

Guidance sheet Chemicals Management and Chemical Change Management at manufacturers

1	Background	2
2	Management system	2
3	Input stream management	5
4	Chemicals Change Management (CCM)	8
5	Storage	15
6	Production	18
7	Occupational Health	19
8	Emissions	21
9	Emergency preparedness	22
10	Disposal of production waste	23
11	Consumer safety	24
12	Other applicable documents	24

1 Background

The management of chemical substances and mixtures is an essential and cross-functional task for every manufacturing company – especially if the respective substances and mixtures are rated as hazardous.

Chemicals management involves all different stages of the production process as well as auxiliary processes and materials. Typically, the following functions are involved:

- Top Management
- Purchasing
- Product development
- Production management
- EHS management
- Quality management
- Management for Emergency Preparedness
- Human resources

Chemical management deals with:

- Process chemicals (e.g. auxiliaries, dyestuffs and chemicals)
- Supplies (fuels, oils, cleaning agents, etc.)
- Chemicals for auxiliary processes and equipment (Freshwater preparation, air conditioning, wastewater treatment, etc.)

2 Management system

2.1 Policy

The environmental or corporate policy of bluesign® SYSTEM PARTNER companies shall contain a commitment for responsible choice and handling of chemicals, as well as regular search for substitution/continual improvement, including a commitment to the *bluesign® SYSTEM* and *BSSL (consumer safety limits)*.

The system partner shall determine and provide the resources needed for the establishment, implementation, maintenance and continual improvement of the Chemical management.

2.2 KPIs/eKPIs

The System partner shall define and record suitable key performance indicators (KPI) and environmental key performance indicators (eKPI) to measure and document environmental performance.

KPIs are for example (list not exhaustive):

- Financial KPIs
- KPIs for accidents and incidents
- KPIs for customer complaints

Chemical related eKPIs can be for example (list not exhaustive):

- Absolute chemical (solvent, etc.) consumption
- Specific chemical (solvent, etc.) consumption
- Emission factor cod (wastewater)
- Emission factor TOC/VOC (off-gas)
- Specific consumption of different chemical components (e.g. Dyestuff per kg dyed fabric, auxiliaries per kg fabric, chemicals per kg fabric)

2.3 Goals

Based on the KPIs/eKPIs clear goals for each business year shall be defined which demonstrate a continual improvement.

2.4 Management of legal obligations

Local regulations

The system partner must be aware of applicable local/national regulations and updates thereof. Necessary permits need to be available and valid. An overview on permits and licenses incl. specific requirements, reporting duties, applicable limits and expiry dates shall be compiled and maintained. International conventions/protocols and respective national implementations as for example the Montreal Protocol (Ozone Depleting Substances (ODS)) must be regarded.

Regulations in target markets

If final products are subject to international shipping, regulations of the target markets must also be kept under control.

2.5 Organization & Responsibilities

An organization chart shall be available and a person responsible for the management of chemicals shall be nominated. The organization chart should clearly define the role and the name of the responsible person (=minimum requirement). The responsible person for chemicals management shall report to senior management. Depending on the size of the organization different aspects of chemicals management can be allocated to different persons (=chemicals management team). In this case an overall responsible person shall be nominated.

2.6 Management of Competences

Responsible Person

Persons in management roles responsible for Chemicals Management must be adequately qualified (e.g. higher education in chemistry or chemical engineering or adequate practical chemical education plus respective work experience). Knowledge shall be kept up to date by regular external trainings. Signed training records shall be kept on file.

Adequately qualified Chemical experts can also take over the internal training of the workers.

Operator

Workers having contact with hazardous materials shall be educated upon engagement with the company, and afterwards periodically (e.g. once a year). The trainings shall also be conducted upon the introduction of new processes or chemicals in order to improve the awareness concerning handling of hazardous materials (including hazardous waste) and in case of incidents. Signed training records shall be kept on file.

2.7 Records on accidents and incidents

System partners shall keep records of accidents, incidents and near miss cases and use this information for improving the safety situation at the site.

2.8 Management review

Goals, KPIs/eKPIs shall be subject to annual management review.

3 Input stream management

3.1 Selection of Suppliers

A basic and very important step of input stream management is, to select suitable suppliers. The following criteria shall be regarded:

- bluesign® SYSTEM PARTNERSHIP
- Social
- Reliability
- Performance/Product quality
- Product documentation (SDS/TDS/Labeling of product)
- Customer service/application support

In the sense of Chemicals Change Management (CCM; compare Chapter 4) the supplier situation shall be continually improved.

3.1.1 bluesign® SYSTEM PARTNERS

The bluesign® SYSTEM PARTNERSHIP of a supplier already ensures a high level of supplier quality. The evaluation can be reduced to performance criteria.

3.1.2 Non- bluesign® SYSTEM PARTNERS

If chemical products and materials are in use that are not supplied by bluesign® SYSTEM PARTNERS, an appropriate input stream management including random testing is required (compare *bluesign® CRITERIA for production sites*).

For non-system partners a more extensive evaluation is necessary.

The following aspects should be regarded:

- Cooperation of supplier in aspects of information exchange about EHS, OHS, etc. aspects
- Provide evidences for quality and restricted substance control (including e.g. testing)
- Provides reliable and continuing technical assistance with up to date and deep product data

- Well documented shipments and products by lot, batch, article numbers, proper labelled products etc.
- Committed for social responsibility e.g. to the principles of the *ILO international labor standard* or *UN Global Compact*
- Technical documentation (SDS, TDS, etc.)
- Impurities in products
- Logistical aspects
- Economical aspects

If non-system partner product shall be used for the certification of final products, an evaluation of data collected by means of the bluesign product screening form (PSF) is necessary (tolerating only possible until re-assessment).

3.2 Selection of products

3.2.1 bluesign® APPROVED

Using only bluesign® APPROVED chemical products (product composition evaluated by bluesign beyond SDS reporting limits and compliance approved) from bluesign® SYSTEM PARTNERS shall be the goal. bluesign® APPROVED products are listed in the bluesign® FINDER.

If chemical products by bluesign® SYSTEM PARTNERS which are not yet registered in the bluefinder shall be used for certified final products, the supplier has to register the chemical product before a certification process can be completed.

3.2.2 Substitution duty

In regular intervals the chemical portfolio – especially the non-system partner products shall be subject to a substitution check. In this check alternative products available on the market – and especially in the bluefinder - shall be compared with the existing products – if an alternative product has a favorable environmental and consumer safety profile while meeting the performance criteria, a replacement shall be conducted. With high priority CMR products and products with a high toxicity to humans and environment shall be phased out.

In the selection process of chemical products (especially for non-system partner products) RSLs and MRSLs shall be considered. Furthermore, the following points shall be considered:

- OH implications
- Environmental implications
- Disposal implications

For further information see also Chapter 4 (Chemicals Change Management (CCM)).

3.3 Approval of products for production

A formal approval procedure with clear responsibilities involving responsible persons of concerned areas shall be defined and applied.

For the approval of actual production, the following points shall be covered:

- Quality of documentation (SDS/TDS; products without suitable SDS shall not be used at all)
- Human toxicity
- Toxicity to aquatic environment
- SVHC check
- Flammability and explosion hazards
- Physical state at delivery
- RSL/MRSL compliance
- Compliance to substances banned in the BSSL
- Compliance to local regulations
- Compliance with regulations in target markets
- Need for substance specific permits
- Lab test/CoA for critical parameters

For trials and pilot production simplified approval procedure can be applied and basic safety and environmental criteria shall be checked by means of an SDS check.

3.4 Input stream management for non-chemical raw materials

It is important to be aware that chemical substances can be introduced to the production and products by means of contaminated raw materials and intermediates (e.g. APEO on greige fabric).

See the *Guidance sheet "Input stream management of nonchemical raw materials/intermediates at manufacturers"* for further details and advice.

4 Chemicals Change Management (CCM)

For the chemical assessment of chemical products detailed information on intended ingredients (actives and additives) and unintended ingredients (impurities, by-products) as well as on toxicological and ecological data is necessary.

As well as manufacturers and brands, chemical suppliers are important system partners within the bluesign® SYSTEM. This approach enables the chemical supplier and bluesign technologies to exchange essential information and updates (which are often confidential).

That means that bluesign® APPROVED chemical products are checked more thoroughly than it would ever be possible with the non-system partner products.

It is the goal that the manufacturer uses only bluesign® APPROVED chemical products from bluesign® SYSTEM PARTNERS. Non-system partner chemistry must be phased-out/replaced as soon as possible.

Taking into consideration that phase-out/replacement of non-system partner chemical products is often linked with time consuming actions, such as

- adaption of recipes
- additional lab and production trials
- new adapted sourcing
- creation/expansion of the bluesign® network

the change in the chemical product portfolio of a manufacturer can only be done step by step.

The bluesign® CRITERIA reflect this situation by means of a stepwise phase out schedule of non-system partner chemical products during the implementation phase of the bluesign® SYSTEM (see Figure 4.1).

Note:

A bluesign® CHEMICAL ASSESSMENT list, that reflects the status of the bluesign® CHEMICAL ASSESSMENT of each chemical product being in use at the inspected production site, is attached to each bluesign® ASSESSMENT report.

This list is a dynamic document and communication tool for information exchange on actual status and Chemicals Change Management (CCM) between the manufacturer and the bluesign® CHEMICAL ASSESSMENT TEAM

4.1 Procedure for replacement of non-system partner chemical products

It is a prerequisite for initial certification that the bluesign® APPROVED articles are manufactured only with

- blue and grey chemical products of bluesign® system partners
- tolerated chemical products of non-system partners
- accepted basic chemicals

For first renewal of the certificate, the goal is that the phase out/replacement of non-system partner chemical products is completed (exception tolerated chemical products), that means that at the whole production site only the following are in use:

- blue and grey chemical products of bluesign® SYSTEM PARTNERS
- accepted basic chemicals

As a minimum requirement the share (number and consumption) of bluesign® APPROVED (blue and grey) chemicals products must be significantly increased.

In exceptional cases the usage of particular non-system partner chemical products which are rated as tolerated can be accepted.

This stepwise approach can be followed only if the organizational and technical performance of the manufacturer is on an appropriate level as checked during on-site inspection and stated in the bluesign® ASSESSMENT report.

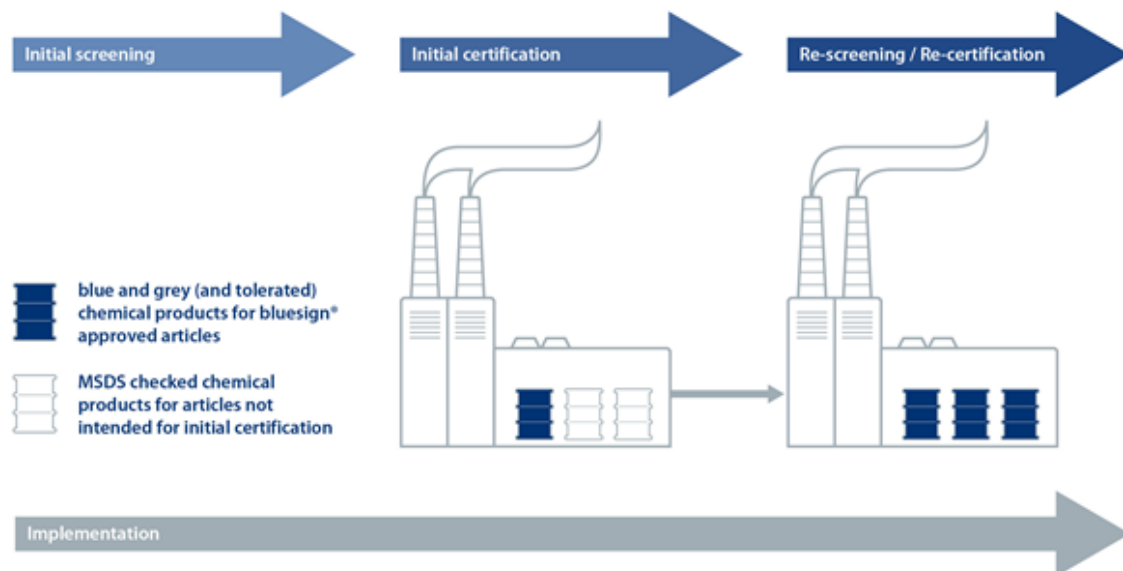


Figure 4.1: Replacement of non-system partner chemical products in the beginning of a bluesign® SYSTEM PARTNERSHIP

4.2 Handling of bluesign® system partner chemical products

Chemical products from bluesign® SYSTEM PARTNERS are generally subject to a chemical assessment. Their rating is listed in the bluesign® CHEMICAL ASSESSMENT list.

4.3 Handling of non-system partner chemical products

4.3.1 Handling within bluesign® ASSESSMENT

Chemical products from non-system partner are generally not subject to a full bluesign® CHEMICAL ASSESSMENT. However, as part of the assessment process, the manufacturer needs to provide Safety Data Sheets (SDS) for all chemical products on site.

Based on this information bluesign technologies decides whether an interim use of this chemical product can be allowed or whether an early phase out is necessary, e.g. of a product with a significant risk. These results are stated in the chemical assessment list.

4.3.2 Handling during implementation

During implementation phase all chemical products must be transferred to bluesign® APPROVED chemical products. This means that

- They need to be replaced by bluesign® APPROVED products of an existing bluesign® SYSTEM PARTNER

or

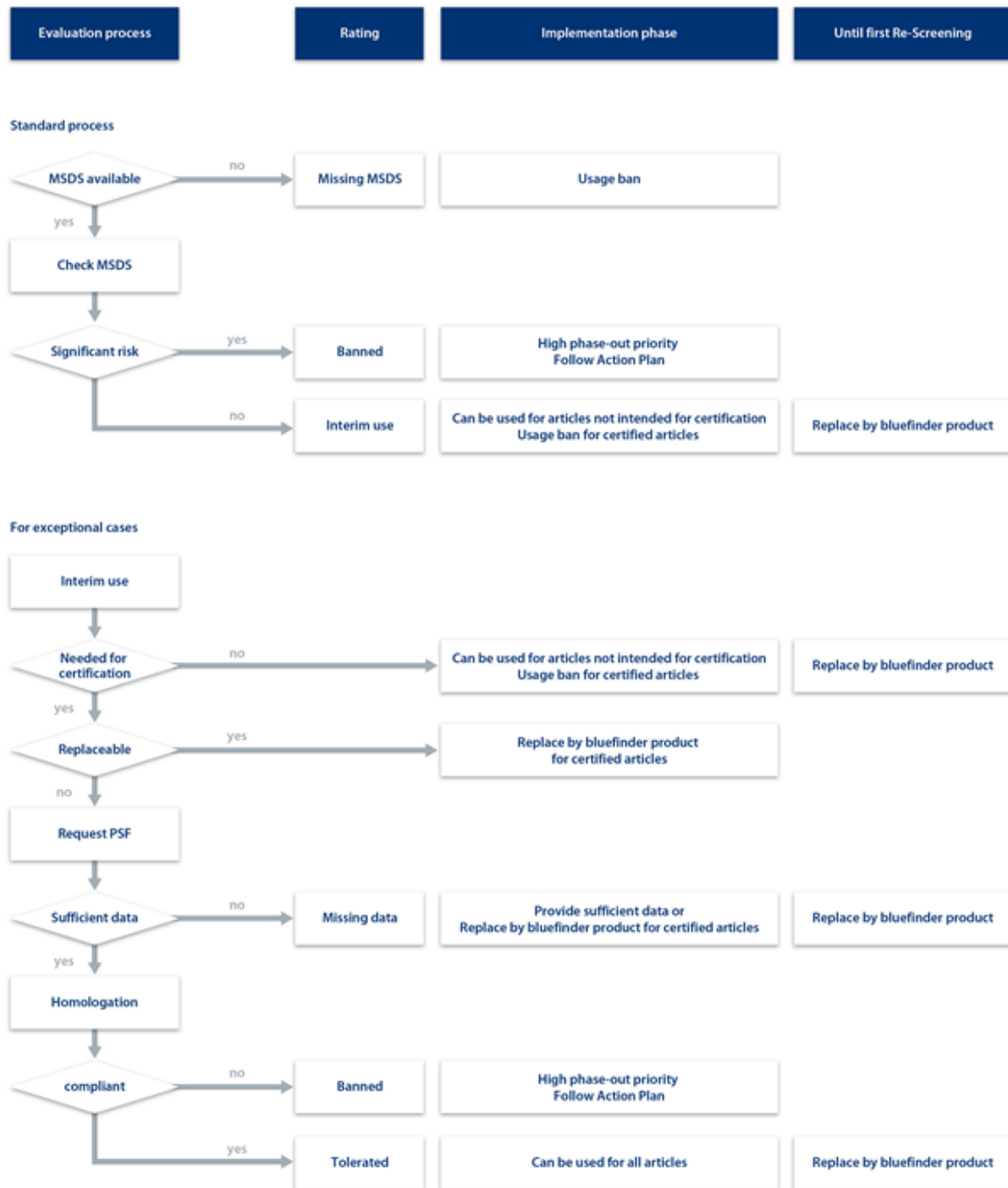
- They need to pass bluesign® CHEMICAL ASSESSMENT if their supplier decides to become a bluesign® SYSTEM PARTNER.

4.3.3 Tolerating non-system partner chemical products

If from a technical point of view there is no appropriate chemical product from a bluesign® system partner registered in the bluesign® FINDER, a chemical assessment of non-system partner chemical product can be performed exceptionally upon the decision of bluesign technologies. Chemical products compliant with the *bluesign® CRITERIA for chemical assessment* will be rated as "tolerated". An appropriate data base (reliable and meaningful SDS + PSF, at best supported by test reports) is required and needs to be provided by the textile manufacturer. Depending on the quality and type of the provided data, the risk

associated with the intended application and the consumption, additional data (test reports, certificates) may be required.

4.3.4 Evaluation process and rating



It is possible that chemical products which have not been subject to the bluesign® CHEMICAL ASSESSMENT may have negative influence on the EHS performance of the company. However, the potential risk is minimized in this time period due to the fact that

- chemical products used for uncertified range(s) are also briefly evaluated based on SDS and during initial bluesign® ASSESSMENT
- emissions and occupational health situation must always meet the *bluesign® CRITERIA for production sites* (also during implementation phase)

Nanoscale materials, fluorocarbons, flame retardants and biocidal products must be manufactured by a bluesign® SYSTEM PARTNER. A “tolerated” status for these chemicals is not possible.

4.4 Basic chemicals

For basic chemicals (such as sodium hydroxide or acetic acid) a bluesign® SYSTEM PARTNERSHIP of the supplier is not required. The chemicals are rated based on an actual SDS which has to be reliable and appropriate. Basic chemicals which conform to the *bluesign® CRITERIA for chemical assessment* are rated as “accepted”; if compliance is not given the chemical is rated “banned” and has to be phased out from manufacturing process (see also *Guidance Sheet - Input stream management commodity/basic chemicals in textile production*).

4.5 Product ranges which are out of scope of certification

As a bluesign® SYSTEM PARTNER the manufacturer commits to working towards a product portfolio which can be certified completely as bluesign® APPROVED in order to minimize the impact to man and environment.

In some specific cases it might not be possible to change the chemical products, not even in the long term (e.g. if detailed customer specifications for chemical products exist (military, automotive, etc.)). In this exceptional case the respective product range can be defined as “out of scope of certification”.

However, an on-site inspection covers the whole production site in order to ensure that the following pre-conditions are met:

- Organizational and technical situation at the production site has to ensure that cross contamination with the bluesign® APPROVED articles can be avoided
- Emission and occupational health situation of the production site meets the relevant bluesign® CRITERIA

The need for an “out of scope range” must be specified by the manufacturer with adequate arguments. Decision whether an “out of scope range” is practicable without significant additional risks must be stated in the bluesign® ASSESSMENT report by bluesign technologies. The phase out of chemical products with high risk can be required.

4.6 Extended phase-out period

In case of the limited availability of appropriate bluesign® APPROVED alternatives on the manufacturers market/business segment bluesign technologies can decide to extend the phase-out period for tolerated non-system partner chemistry.

4.7 Chemical assessment status of chemical products

The following table explains the different rating of chemical products and basic chemicals. Additionally, it is explained how the chemical products have to be managed at the time of initial certification and first renewal of certificate.

Initial ASSESSMENT		Initial certification		Re-certification
Result chemical assessment	Explanation	bluesign® APPROVE D articles	Articles not intended for certification	All articles
Chemical products from bluesign® SYSTEM PARTNER				
Blue	Blue rated chemical products may be used for approved applications.	No restriction	No restriction	No restriction
Grey	Grey rated chemical products are products that may be used under one or more pre-conditions as listed in bluefinder.	ok but pre-conditions to be met	ok but pre-conditions to be met	ok but pre-conditions to be met
Black	Black rated chemical products do not meet the bluesign® CRITERIA for chemical assessment and must be eliminated from the manufacturing process.	Usage ban	Interim use but high phase out priority	Usage ban
Data pending	bluesign technologies is in contact with chemical supplier and manufacturer textile for completing data base.	Usage ban	Interim use	Usage ban
Not intended for chemical assessment	Chemical supplier intends not to apply for chemical assessment of the specific product	Usage ban	Interim use	Usage ban
Deleted in bluesign® FINDER	Product has been deleted from database	Usage ban	Interim use	Usage ban
Chemical products from non-system partner				
Standard process				
Missing SDS	Chemical products shall not be used at the production site without SDS	Usage ban	Usage ban	Usage ban
Interim use	Chemical products are not subject to a full chemical assessment. SDS check showed no significant risk.	Usage ban	Interim use	Usage ban
Banned	Banned rated chemical products do not meet the bluesign® CRITERIA for chemical assessment and must be eliminated from the manufacturing process.	Usage ban	Interim use but high phase out priority	Usage ban
For exceptional cases – additional states				
Tolerated	Chemical products from non-system partners, for which an appropriate data base (SDS + PSF) exist and which conform to the bluesign® CRITERIA for chemical assessment	ok until re-certification	Interim use	Usage ban
Missing data	Data base not sufficient for chemical assessment (SDS available but insufficient PSF data). Company needs to contact chemical supplier for completing data base (PSF).	Usage ban	Interim use	Usage ban
Banned	see above			
Basic chemicals				
Accepted	Basic chemicals for which an appropriate data base (SDS) exist and which conform to the bluesign® CRITERIA for chemical assessment	No restriction	No restriction	No restriction
Banned	Banned rated basic chemicals do not conform to the bluesign® CRITERIA for chemical assessment and must be eliminated from the manufacturing process.	Usage ban	Interim use but high phase out priority	Usage ban

Table 4.1: Ratings of the bluesign® CHEMICAL ASSESSMENT and implications

Note:

Chemical products which do not meet the *bluesign*[®] *CRITERIA for chemical assessment* shall be replaced by bluesign[®] APPROVED chemical products listed in the bluesign[®] FINDER.

5 Storage

5.1 Receiving procedures

Clear receiving procedures for chemicals and intermediates shall be defined including:

- Responsibility
- Check of product type
- Check of Quality
- Check of Quantity
- Check of containers & Label
- Interim storage until clearance

5.2 Storage rules

The following aspects concerning storage of chemicals shall be regarded:

- Common storage rules for combined/segregated/separated storage shall be regarded (see also storage instructions in good SDS)
- Store peroxide and other oxidizing and reducing agents as well as acids and lye separately
- Special areas for the storage of toxic chemicals (esp. Hydrogen peroxide) need to be defined; access shall be restricted
- Prepare and post product and process specific safety instructions for the workers
- Whenever possible, all containers should be stored with a lid/cover
- Chemicals safety information for all hazardous and toxic substances shall be posted near relevant chemical workplaces
- Actual material inventory list should be available including types and amounts of stored auxiliaries, dyes and chemicals and storage place
- Overview map of storage places

- Maximum amount of chemicals stored in one storage area/place shall be defined
- First in -. First out principle (FIFO) shall be regarded

See the *Guidance sheet "Storage of Chemicals"* for further information and advice.

5.3 Storage facilities

The following aspects shall be regarded for storage facilities:

- Suitable floors (compatible to stored chemicals, impermeable, slip proof)
- Secondary containments and retention basins to avoid soil and ground water contamination
- Retention for firefighting water

5.4 Chemical Inventory

A Chemical inventory is a list (Chemical Inventory List, CIL) or database/system which contains all the chemical products and base chemicals used for production (and preferably all chemical products used in auxiliary processes as well, e.g. cleaning and cooling agents).

The following information shall be contained in a chemicals inventory:

- Product ID
- Product name/identifier
- Initial Supplier identifier
- Actual quantity stored
- Maximum quantity stored
- Designated storage area
- Product specific hazards
- SDS issue date
- GHS signal word and pictograms

Additionally, the inventory may contain the following information:

- Bluesign® rating of chemical product
- Person in charge

- Application (e.g. used as auxiliary for dyeing, pre-treatment; for maintenance, dry coating, etc.)
- GHS hazard statements (H-statements)
- GHS precautionary statements (P-statements)
- Segregated/specific storage
- Restrictions concerning working place atmosphere
- Necessary PPE
- Fire - actions
- Spillage – actions
- Container type and volume
- Disposal procedures
- Re-order level
- Environmental characteristics

5.5 Regular updates of inventory, storage concept & SDS

The chemicals inventory must be updated in regular intervals (depending on the type of chemicals and production processes; minimum monthly update).

The storage concept needs to be checked in regular intervals and revised if relevant changes in production or chemicals portfolio occur.

SDS must be kept up to date. Actual versions have to be gathered from the suppliers and distributed into relevant areas of the production

6 Production

To control unnecessary consumption/overdosing, unnecessary emissions as well as unintended transfer of chemicals to the final product, process control is of great importance. The following goals shall be achieved:

- Minimization of release of hazardous chemicals to workplace and environment
- Minimization of impurities, by-products as well as waste
- Minimization of leaks and spills
- Safe workplace

The following measures are typically applied:

- Exact definition of recipes
- Exact definition processing conditions
- Automatic control of important process parameters
- Use of suitable containers and machinery
- Regular calibration of measuring equipment
- Regular check of actual dosing
- Regular revision of dosing instructions/settings

Storage amounts of chemicals stored in production storage areas and temporary storage areas should be kept under control. Maximum amount shall not exceed the daily consumption of the respective chemicals

7 Occupational Health

7.1 Risk assessment

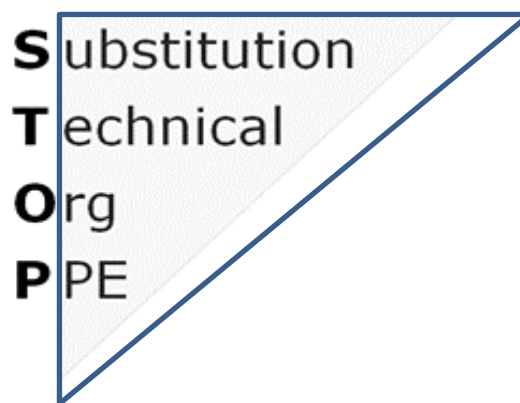
Workplace risk assessments shall be carried out for new processes to identify the risk level and decide whether it is acceptable or not. Workplace risk assessments shall include the risks originating from chemicals handled at the respective workplace (including reactions between chemicals).

A regular and scheduled revision of risk assessments is necessary – extraordinary revisions are necessary if the process is modified or in case of accidents and incidents.

See the *Guidance Sheet "risk assessment"* for further information and advice.

7.2 Hierarchy of controls

For the management of the workplace situation the hierarchy of controls shall be applied:



The effectiveness of the measures is in descending order.

7.3 Suitable equipment and machinery

Machinery, equipment and safety devices need to be suitable for the chemicals in use and shall reduce the risk for the worker as far as reasonably feasible.

7.4 Safe Operating Procedures/Safe work procedures

Safe operating procedures summarize all precautions necessary for the safe handling of chemicals or the safe operation of machinery. Safe operating procedures shall be available near the relevant workplaces for the workers, e.g. to refresh knowledge from trainings.

7.5 Use of own containers/repacking

In case Chemicals or chemical products are put from their shipping container into other containers (e.g. for easier application and dosing) it has to be ensured that the new container is suitable for the chemicals and that an appropriate (simplified in case of small containers) label is attached which contains the main information of the original label.

7.6 OELs and monitoring

The company must identify the types and relevant amounts of chemical substances for which workplace regulations and concentration limits for the workplace atmosphere exist. The basis for this identification are actual SDS. Amounts can be derived from the chemicals inventory list.

Based on these data a suitable workplace monitoring program has to be defined and relevant measurements have to be carried out in regular intervals.

In case of noise relevant processes noise shall be added as a parameter to the monitoring program.

In case dust is relevant, dust shall be added as a parameter in the work areas concerned.

7.7 PPE

Based on the data from risk assessment and OEL monitoring it must be decided whether the workers have to wear PPE for their work.

If PPE is necessary to provide a reasonable level of safety, the type of PPE must be clearly defined and workers have to be trained in correct application. Furthermore, the mode of replacement for PPE, especially for gloves and respiratory protection has to be defined (calculation of breakthrough times and cartridge service life). The application of PPE for daily work should be subject to regular checks.

7.8 Personal hygiene

The following principles of personal hygiene shall be regarded:

- Washing
- Application of creams for skin protection
- Regular change of work clothes
- No eating/drinking in contaminated work areas

7.9 Health check

Depending on the type of processes and chemical applied, initial and regular health checks carried out by qualified medical staff (internal/external) shall be offered to detect potential occupational diseases and prevent further harm (e.g. when working in noise areas, working with toxic chemicals).

7.10 Good housekeeping

Finally, following the principles of good housekeeping helps ensure a clean and safe workplace for the workers.

8 Emissions

8.1 Water

Limit values according to the *bluesign*[®] CRITERIA for production sites as well as applicable local regulations have to be kept.

In textile finishing concentrated padding liquors of:

- Antimicrobials and biocides
- Flame retardants
- Fluorocarbon compounds

Must not be discharged to the water path but disposed of separately via suitable disposal company.

8.2 Air

Limit values according to the *bluesign*[®] CRITERIA for production sites must be kept.

For VOC relevant production sites, the general VOC limitation must be kept additionally for Toluene and DMF a substance related cleaning efficiency of more than 80 % has to be demonstrated by measurements.

Fugitive emissions shall be reduced as far as feasible.

8.3 Soil

Contamination of soil and groundwater with hazardous Chemicals shall be avoided in any case. Respective precautions shall be taken (e.g. retention basins, floorings, spill precautions).

9 Emergency preparedness

9.1 Toxic substances

Special precautions for accidents with toxic and especially highly toxic substances (e.g. antidotes (e.g. for cyanide poisoning), special first aid training, special PPE, adjustment with local hospital) shall be arranged for.

9.2 Fire and explosion

Suitable preventive measures shall be taken (e.g. limitations of fire loads in one section, separation of different fire areas and in case of explosion hazards suitable and sufficient ventilation, ex-proof electrical installations, ESD precautions).

Smoke and heat detectors should be installed to detect fires in an early stage and allow for quick reaction (evacuation and/or firefighting)

For firefighting suitable portable fire extinguishers shall be made available. The category of extinguisher must match the type of fire (compare *Guidance Sheet – fire extinguishers*)

Additional firefighting systems shall be installed wherever necessary (fire hoses, sprinkler systems, CO₂ extinguishing systems)

Firefighting based on water and foam will result in larger amounts of water potentially contaminated with chemicals – to prevent contaminated water entering soil, groundwater or surface waters, suitable firewater retention systems shall be available.

Suitable information for the fire brigade on chemicals storage areas, type of stored chemicals and amounts shall be made available.

9.3 Spills & leaks

Spills shall be prevented as far as possible by applying suitable technical dosing aids and training of workers. Impermeable floorings and secondary containments help to contain

spills and prevent chemicals from entering soil, groundwater or surface waters. Additionally, spill kits can help to contain, adsorb and dispose of spills in an effective and safe way.

If necessary additional devices for preventing spills from entering the rainwater system shall be made available (e.g. cover for storm drain hatches and sewers).

9.4 Special regulations for major accidents hazards

The company is responsible for complying with major accidents hazards regulations (e.g. Seveso III directive, COMAH regulation, etc.) which deal with accidents affecting also the surroundings of the site. Respective preventive measures must be applied.

10 Disposal of production waste

10.1 Classification

Waste must be collected in designated collection areas and containers. Correct classification of waste type must be carried out in order to define the correct treatment procedure as well as safety precautions

10.2 Recycling

Waste which is suitable to be subject to recycling (internal or external) shall be collected separately. The goal shall be that recycled "waste" represents a high percentage of total waste.

10.3 General waste

General waste shall be free from hazardous contents.

10.4 Hazardous waste

Hazardous waste shall be collected separately from materials for recycling and general waste. Different categories of hazardous waste shall be collected separately.

Disposal shall be conducted by a suitable, officially accredited and certified waste disposal contractor.

Sludge from industrial wastewater should not be used in agriculture.

10.5 Disposal of containers

Containers (barrels etc.) in many cases contain residues of the former content which can still represent a hazard (e.g. explosion hazard with solvent containing products). Containers must be collected and handled in an appropriate manner. If possible, returnable containers shall be used (check with supplier) to reduce waste.

If containers are re-used for waste collection reaction of residues with the waste must be prevented (e.g. by cleaning), original labeling must be obliterated and correct waste label attached.

11 Consumer safety

11.1 RSLs BSSL& legal requirements

A textile manufacturer shall establish and maintain an appropriate control of finished products to assure the quality. Parameters such as pH and fastness properties as well as the relevant BSSL substances and defined limits shall be part of a testing program, especially if the BSSL compliance depends not only on the used raw materials and intermediates but also on the process conditions and control (e.g. residual solvent content in solvent coating).

11.2 Testing

A reasonable Testing program shall be defined considering the following factors:

- Risk from involved chemicals
- Risk from involved non-chemical raw-materials
- Risk from process control
- Risk during use phase of the final product

12 Other applicable documents

- bluesign® CRITERIA for production sites
- Guidance sheet - Input stream management of nonchemical raw materials/intermediates at manufacturers
- Guidance sheet - Storage of Chemicals

- Guidance Sheet - Risk assessment
- Guidance sheet - Managing non-system partner chemicals
- Guidance Sheet – Fire extinguishers