken to the emergency department of a hospital.
- Nyrstar's first aiders have received instructions on high pressure spray wounds. There is an information protocol that is given with the victim if one goes to an emergency department for care. [XW-435-VI-0-00025](#)

**4.2 Cleaning with chemicals**

In the case of acids, alkalis and the use of other chemicals for cleaning equipment, detailed regulations, e.g. a Risk Inventory and Evaluation Task (TRIE) should be drawn up in which attention is paid to the following aspects:

- Properties and handling of substances to be used (see safety data sheets);
- personal protective equipment;
- the equipment to be treated;
- creating the solution;
- the release of flammable and/or toxic vapours or gases;
- the removal of the work area;
- the disposal of waste.

**4.3 Rinsing vehicles**

Tank containers, tankers and vacuum trucks with products foreign to Nyrstar may not be flushed on the Nyrstar sites