

PROTECTION AND SAFETY RULES

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PROTECTION AND SAFETY RULES

1 General

INOVYN Sverige AB produces, manages and stores large quantities of flammable, toxic, corrosive and harmful substances.

Vapour cloud explosions and fire are the biggest risk factors within the chemical industry, but other uncontrolled releases of chemicals can also cause serious accidents.

Employers and employees must cooperate to achieve a safe working environment. The employer must take all necessary measures to prevent employees being subjected to ill health or accidents.

It is therefore the responsibility of each manager and supervisor to ensure that:

- every employee understands the information provided and is aware of the risks that may exist during different work
- protection and safety rules are observed, personal protective equipment is used and safety devices are in good condition
- contractors always receive information about the company's protection and safety rules

Employees are required to follow instructions, use appropriate safety equipment and observe other precautions needed to prevent illness and accidents.

As part of achieving a safe work environment, the following general rules have been created. Supplementary departmental rules exist for some departments.

2 Points of entry factory area

2.1 Process area

Personnel in control room shall be informed and an entry shall be made in the logbook when entering and exiting the following process areas:

Chlorine:	Chlorine factory building, the filter housing
Chlorine store:	Harbour and chlorine store
VCM/DS:	Process area, ÅC building and KKV
PVC:	PM 7/8/9 and VCM recycling
PVC Loading:	Whole loading area except surrounding drive ways

Does not apply to the department's own personnel or personnel with a valid work permit.

2.1.1 Visiting groups

Visitors must always report to the control room. Large groups (more than five people) must be reported to the production manager and the shift supervisor in advance.

2.2 **Drugs and alcoholic drinks**

Drugs and alcoholic drinks may not be brought into or consumed within the factory area. People under the influence of drugs or alcohol are not allowed in the workplace. See HMSH-4.1-052.

2.3 **Photography**

Photography (including mobile phone camera function), filming or other depiction or description of the areas or parts thereof is not permitted except by permission of a representative of the corporate management or the head of IT.

Photography performed by its own personnel for internal use or by contractors who has signed a non-disclosure agreement for their assignment are exempt from the requirement for photo permission. NB! Work permits to photograph in EX-area are not exempt.

It is not acceptable to publish images taken within the factory site on the Internet.

2.4 **Pets**

Pets are not allowed within the factory area

2.5 **Internal emergency alarm**

Internal emergency alarms given by loudspeakers and lights in emergencies, such as fire, gas emissions or leaks, have the following signal characteristics:

Personnel appointed according to the internal emergency plan take their positions immediately. Some operations staff who are not appointed stay in the control room and assume the level of protection required by the situation. In the event of an internal emergency alarm, all work permits become invalid. Welding equipment must be turned off and engines stopped. Work may not be resumed until the all clear is given.

The signal character from the loudspeakers for that is a long drawn-out signal:

New work permits must now be requested from the issuer responsible.

3 Flammable areas

Flammable areas are areas of the company where the fire hazard may be extremely large. Flammable areas are cordoned off with signposted concrete blocks and/or yellow posts and booms (see HMSS-313).

3.1 Electrical equipment

Battery-powered or mains-connected electrical equipment that is not Ex-protected cannot be brought within the flammable area without special permission (see HMSS-314).

3.2 Use of mobile phones

Mobile phones may be used in the factory area outside flammable areas. NOTE! They may not be taken into flammable areas, even if they are turned off. EX classified mobile phones may be used within the entire factory area except in the instrument room. If taking a mobile phone in with camera function, the camera cannot be used without permission, in accordance with the same rules as normal cameras. Private use of social media via Smartphones is not allowed during work hours.

3.3 Smoking

Smoking is prohibited except in designated smoking rooms with their own ventilation or in designated smoking cubicles. Smoking areas must be labelled "smoking permitted".

3.4 Gas bottles

Only the number of gas bottles required for the work may be in the working premises. For temporary work such as maintenance work in progress over several days and with gas bottles standing out in the departments, the gas bottles must be moved close the external door and a warning sign must be put up on the door. Gas bottles must be secured to prevent them falling over.

3.5 Work tools with sparking risk

Open flame or spark generating work tools may be used within the factory area only after a "Work permit" has been issued by an authorised issuer (see HMSS-308). Exceptions are the mechanical engineering workshop, electrical workshop, instrument workshop and laboratory.

4 Installing blinds on equipment

To prevent leakage from systems containing flammable, corrosive, toxic, or other media that may pose a risk to health or the environment, the following applies:

- Hose and drainage connections must be fitted with plugs or end flanges
- Blind plates, end flanges, blanks or caps for pump housings must be installed when disassembling equipment (see HMSS-353).

5 Cordons

Areas must be cordoned off with yellow/black tape. Signs describing the cordoned area and who is responsible must be displayed. Signs are available at the permit issuer. See also HMSS-341 Temporary cordons

6 Clothing

Appropriate clothing must be used with regard to fire and chemical risks.

When working with open flame or spark generating work tools, all outer garment must be flame retardant.

Long sleeved clothing must be worn throughout the factory area, in all workshops, **switchgear, equipment bay**, stores and laboratory. Legs must be covered at all times. Clothing that deviates from this rule is permitted in the following cases:

- in the area inside the gate security where helmet and gas mask are not obligatory, but only for walking between offices, staff rooms or conference rooms.
- in offices, staff rooms and conference rooms.
- **Personal protective equipment in the old cell room is handled in a separate risk assessment.**

North of the railway:

- Outer garment (**i.e. jacket and trousers**) must be flame retardant according to ENISO11612 (A, B, C).
- At least one garment (**i.e. jacket or trousers or hi-vis vest**) must be marked with high visibility according to ENISO20471.
- **Long underwear and socks must be of cotton or other flame resistant material.**
- Exceptions include going to and from work areas/changing rooms, offices, staff rooms and conference rooms. A hi-vis vest is sufficient.
- Visitors to the process should wear protection wear overalls with luminous reflector tape which can be borrowed at the gate. For larger groups visiting, a risk assessment should be carried out together with the manager of the department to prove sufficiency of wearing hi-vis vest.

Do not clean clothing with compressed air from the ordinary compressed air network as this entails an injury risk. Labelled outlet with reduced air pressure (maximum 1.5 bar) may be used.

Rings and other jewellery must not be worn during process and maintenance work.

7 Personal protective equipment

7.1 Helmet (as per EN 397) (*three- or four-point bracket and gas mask*)

Helmet with large goggles must always be worn on the head and a gas mask, (*also in switchgear, equipment bay and cell room in new chlorine plant*).

Exceptions to the rule regarding large goggles on the helmet may be made for drivers of trucks for PVC.

The chin strap must be fastened in process area.

Helmets must have the company's logo on the front. They must also be labelled with the owner's name written in dymo tape or with a marker device. Keep helmets clean.

Indoor, i.e. in office and laboratories

Helmets do not need to be worn in offices and laboratories.

7.2 Goggles (must at least meet requirements according to EN 166)

7.2.1 Small goggles

Small goggles with side shields (or large goggles) must be used in the factory area.

Small goggles are not obligatory immediately within the gate security, within the workshop area, around the labyrinth between the eastern gates and in changing rooms, in offices and conference rooms unless otherwise indicated by signs.

7.2.2 Tight-fitting goggles

Tight-fitting goggles must be worn when working on process equipment, as well as in places where there is risk of chemical splashes. These places must be signed. Tight-fitting goggles must also be worn when sanding and flexing, (exceptions may be made for welding mask work when small goggles or a visor are permitted).

Visors may replace large goggles for special work, if a JSA indicates that this is safer than large goggles.

7.3 Safety shoes (must at least meet requirements according to EN ISO 20345)

Safety shoes must be used in the process area, workshops and Laboratory. Marked footpaths in the process area are excluded. Exception to the safety shoe rule may be made by the department manager after risk assessment.

Protection sandals are not allowed.

If protection sandals from the standard range is not possible to wear, contact the health and safety engineer. If protection shoes are not possible to wear, contact the ergonomist at the

occupational health services (Avonova) in order to inquire if special insoles can be made and tried out. The Manager/Superior is responsible of work adaption and he/she can make a demand/insist on the wearing of protection shoes on certain occasions.

7.4 Gloves

Protection gloves should be used north of the railway.

Excmptions can be made:

- On marked walkways
- When drilling and turning
- When risk assessment showing that there is a greater risk when using the gloves.

The gloves must be type approved and adapted to the environment.

Protection gloves should always be used when working south of the railway unless special reasons prevent this.

Visitors in the process area shall be equipped with protection gloves.

7.5 Hearing protector

Hearing protection (earmuffs or earplugs) is ordered with a storehouse requisition. Molded earplugs must be ordered by supervisor/manager .

Hearing protection shall be used when required by mandatory signage, risk assessment, work permit or when you yourself feel the need. Wherever mandatory signage requires hearing protection, earplugs are available.

Contractors shall bring own earmuffs or earpluggs.

Emplyees are responsible of attending to their own hearing protection. As earmuffs gets older the sealing rings must be checked. The sealing rings should be soft and intact, if they lose shape, gets stiff or brittle they must be immediately replaced.

7.6 Diphoterine for eye wash/flushing

During all work in the process area, Diphoterine must be carried to enable immediate flushing of the eye in the event of chemical splashes.

8 Traffic rules

General traffic rules apply within the factory area.

8.1 Motor vehicles

Motor vehicles may only enter for freight and with an approved pass at a max. speed 20 km/h. Engines must be switched off when the vehicle is left. Automatic passenger compartment heaters must not be switched on when the vehicle is within the factory area. Motor vehicles may not enter or park within flammable areas without a "work permit" (see HMSS-308).

8.1.1 Seat belts

Seat belts must be worn within the factory area. Exceptions are made for trucks, wheel loaders and post vans.

8.1.2 Telephone calls

It is not permitted to talk on a mobile phone while driving, unless hands-free equipment is used. Neither is it permitted to use a mobile phone in any way (send text messages or similar) whilst driving.

8.2 Mopeds and helmets

An approved helmet must be worn for moped use. Exceptions may be made in the factory area and on the way to the main office when the company's work helmet is sufficient.

8.3 Cycling

Two-wheeled bicycles are not allowed on site. This rule applies even if the bike has stud tyres.

Keep both hands on the handle bars when cycling. Do not transport objects on the handle bars. If goods are transported on the bicycle they must be transported in a secured crate or box on the bike. Do use a mobile phone when cycling.

8.3.1 Bicycle lighting

The factory area is sufficiently lit that bicycle lights are not required. Do not use bicycle lights on bikes which are ridden through flammable (ex-classed) areas.

8.3.2 Battery-powered bicycle

It is not allowed to ride a battery-powered bicycle (with or without battery) within EX-/ or inflammable areas.

8.3.3 Within track areas

It is forbidden to ride bicycles within the track area. The only exception is the crossing on the main road by the dining room and the crossing at the new hopper.

9 **Parking**

Parking on company parking is only allowed when working on site or when on work related business trip.

Parking spaces with charging possibility (6) below Talludden are intended only for electric cars.

10 **Accommodation/sleep**

It is not permitted to sleep at the factory. This also applies outside the fence, such as in car parks and in the marina.

Trucks waiting outside PVC loading gate to load PVC are exempted from the overnight sleeping rule and this is approved by the local rescue service.

11 **Work permits**

Work permits are required for all work, in most cases written. (see HMSS-308).