Please consult the asset’s HSE instructions for potential installation specific requirements
1 GENERAL

Purpose
The purpose of this directive is to ensure
- that the least harmful chemicals are selected in terms of health and environment
- that chemicals are handled and used without any risk to people and the environment in accordance with regulations and requirements
- The following measures hierarchy governs any work process involving chemicals

Domain
This directive applies to Skarv, Ula and Valhall.

For hired installations, the directive only applies to
- chemicals specified by Aker BP and used in Aker BP operations
- any chemicals subject to Skarv, Ula and Valhall’s discharge permit

Owners of contracted installations who have a system that satisfies the requirements in this directive may use their own system provided this has been clarified upon implementation

References
- HSE Directive 1 – Work permits
- HSE Directive 2 - Entry
- HSE Directive 6 – Hazardous material and equipment
- HSE Directive 9 – Personal protective gear
- 0.60.016 Working Environment Manual
- 0.63.033 Environmental Manual

Definitions and abbreviations
- **ACC (authorization for chemical change)** is a form that must be filled out if new process chemicals are introduced, if process chemicals are altered or if new chemical injection points are introduced/used
• **Action cards (AC)** is an extract of a safety data sheet. The card contains information about the substance, hazard signage, first aid, personal protection equipment, measures to be taken during firefighting and accidental release

• **Area authority** is responsible for all activities within a specific area

• **Area technician** has the operating responsibility for a specific facility or area

• **CCR technician** - a person in the central control room who controls and coordinates all production and other work onboard

• **ChemiRisk** ChemiRisk is a tool for risk assessment of work with chemicals

• **CHESS** is an electronic database for approved chemicals and related safety data sheets, action cards (AC), and risk assessments

• **Hazardous chemicals** a term that covers chemical products which are categorized in Health hazard Class 4, 5 and 6 (classified as toxic, health-hazardous, corrosive, allergenic or carcinogenic)

• **HSE** - Health, safety and environment

• **HSE department** is a department on land that provides advice, guidance and assistance in matters related of health, safety and environment

• **HSE evaluation** of chemicals involves an evaluation of:
  - health, safety and environmental aspects of the use of the product concerned
  - requirements and precautions related to the storage, transport and use of the product as well as any waste products

• **HOCNF** (Harmonized Offshore Chemical Notification Format) - a standard format used for documenting the eco-toxicological properties of chemicals used offshore. Contains information about composition, bio-degradation, bio-accumulation and toxicity to marine organisms

• **Miljødirektoratet** (The Norwegian environment agency) is a Norwegian authority that manages Norwegian environmental issues and prevents pollution

• **NEMS Chemicals** is an electronic archive for HOCNF datasheets (highly restrictive user access)

• **PCMS Chemical Management System**

• **Performing technician** - the person who actually/physically performs the work covered by the work permit

• **RNNP** risk level in the Norwegian petroleum industry

• **Safety data sheet (SDS)** is an accompanying document that contains information on the hazardous properties and recommended protective measures for the use of hazardous chemicals. The safety datasheet must be in accordance with applicable regulations, and the latest revision must always accompany applications for new chemicals

• **Supervisor** plans and carries out work operations, including the selection of chemicals to be used in the work
2 RESPONSIBILITY

**Supervisor**
is responsible for
• ensuring that all chemicals used have been evaluated and approved in terms of HSE, and that an approved Norwegian safety data sheet available, prior to use

**HSE department**
is responsible for
• HSE-evaluating and approving new chemicals based on the applicable requirements and regulations and in accordance with the Instructions to the HSE approval of chemicals given in Appendix 1.
• ensuring new chemicals are registered in CHESS.
• removing Safety Data Sheets from CHESS when chemicals are no longer used

**Purchasing department**
is responsible for
• ensuring that only chemicals that are HSE-approved and registered in CHESS on the relevant installation are purchased

**Area authority**
is responsible for
• ensuring that all storage sites in their area are labelled with the installation-specific Chemical storage map
• ensuring that approved Norwegian safety data sheets / Action Cards are available in hard copy form in binders at the storage sites / working area, and that they are used in accordance with applicable requirements
• ensuring that chemicals are properly labelled and stored in accordance with Guidelines for storing chemicals (Appendix 2), as well as Item 7 in the safety data sheet.
• ensuring that chemicals that are no longer used, are sent onshore
• ensuring that chemicals that come on board and are not registered in CHESS are placed in quarantine until they are either approved or returned ashore
• ensuring that safety datasheets are always included when sending chemicals from the installation

**User**
is responsible for
• checking that the desired chemical is approved and registered in CHESS, alternatively whether similar suitable products that are already approved are available, before requisitioning chemicals.
• cooperating with the HSE department in preparing user
instructions/risk assessments (ChemiRisk) for chemicals that are hazardous to health
• providing input for substitution plans for hazardous chemicals
• becoming familiar with the content of safety data sheets and, if relevant, user instructions/risk assessment (ChemiRisk) before using the chemical
• ensuring that chemicals are handled and stored in accordance with the safety data sheet/procedures and HSE-evaluation.
• ensuring that a new risk assessment is carried out if the existing risk assessment does not reflect the intended use by contacting the HSE department. Use proper personal protective equipment according to safety data sheet/Action Card, risk assessment (ChemiRisk) and HSE directive 9: personal protective equipment.

Safety officer is responsible for
• checking that chemicals are stored in accordance with safety data sheets and attachment 2.
• assisting in the event of non-compliance

Production chemist
• ensuring that the ACC is filled out and approved before process chemicals are used offshore

3 PROCUREMENT

General requirements
• All chemicals must be HSE-evaluated, approved and registered in CHESS prior to procurement
• When choosing chemicals, one should primarily choose those that have the lowest impact on health and environment
• Amendments to contracts must not lead to an increase in overall environmental impact
• The chemical is only approved for one installation per application

Application for approval of new chemicals
• An application for new chemicals is found on the intranet page under “Chemical database” or at https://pcms.proactima.com/akerbp/
• When there is a request to use chemicals that are not registered in CHESS, fill out the form on https://pcms.proactima.com/akerbp/ at least one week prior to use to ensure satisfactory processing of the application. For “environmental” chemicals, the application must be submitted at least two weeks before planned use.
• Applicants must obtain the latest revision of the Norwegian safety data sheet from the supplier and check that this is
the version that is found in the application database, PCMS. If you do not find the desired chemical or proper version of SDS in PCMS, it must be uploaded into the database.

Sending chemicals offshore
- When sending chemicals offshore, the supply base shall ensure that they are registered in SAFEUSE on the relevant installation and that Norwegian safety data sheets are accompanying the chemicals

Additional for process chemicals
- fill out the ACC form and submit for approval a list of the disciplines specified in the form

HSE-evaluation of new chemicals
- The HSE department shall HSE-evaluate new chemicals in accordance with Appendix 1: Instruction for HSE approval of chemicals. Report on status of approval, along with any precautions, shall be sent to the applicant as soon as the evaluation is completed
- HSE assessment, ACC and approval/rejection shall be documented and archived.
- Chemicals in risk classes 4, 5 and 6 require a detailed risk assessment (ChemiRisk), while chemicals in risk classes 5 and 6 also require and application for exemption (see Appendix 1).

Registration of new datasheets
- When a new chemical has been approved, the Norwegian safety data sheet shall be archived in CHESS under the relevant department/installation
- If a detailed risk assessment has been carried out in ChemiRisk, this shall be linked to the chemical in CHESS
- For hired installations, the Supervisor shall send safety data sheets to the respective installation; in addition, the HSE department must have access to the rig's chemical database/inventory to verify that no chemicals are used that are on Skarv, Ula and Valhall’s prohibited list.

Sending chemicals offshore
- When sending chemicals offshore, the supply base shall ensure that they are registered in CHESS on the relevant installation and that Norwegian safety data sheets are accompanying the chemicals

Receiving chemicals
- When receiving chemicals the store keeper shall
  - check the cargo manifest
  - check the documentation
  - ensure that chemicals are stored in accordance with the Safety Data Sheet (Area responsible leader and user)
4 WORKING WITH CHEMICALS

General requirements
• All chemicals that are used must be approved by the HSE department and be labelled according to the regulations
• All users are responsible for familiarising themselves with the properties of the chemical, its hazards and, if applicable, the risk assessment
• Users shall have a copy of the approved safety data sheet or Action Card and if applicable, the risk assessment (ChemiRisk) available at the regular place of use
• The recommendations described in the safety data sheet/risk assessment shall be followed by everyone on board. If chemicals are to be used for a different purpose, a new risk assessment must be carried out before work is started

Safety Data Sheets
• The Area authority must make sure that the data sheets at the place of use are the same version as in CHESS
• General reference books with safety data sheets direct from the supplier etc, are not to be considered as approved safety data sheets

Approval of work
• For approval of work with hazardous chemicals, reference is made to HSE Directive 1 - Work Permits
• For approval of work involving pipe systems, tanks and related components, HSE Directive 1 - Work Permits, and HSE Directive 2 - Entry, shall apply

Safety precautions for working with hazardous chemicals
• When working with hazardous chemicals, safety measures for Level 1 Work Permits (Directive 1) shall apply. The recommendations described in the safety datadheet/risk assessment shall also be followed

On completion of the work
• The Performing technician shall ensure that used chemicals and any chemical spills are handled as hazardous waste pursuant to HSE Directive 6 - Hazardous material and waste

5 RECEIVING, LABELLING AND STORING CHEMICALS

Receiving of chemicals
• When receiving chemicals the OMC shall check the cargo manifest
• The Area responsible and the user shall ensure that the material is stored in accordance with paragraph 7 of the safety data sheet and guidelines for storage of chemicals as described in the table in in Appendix 2
Packaging and labeling of chemicals

All chemical products should be well packed and labeled in Norwegian with:

- identification of the supplier (s)
- The amount of the product (if it is not specified elsewhere on the package)
- product identifiers
  - for substances: Chemical name and ID number (EC number or CAS number)
  - for mixtures: Trade names and identifiers for the substances that contribute to the hazard classification
- Identification of relevant hazards using:
  - hazard pictograms
  - signal words
  - risk phrases (R phrases or H statements)
  - safety phrases (S or P-phrases)
  - supplementary information
- All chemicals should only be kept in original packaging. When transferring to another container, inspect the container material is suitable for the preparation and the container must be labeled in the same way as the original packaging. Labels may be printed from CHESS and shall be attached clearly visible on the container.

Chemical Storage Map

- Storing of chemicals should only be done in dedicated locations according to installation-specific Chemical Storage Map and according to the descriptions given in Appendix 2: Guidelines for storage of chemicals and paragraph 7 of the safety data sheet.

Storage sites

- There should be a folder with the relevant safety data sheets /Action Card on each chemical storage.
- The following specific factors should be considered when storing:
  - containers under pressure and flammable chemicals should be stored so that they are not exposed to heat
  - empty containers should be labeled and stored separately at defined place for waste
  - chemicals that may react with each other must be stored separately, cf. section 10 of the MSDS
  - do not store a greater amount than the daily requirement of the chemicals on the worksite
  - chemicals in hazard categories as very toxic, toxic and explosive shall be secured to prevent unauthorized access to them. Hazardous chemicals should be kept locked up
  - all storage areas should be well ventilated
  - storage spaces should not be close to escape routes
- All chemicals must be stored in closed containers. Containers should be kept clean in case of spill. Preferably, always use the original packaging.
• Chemicals in the same hazard class primarily has the same risks and can be stored in the same place. Otherwise the guidelines for storage of chemicals as described in the table in Appendix 2

6 CHECKS

Inspection of chemicals and storage sites
• HSE shall ensure identification of potential deviations in relation to governing documentation or good working practices
• Area authority shall regularly inspect the chemicals in his/her area of responsibility in accordance with:
  o Chemical Storage Map for the installation
  o Guidelines for storing chemicals (Appendix 2), as well as Item 7 in the safety data sheet
• The inspection shall include the following, as a minimum that:
  o binders with hard copies of up-to-date and approved safety data sheets (SDS) / Action Cards are available at all permanent storage/user sites
  o all chemicals in use have safety data sheets available in CHESS
  o chemicals that are no longer used are removed, and sent to shore
Inspections shall be documented using Tra@ction and actions shall be assigned to close nonconformities

» Checking CHESS
• The HSE department shall, at least once every year, ensure that all chemicals registered in CHESS are reviewed to ensure that prohibited chemicals listed in Appendix 1 are not registered, and keep the electronic chemical archive up to date
• The HSE department shall annually report the chemical indicator for Aker BP installations to PSA according to RNNP

Substitution
• All chemicals should be considered for substitution every 3 years. The evaluation should also include health and environmental assessment and shall be performed according to internal substitution/phase-out plan

Checking chemicals subject to discharge permits
• At least once a year, the environmental advisor must review all chemicals that are subject to discharge permits. Normally this can be done in connection with the annual reporting to the Miljødirektoratet (Norwegian Environment Agency)
Training
- Everyone who is exposed to chemicals shall have relevant information and training in handling chemicals, including training in CHESS. This directive shall also be regarded as information designed to increase awareness surrounding safe use of chemicals.
- Information and training shall cover the requirements set in Chapter 3 of the Regulations relating to conduct of work.

PPE (Personal Protective Equipment)
- For selection of PPE, see HSE Directive 9 - Personal protective equipment.
- If a detailed risk assessment has been performed, the requirements for PPE shall be listed and used.
- Separate glove guides and filter guides are available. These can be found on the intranet.
HSE DIRECTIVE 7
CHEMICALS ATTACHMENTS

Attachment 1:
Instruction for HSE approval of chemicals

Attachment 2:
Guidelines for storing chemicals
ATTACHMENT 1: INSTRUCTIONS FOR HSE APPROVAL OF CHEMICALS

General
The chemical database, PCMS, be used when applying for approval of new chemicals. The requisitioner will receive an email receipt for the application is submitted.

The HSE department will consider your application based on the information received on the use of the substance and the information given in the safety data sheet.

Quality
Check :
• the quality of the Safety Data Sheet
• Material Safety Data Sheet must be approved by REACH, attachment II
• that the declaration number in Miljødirektoratet's product register is stated. The supplier must be contacted if the number is not stated
• for Biocides, HSE department should get documentation from the supplier that the enrollment of the active substances in the EU review for biocides is performed

Content of prohibited substances - Group 1
Check :
• that the chemical does not contain any substances that are not permitted in accordance to Chemicals with prohibitions or special restrictions (given in this attachment), Group 1 - Prohibitions
• the substance is not on the REACH list of forbidden chemicals

Content of substances with special restrictions - Group 2
Check:
• That the chemical does not contain substances that are associated with special restrictions according to Group 2 - Special restrictions (specified in this attachment), or substances on Miljødirektoratet's priority list.
• for chemicals that contain substances in Group 2 – Special restrictions, one must apply for an exemption, as well as complete detailed risk assessments before the chemical can be approved

For chemicals discharged to sea
• Check whether HOCNF is registered in NEMS or has been attached
• All HOCNF datasheets shall be handled confidentially, and access to the NEMS database is restricted
• Assess and document the individual substances:
  o biological degradability
  o potential for bio-accumulation
  o acute effect
  o against section 66 of the Activities Regulations

Chemicals in the black and red colour categories, as well as yellow with Y3 sub-category, shall not be approved without further evaluation against internal phase-out plans and relevant discharge permits. Use and discharge of chemicals shall generally be assessed in relation to permits, this regards both yellow chemicals and chemicals in closed systems. For chemicals that are not included in existing permits, applications must be drawn up for Miljødirektoratet (the Norwegian Environment Agency)

**Risk assessment**
The chemical shall be classified based on the chemical’s inherent hazard according to the table in criteria for HSE categorisation of chemicals. A substitution evaluation and detailed risk assessment are required for all chemicals in health risk categories 4, 5 and 6. This evaluation must be carried out before the chemical can be approved for use. Chemicals in risk category 5 and 6 also require applications for exemption handling.

Detailed risk assessments shall be performed in cooperation with the user of the chemical and shall be documented in ChemiRisk. Based on the risk assessment, the HSE department shall make a decision regarding approval of the chemical. Approved risk assessments are made available in CHESS (under “Risk”).

**Application for exemption handling**
For chemicals that require an application for exemption, the necessity of the product, as well as the substitution evaluation, shall be described and documented by the HSE department.
<table>
<thead>
<tr>
<th>Risk class</th>
<th>Basis for category</th>
<th>HEALTH</th>
<th>ENVIRONMENT</th>
<th>SAFETY</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Unacceptable</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>Very high</td>
<td>Acute tox. 1, 2 (H300, H310, H330)</td>
<td>Aquatic chronic 1 (H410)</td>
<td>Ozone 1 (H420)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute tox. 1, 2 (H301, H311, H331)</td>
<td>Aquatic chronic 2 (H411)</td>
<td>Acute tox. 3 (H304, H314, H334)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Carc. 1A, 1B (H340, H350)</td>
<td>Aquatic chronic 2 (H411)</td>
<td>Carc. 2 (H351)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Skin corr. 1A, 1B (H354)</td>
<td>Exp. 1.2 (H202)</td>
<td>EUH 004</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Resp. sens. 1A, 1B, 1C (H354)</td>
<td>Exp. 1.3 (H203)</td>
<td>EUH 005</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STOT RE 1 (H372)</td>
<td>EUH 014</td>
<td>EUH 207</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STOT SE 2 (H371)</td>
<td>EUH 070</td>
<td>EUH 207</td>
</tr>
</tbody>
</table>

**REQUIRED MEASURES**

- Application for exemption required before use. Substitution shall/must be evaluated and documented.
- Thorough risk assessment required. Substitution must be evaluated and documented.
- Application for exemption required before discharge chemicals and KMR substances required. Substitution must be evaluated and documented.
- Application for exemption required before use. Substitution shall/must be evaluated and documented.
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<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
<th>Symbols</th>
<th>Instructions</th>
<th>Notes</th>
</tr>
</thead>
</table>
| 3     | Moderate    | Acute tox. 4 (H302, 312, 332)  
Asp. tox. 1 (H304)  
Eye dam. (H318)  
Skin corr. 1B, 1C (H314)  
STOT RE (H373)  
EUH 202  
EUH 203  
EUH 204  
EUH 205  
EUH 208 | Aquatic chronic 3 (H412)  
Aquatic chronic 4 (H413)  
HOCNF chemicals  
"Other chemicals" | Expl. 1.1 (H201)  
Aerosol 2 (H223)  
Aerosol 1, 2, 3 (H229)  
Flam. Gas 2 (H221)  
Flam. Liq. 2 (H225)  
Flam. Sol 1 (H228)  
Chem. Unst. Gas B (H231)  
Org. Perox B, Self-react B (H241)  
Pyr. Liq. 1, Pyr. Sol. 1 (H250)  
Self-heat. 1 (H251)  
Ox. Gas 1 (H270)  
Ox. Liq. 1, Ox. Sol. 1 (H271)  
Ox. Liq. 2, Ox. Sol. 2 (H272)  
Press. Gas ref. Liq. Gas (H281)  
EUH 029, EUH 031 | Need for risk assessment shall be evaluated. Stored / handled in accordance with safety datasheet instructions with any supplemental requirements. Procurement allowed. |
| 2     | Low         | Eye irrit. 2 (H319)  
Skin irrit. 2 (H315)  
STOT RE 3 (H335, H336)  
EUH 066  
EUH 201  
EUH 201A  
EUH 206 | Not classified Environmentally Harmful  
HOCNF: "GREEN" | Flam. Liq. 3 (H226)  
Flam. Sol. 2 (H228)  
Org. Perox. A,C,CD,D,E,EF,F (H242)  
Self-react. C,CD,D,E,EF,F (H242)  
Self-heat. 1, 2 (H252)  
Water react. 2, 3 (261)  
Ox. Liq. 3, Ox. Sol. 3 (H372)  
Met. Corr. 1 (H290)  
EUH 018, EUH 209, 209A | Stored/handled in accordance with the safety datasheet’s instructions. |
| 1     | Very low    | Not classified hazardous to health | Not classified Environmentally harmful  
HOCNF: «PLONOR» | Not classified safety hazardous | Stored/handled in accordance with the safety datasheet’s instructions. |
Chemicals with prohibitions or special restrictions

Prohibited substance-Group 1:
DANGEROUS PRODUCTS/SUBSTANCES THAT ARE NOT PERMITTED:
- 2-naphthylamin and its salts
- 4-aminobiphenyl and its salts
- benzidine and its salts
- 4-nitrophenyl
- asbestos, attapulgite, zeolite, sepiolite
- cadmium compounds
- chlorofluorocarbons (CFC)
- halones
- mercury compounds
- PCB
- 1,1,1-trichlorethane
- lead compounds
- tetrachloromethane
- trichloromethane
- 1,1,2-trichlorethane
- 1,1,2,2-tetrachlorethane
- 1,1,1,2-tetrachlorethane
- pentachloroethane
- 1,1-dichlorethane
- dope containing heavy metal
- paint systems containing zinc chromate
- isocyanate based products (polyurethane)

Substances with special restrictions - Group 2:
DANGEROUS PRODUCTS/SUBSTANCES THAT TO THE GREATEST POSSIBLE EXTENT MUST BE AVOIDED
- arsenic compounds
- benzene
- bitumen
- chloroform
- chromates (IV)
- ethylene glycol monoethyl ether
- 2-ethoxyethylacetate
- (ethylene glycol mono ethyl ether acetate)
- 2-methoxyethanol
- (ethylene glycol mono methyl ether)
- 2-methoxyethylacetate (ethylene glycol mono methyl ether acetate)
- formaldehyde
- n-hexane
- nickel compounds
- dichloromethane
- trichloroethene
- chlorinated solvents
ATTACHMENT 2: GUIDELINES FOR STORING CHEMICALS

General info about storing chemicals
Chemicals shall only be stored in established chemical storage locations (see the installation-specific chemicals map), as well as Item 7 in the safety data sheet or Action Card. Chemicals shall always be stored on the basis of their properties and reactivity. Not all chemicals can be stored together. Some of them require special storage conditions and some may change properties if they are stored over longer periods of time. Use the information in the safety data sheet

• Chemicals shall only be stored in the original packaging, or in other approved chemical packaging, and must be clearly marked with the name of the chemical and hazard labelling. Labels can be printed from CHESS. Never pour used chemicals or remnants back into the original packaging
• Chemicals that react violently with each other must not be stored together
• Only the very minimum amount of chemicals shall be stored where work is being performed. The chemicals must be stored in closed cabinets, containers or in rooms that are designed for storing such types of chemicals
• Chemicals that emit vapour, such as organic solvents, must be stored in a ventilated location
• Flammable chemicals (and gases) shall be stored in fire-proof cabinets with separate ventilation
• Some chemicals must be stored in coolers or freezers, others must be stored in a dark location
• Toxic chemicals should be kept in a locked area, and cabinets, rooms or containers must be equipped with ventilation
• Cabinets where concentrated acids are stored must not be made of metal, since concentrated hydrochloric acid, in particular, emits HCl gas, which has a corrosive (caustic) effect on metals. Bottles containing concentrated acids must be placed in plastic vessels and stored below eye level. Examples: acetic acid, hydrochloric acid and sulphuric acid. The hazard labelling must indicate whether the substance is “caustic”

Guidelines for storing chemicals

<table>
<thead>
<tr>
<th>Type of chemical</th>
<th>Hazard labelling</th>
<th>Transport labelling</th>
<th>Storage requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explosives</td>
<td><img src="Image" alt="Explosives Icon" /></td>
<td><img src="Image" alt="Explosives Icon" /></td>
<td>Shall not be stored on board unless absolutely necessary. If stored on board, this must be done in accordance with regulatory requirements.</td>
</tr>
<tr>
<td>Flammable chemicals</td>
<td><img src="Image" alt="Flammable Icon" /></td>
<td><img src="Image" alt="Flammable Icon" /></td>
<td>Flammable liquids shall be stored in sealed containers. Paint and other products containing solvents must be stored as flammable liquids.</td>
</tr>
<tr>
<td>Storing flammable solids</td>
<td>Flammable chemicals must be stored in approved fire cabinets connected to ventilation. They must not be stored together with other chemicals. Large volumes of flammable chemicals should be stored in suitable rooms that are designed to prevent fire or explosion. This means, e.g. that fixtures, outlets, etc. must be EX-proof. The same applies to ventilation system requirements (ducts and fans) from a cabinet or room where flammable chemicals are stored. Additional requirements include that the ventilation provides sufficient air exchange, that the room has an adequate pressure relief surface located so that it does not pose a hazard for the surroundings, and that the room is fire-resistant (shelving, cabinets, walls, ceiling and floor). Vents must be installed at both floor and ceiling. Rack-off or other activity must not take place in rooms where flammable chemicals are stored. Storage of flammable solids that are easily ignitable (e.g. wood, cloth and paper) shall be restricted to a minimum. Chemicals must be stored in areas equipped with sprinkler systems. Flammable chemicals must not be stored in switchboard rooms or electrical equipment rooms.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pressurised gases</td>
<td>Shall be stored as flammable chemicals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxidising chemicals</td>
<td>Shall be stored in such a manner that they cannot come into contact with flammable goods/hydrocarbons. Must be stored in closed and well-ventilated areas, completely separate from other chemicals (min. 3 metres away). The storage site must be cool and well-ventilated.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrosive (caustic) chemicals</td>
<td>Shall be stored in closed and well-ventilated areas, completely separate from other chemicals (min. 3 metres away). The areas must be clearly marked. Correct protective gear must be used when handling the chemicals. Acids and bases shall be stored in a dry location, with no risk of contact with water and other chemicals. Acids and bases must be stored separately. The ventilation system from a cabinet or room used to store acids must be resistant against corrosion, including ducts and fans. Remember to check the type of acid vapour that may occur, as regards whether it is lighter and/or heavier than air.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toxic chemicals</td>
<td>Must be stored and handled as corrosive chemicals. Must be stored in locked cabinets and connected to ventilation as needed.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radioactive chemicals/waste</td>
<td>Must be stored and handled as corrosive chemicals.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Environmentally harmful chemicals | Must be stored such that the chemical cannot be discharged to sea or drains.
---|---
Inorganic and organic chemicals | Inorganic and organic chemicals must not be stored together. They can potentially be stored in the same room, but must be physically separated, e.g. by being placed at opposite sides of the room. All organic substances are flammable. They must therefore not be stored together with inorganic substances that are labelled as oxidising, such as e.g. ammonium nitrate and potassium permanganate. This is because oxidising substances can cause flammable substances not classified as combustible to nevertheless burn explosively.

**Special conditions for specific products**

- Magnodol is stable and can be stored with any other substance in a cool, dry location, stored in a sealed container.
- Sodium bisulphite must be stored away from acids and oxidising agents, for example calcium hypochlorite which is stored as an oxidising substance.
- Scalekreat 8070 must be stored separate from alkalis and oxidising materials, for example sodium hypochlorite, which is an alkali.
- Saf ACID must be stored in the original container, avoiding acids, alkalis and oxidising materials.
- Citric Acid must be stored away from oxidising materials.
- Calcium hypochlorite must be stored in the original container, as an oxidising material. Must be stored away from flammable substances, oxidising substances and acids. Caustic product.
- Sodium hypochlorite must be stored separately from acids and oxidising material. Caustic product.