Higg Facility Environment Module (Higg FEM) Assessment Questions

Version 3.0

Updated November 2018

Higg Facility Environmental Module (Higg FEM) Convergence Partners

The Higg FEM Chemicals Management section is a joint effort among the Sustainable Apparel Coalition (SAC), the Outdoor Industry Association (OIA), and the Zero Discharge of Hazardous Chemicals (ZDHC) Programme to converge their respective chemicals tools into one assessment questionnaire.

Higg FEM replaces the standalone OIA Chemicals Management Module Facilities Indicators. OIA recommends that all its members utilize the Higg FEM as one holistic tool in its entirety, and as their primary source of benchmarking and measurement for chemicals management best practices at the facility level.

Higg FEM replaces the ZDHC Audit Protocol V.2.0, which is no longer supported by ZDHC. ZDHC Contributors are encouraged to access and utilize Higg FEM as a critical part of the ZDHC system of tools for management and improvement of chemical management. Further, ZDHC requests that Contributors accept Higg FEM assessments and verifications as indicators of chemical management performance.

Through the process of convergence, ZDHC, OIA, and the SAC intend to reach thousands of facilities to harmonize chemical management assessments and reduce duplicative efforts, while also increasing assessment quality and enabling data sharing.

Higg Facility Environmental Module (Higg FEM) version 3.0

Content

General Information and Structure of FEM 3.0

All facilities are required to complete their facility profile on higg.org first, where they are asked to provide information regarding their industry sector, facility type, facility processes, site information, material types, total number of employees, annual production volumes and all permits and licenses they hold. After completing the facility profile, you can start filling in the Facility Environment Module (FEM) sections.

In the module on Higg.org, each section has an introduction and guidance, and all questions in FEM 3.0 have the following additional information and context provided, which provides substantial guidance on:

- What is the intent of the question?
- How does this question help a facility drive improvement?
- Technical guidance
- How this will be verified
- Other references

In addition to the in-tool information and guidance given, the Higg FEM has a so-called 'How to Higg' guide, which is a comprehensive guidance document that contains additional background information, guidance and references to aid facilities and guide them through the completion of the Higg Module. For further information and to access the How to Higg guide, visit howtohigg.org.

Applicability Test

Some sections in FEM 3.0 have an applicability test, which means that users are asked to fill out several questions regarding each topic. Questions are used to determine whether your facility is, for example, a heavy water user or a light water user, which subsequently determines which questions in that section apply and do not apply to your facility and hence do not contribute to your FEM score.

The sections that have an applicability test are: Water, Wastewater, Air Emissions and Chemicals Management.

Site Info Permits

Country

Industry Sector
Select all that apply:

- Apparel
- Footwear
- Home Textiles (includes bed linens, tablecloths, towels, cloth napkins, and similar products)
- Accessories (includes handbags, jewelry, belts and similar products)
- Home Furnishings
- Hard Goods (includes bikes, tents, backpacks, luggage, electronics, coolers, climbing gear, watercraft, and and other equipment made of metal, plastic, or wood)
- Other

Facility Type
Select all that apply:

- Sewing or Final Product Assembly
- Printing or Dyeing
- Materials Supplier (including wet process)
- Trim
- Chemical
- Packaging

Facility Processes:

Sewing or Final Product Assembly	Printing or Dyeing	Materials Supplier (including wet process)	Trim	Chemical	Packaging
Casting	Dyeing	Casting	Casting	Raw Material Storage / Warehousing	Converting raw materials (incoming paperboard or plastic resin)
Cutting	Sublimation	Coating	Dyeing	Chemical Synthesis	Die cutting (e.g. cartons)
Embossing	Wet printing	Dyeing	Gluing	Standardization / Chemical Finishing	Assembly (e.g. corrugated board)
Priming	Screen Printing	Extrusion	Heat Press / Heating and Cooling	Blending / Formulating	Molding (plastic)

Heat Press / Heating and Cooling	Rotary Printing	Finishing	Lamination/Coating	Packaging	Printing
Lasting		Insulation: animal (down) processing	Molding	Waste Treatment / Management	Assembly
Molding		Insulation: non-woven processing	Non-woven	Final Product Warehousing / Storage	Gluing
No sew		Knitting		Shipping	Finishing
Packaging		Lamination			Die cutting
Gluing		Mixing (EVA / Rubber / primer / glue)			Packing
Seam Taping		Bonding			Shipping
Sewing		Spinning			
Sundries Application		Tanning (beam house or retannage)			
Washing		Vulcanization			
Welding		Washing			
Printing		Weaving			
Embroidery					

Material Types

Barriers
- BiComponent Coating
- BiComponent Laminate
- Microporus Coating
- Microporus Laminate
- Monolithic Coating
- Monolithic Laminate

Foams
- Ethylene-vinyl acetate (EVA) foam
- Polyethylene (PE) foam
- Polyurethane (PU) foam

Insulation Materials
- Duck Down insulation
- Goose Down Insulation
- Polyester insulation
- Sheep Wool insulation

Leather
- Cow leather
- Goat leather
- Kangaroo leather
- Pig leather

Metals
- Aluminum
- Brass
- Chromium
- Copper
- Gold
- Iron
- Lead
- Nickel
- Platinum
- Silver
- Steel
- Tin
- Titanium
- Zinc

Plastics
- Acrylonitrile butadiene styrene (ABS) plastic
- Epoxy plastic
- Nylon/Polyamide (PA) plastic
- Poly(methyl methacrylate) (PMMA) (Acrylic) plastic
- Polycarbonate (PC) plastic
- Polyester plastic
- Polyethylene (PE) plastic
- Polylactic Acid (PLA) plastic
- Polypropylene (PP) plastic
- Polysterene (PS) plastic
- Polytetrafluoroethylene (PTFE) plastic
- Polyurethane (PU) plastic
- Polyvinyl Acetate (PVA) plastic
- Silicone plastic
- Thermoplastic Polyurethane (TPU) plastic
- Thermoset PU plastic

Rubbers
- Butyl rubber
- Chloroprene rubber (Neoprene)
- Elastomeric polyurethane (PU) rubber
- Foamed rubber
- Isoprene Rubber (IR)
- Natural Rubber (NR)
- Nitrile Rubber (NBR)
- Polybutadiene rubber (BR)
- Silicone rubber
- Styrene-butadiene rubber (SBR)
- Thermoplastic elastomer (TPE)

Synthetic Leathers
- Polyurethane (PU) synthetic leather

Textiles
- Acetate, Triacetate fabric
- Acrylic fabric
- Alpaca
- Aramid fabric
- Bast fiber fabric
- Carbon fiber fabric
- Elastane/Spandex fabric
- Glass fiber fabric
- Lyocell fabric
- Cashmere
- Cotton fabric
- Modal fabric
- Nylon fabric
- Polyester fabric
- Polylactic Acid (PLA) fabric
- Polypropylene (PP) fabric
- Silk fabric
- Viscose/Rayon fabric
- Wool fabric

Wood-Based
- Cork
- Wood

How many days did you facility operate in 2018?:

Total Number of Employees:

- **Specify the number of full-time employees at your facility:**
- **Specify the number of temporary employees at your facility:**

What was your facility's annual production volume?
Report the total amount of product shipped/sold in the last calendar year

Production Units: Your annual production unit will be used to normalize baselines, targets, and reductions in the Higg Energy, Water, and Waste sections and may also be used for benchmarking purposes. Please select the unit that best represents how your factory tracks production. This may mean that you need to do a unit conversion in order to select a unit from the provided list. For example, if you track production in square feet you will need to convert to square yards

Quantity:

Units
- Square Yard
- Meter
- Kilogram
- Cubic meters (m3)
- Unit (piece or pair)

Does your facility site use pre-treatment for freshwater prior to entering the manufacturing process?
Suggested Upload: Schematics or permits
- Yes
- No
- Not applicable

If yes, please select what type: (include option to upload pre-treatment flow chart, not required)

Pre-Treatment
- Screening/Seaving
- Equalization tank/Homogenization tank
- Grit chambers
- pH Neutralization

Primary Treatment
- Coagulation -flocculation
- Primary clarifier
- Dissolved air flotation
- Lamellar settling

Biological Treatment
- Activated sludge
- Sequential batch reactor (SBR)
- Trickling filters
- Rotating biological contactors
- Submerged aerated filters
- Aerated biofilters
- Fluidized Bed
- Anaerobic digestion
- UASB Reactor
- Membrane bioreactors

- Aerated ponds

Secondary Treatment
- Sand filtration
- Adsorption with activated carbon
- Fenton reactions
- Ozonization
- Membrane filtration and reverse osmosis
- Ion exchange

Advanced
- Advanced Oxidation Processes (AOPs)
- Electrocoagulation-Electroflocculation
- Evaporation

Sludge Treatments
- Sludge thickening

Sludge dehydration technologies
Please upload your facility's pre-treatment flow chart, if you have one

Guidance:
- Need definitions: http://www.wateractionplan.com/en/web/gestion-del-agua/training#panel_2

Permits

The purpose of this section is to determine your compliance status with relevant environmental permits. Please include adherence to any rules or regulations your facility is required to follow such as permits, authorizations, licenses, registrations, certificates or other compliance documentation. Examples of non-permit requirements to include are annual required government reports and required registration of specific chemicals.

Please note that this section is NOT SCORED. This means that you do not get points for being in compliance. However, you must be in compliance to earn any points in the Facility Environmental Module. If you answer "No" to "Does your factory site have a valid operating license?", you will score ZERO for the entire module. This is because a valid operating license is required to score points in the Facility Environmental Module.

1. Does your factory site have a valid operating license, if required by law?
- Yes
- No
- Unknown

Please upload a copy of the operating license, if applicable.

2. Did your facility receive any government-issued environmental violation records in 2018?

- Yes
- No
- Unknown

If yes, please describe the violation and your site's action plan to improve

Suggested Upload: Copies of violation notices

If China is selected country: **Does your facility currently have any records in the Institute of Public & Environmental Affairs (IPE) database?**

- Yes
- No
- Unknown

Suggested Upload: IPE database records

If yes, has your facility supplied enterprise feedback to the database and/or taken steps to remove the record(s) from the database?

- Yes
- No
- Unknown

3. Please complete the following questions to provide details on your facility's environmental permits requirements and compliance status

Please note that licenses/permits for hazardous waste contractors will be requested in the Waste section.

Permit / Agreement Type	**Required for your site?** If yes, all columns must be complete to move on from this page.	**Name of the regulatory agency issuing the permit or agreement**	**Effective Date (MM/YYYY)**	**Is there an expiration date**	**What is your Compliance Status for this permit?**	**Upload a copy of your permit**	**Provide any additional notes**
Is a permit required for water use?	*Yes* *No* *Unknown*	*Open text*	*MM/YYYY*	*Yes / No* *If yes, MM/YYYY*	*In compliance* *Out of compliance*	*Upload*	*Open text*
Is a permit required for water discharge?							
Is a permit required for wastewater treatment?							
Are permits required for specific chemical use and management?							
Are permits required for air emissions?							

Is a permit required for solid waste discharge?							
Are any other environmental permits required? *For example, upload your Environmental Impact Assessment here*							

Section 1. EMS

EMS – Level 1

1. Are one or more employees at your facility responsible for coordinating your facility's environmental management activities?

Please answer Yes if you have any full-time, half-time, part-time, seasonal or contract employees working on environmental management in your facility. If Yes, provide details below.

You can provide details on up to five employees. If you wish to provide details on more than five employees, please upload these details in a document.

- Yes
- No
- Unknown

(If yes)

- Name (text)
- Job title (text)
- Time spent on environmental management (select one):
  - Full time (100%)
  - Half time (50-99%)
  - Part time (1-49%)
  - Seasonal
  - Contract
- Select environmental topic (select all that apply):
  - Energy
  - Waste
  - Water
  - Wastewater
  - Air Emissions
  - Chemicals Management
- Description (text)
- Do you wish to provide information on an additional employee? (If yes, please complete options above)
- Please upload documentation, if available (

  Upload: Environmental management team organization chart

2. Does your facility have a company environmental management strategy that guides long-term decision-making on environmental management?

Please answer Yes if you have a documented environmental strategy in place that sets forth environmental priorities, goals, and actions for 3+ years. A good environmental strategy should: 1) address your facility's significant environmental impacts and compliance obligations as prioritized in your environmental impact assessment; 2) be supported by factory leadership; and 3) be communicated to all employees. To ensure environmental objectives are carried out, your strategy should include plans for achievement that detail: what will be done, what resources will be required, who will be responsible, when it will be completed, and how results will be evaluated (reference: ISO 14001). If you have an environmental strategy that aligns with requirements in ISO 14001, you may answer Yes to this question.

- Yes
- No
- Unknown

Select all topics covered by this strategy:

- Energy
- Water
- Wastewater
- Air
- Waste
- Chemicals Management

Upload environmental management strategy

3. Has your facility identified the significant environmental impacts associated with current operations within the factory premises?

Please answer Yes only if you have an environmental impact assessment that shows significant environmental impacts from current factory operations.

- Yes
- No
- Unknown

Upload: a) Environmental impact analysis and aspect evaluation

4. Does your facility have a program or system in place to review and monitor environmental permit status and renewal (where appropriate) and ensure compliance?

Please answer Yes if you have a program to monitor compliance with environmental permits and rules.

Suggested Upload: Calendar for permit activities.
Upload or view supplemental documents

- Yes
- No
- Unknown

Upload: a) List of required permits needed for your facility to operate and calendar of permit activities; b) Documentation of programs or systems in place to review and monitor environmental permit status, renewals, and ensure you are meeting the legal requirement.

5. Does your facility maintain a documented system to identify, monitor and periodically verify all laws, regulations, standards, codes and other legislative and regulatory requirements for your significant environmental impacts?

Please answer Yes only if you have a system to monitor requirements.

Suggested Upload: Calendar for regular meetings with representatives from relevant organizations.
Upload or view supplemental documents

- Yes
- No
- Unknown

Select all topics covered by the system:

- Energy
- Water
- Wastewater
- Air
- Waste
- Chemicals Management

Are the findings used to set an improvement plan that is regularly reviewed?

- Yes
- No
- Unknown

Upload: Documentation of your system to identify, monitor, and periodically verify all laws, regulations, standards, codes, and other legislative and regulatory requirements for your significant environmental impacts

6. Does your facility have a process and schedule to maintain all equipment?

Please answer Yes if you maintain all equipment as this is important for managing emissions to air, energy efficiency, water efficiency, and other environmental impacts.

Upload: Maintenance schedule

EMS – Level 2

7. Does your facility review the environmental management strategy with your facility's managers each calendar year?

Please answer Yes only if you have evidence of management reviews conducted in 2018.

Suggested upload: Records from last annual management strategy review

8. Do employees at your facility responsible for environmental management have the technical competence required to do their job?

Please answer Yes if you can explain how you ensure environmental employees: a) have technical competence, b) are provided with trainings or certifications as needed, and c) are evaluated for competence on an annual basis. If you can demonstrate employee competence but do not yet have a process for annual performance review, please answer Partial Yes.

Upload: a) List of individuals that are responsible for environmental related issues; b) Procedure to cross reference the individuals listed have the technical competence required to do their job

EMS – Level 3

9. Does your facility promote awareness of the environmental strategy to employees?

Workers play a major role in how much energy and water is used, how much waste is generated, and can also help identify improvements for air and wastewater impacts. Please answer Yes if you can demonstrate how your environmental strategies have been communicated to workers. If you are in the process of developing a communication plan, you may answer Partial Yes.

Upload: Plan for promoting awareness of the environmental strategy to workers.

10. Does your facility monitor, evaluate, and/or engage with your subcontractors on their environmental performance using the Higg Index?

Please answer Yes if you engaged subcontractors in environmental assessment using Higg. If you have a plan to engage subcontractors, please answer Partial Yes.

Upload: List of all subcontractors with proof of Higg Index engagement: e.g., show Higg.org Module shared or other documentation of their Module results such as an emailed export of results.

11. Does your facility engage in environmental improvement in your local context?

Select the ways in which your facility engages in environmental improvement:

- We are supporting (financially or otherwise) conservation or improvement projects for environmental issues (e.g. preserving wetlands).
- We work with other similar businesses to share best practice for environmental management.
- We engage in dialogue with local communities to understand their views on how we as a company should manage our environmental impacts.
- We work within a group of other local stakeholders including government and communities, to understand and address local environmental issues together.
- We engage directly with local or national governance bodies on environmental regulation or management issues.
- We work together in a group with other local stakeholders, to engage with local or national governance bodies on environmental regulation or management issues.
- Other

Suggested Upload: a) Evidence of environmental improvement in your local context (e.g., community, river basin, etc.); b) List of local stakeholders and dates of engagement; c) Pictures, articles or press releases; List of organizations/initiatives you support.

12. Does your facility monitor, evaluate, and/or engage with your upstream suppliers using the Higg Index?

Please answer Yes if you can show Module shares, Higg.org invitations, or Module exports from your upstream suppliers. If you cannot yet show results but can demonstrate your plan for an upcoming Higg.org roll-out, please answer Partial Yes.

If yes, which type of suppliers?:

- Chemical suppliers
- Raw material suppliers
- Other, please describe

Suggested Uploads: List of upstream suppliers with proof of Higg Index engagement: e.g., show Higg.org Module shared or other documentation of their Module results such as an emailed export of results.

Section 2. Energy

Energy– Level 1

1. Select all sources of energy for your facility:

You will receive full points if you are completely tracking all sources of energy that your facility uses. You will receive partial points if you are completely tracking at least one of your energy sources, but are not yet tracking all of your energy sources.

Suggested Upload: a) Optional: an annual summary of the energy consumption for each type of energy sources. Uploading utility bills is NOT required, however they should be available for the verifiers to review at the time of verification; b) Picture of the energy meters used to monitor the consumption of the main energy sources if applicable

Select all sources of energy for your facility	**Does your facility track its energy use from this source?**	**What quantity of energy was used by this source in 2018?**	**Which method was used to track this energy source?**	**What was the frequency of measurement?**	**Provide any additional comments**
Biomass Select all types of biomass used at your facility: • Begasse • Cane Sugar • Cashew Nut Shell • Corncob • Cornstalk • Empty Fruit Branch • Eucalyptus Bark • Palm Fiber • Palm Leaf • Palm Shell • Palm Trunk • Parawood • Peanut Shells • Rice Husk • Rice Straw • Saw Dust • Sliver of wood • Tapioca Rhizome • Wood Briquette • Biodiesel • Biomass- Specific type not known	*Yes* *No*	*Enter Quantity:* _____ *Select Unit:* • g • kg • lb • oz • ton (metric) • ton (short) • kWh • MJ • mmBTU • BTU • Joule • cu ft • cu yard • liter • m3 • gal • CCF	Meters Invoices Estimates	Continuously Daily Weekly Monthly Bimonthly Quarterly Annually	
Chilled Water (purchased) The most common practice is to generate your own chilled water by chilling with purchased electricity, but in some areas you purchase chilled water from a					

centralized system - must track for Scope 1					
Coal					
Coal (Sub-Bituminous A)					
Coal (Sub-Bituminous B)					
Coal (Sub-Bituminous C)					
Coal (Sub-Bituminous High Volatile C)					
Coal (Bituminous High Volatile B)					
Coal (Bituminous - high volatile A; medium volatile; low volatile; Anthracite - semi-anthracite; anthracite; meta-anthracite)					
Coal- Specific type not known					
Diesel					
Electricity (produced on-site)					
Electricity (purchased)					
Fuel Oil					
Geothermal					
Hydro					
Micro-Hydro					
Natural Gas					
Petrol					
Solar Photovoltaic					
Steam (produced on-site)					
Steam (purchased)					
Wind					

Energy– Level 2

2: Has your facility set baselines for energy use? If yes, select all sources of energy for which your facility has set a baseline.

In order to demonstrate improvements or reductions, it's important to know what your starting point is. A "baseline" is a starting point or benchmark that you can use to compare yourself against over time. For example, if your facility used 80 MJ of natural gas per 10,000 fabric meters in 2016, you will be able to compare your performance against this amount in years to come. In this example, "80 MJ of natural gas per 10,000 fabric meters in 2016" is an example of a normalized baseline.

Suggested Upload: A description of how the baseline was calculated (uploading annual consumption records is NOT required, however they should be available for the verifier to review at the time of verification.

Energy Source (fills from source selections above)	**Is the baseline absolute or normalized?**	**What is the baseline quantity?** *If you are reporting a normalized baseline, it must be normalized by the production unit you specified in the Site Info section. Please make sure your normalization calculation reflects your production volumes from your baseline year, not from 2018.*	**Enter the baseline year**	**How was your baseline calculated?**	**Was the baseline verified?**
Source	*Normalized Absolute*	*Enter Quantity: _____* *Numerator Unit:* • g • kg • lb • oz • ton (metric) • ton (short) • kWh • MJ • mmBTU • BTU • Joule • cu ft • cu yard • liter • m3 • gal • CCF *Denominator Unit: populates from annual production selection in Site Info*	Dropdown of years (2000-2018)	Open text	If yes, tell us date and auditing party. Not req
+ Add new row					

3. Does your facility know what facility processes or operations use the most energy?

It is important to understand what influences energy use the most in your facility. This allows you to strategically target those factors in order to improve energy efficiency and/or greenhouse gas emissions. Please answer Yes only if you have documented records and methodology to identify the highest factors of energy use on-site (e.g., processes, machines, etc.).

If you do not have a document to upload, describe your methodology here
If you already uploaded a document above, enter "See attached"

What are the highest energy use factors at your facility?

Suggested Upload: a) Ranking of processes or services that consume the most energy (with energy consumption values); b) Copy of an energy audit conducted by an internal or external energy management specialist (if available)

4. Has your facility set targets for improving energy use or GHG emissions? If yes, select all sources of energy for which your facility has set an energy or GHG reduction target.

You will receive full points if you set targets for energy sources that make up 80% or more of your total energy use. You will receive partial points if you set targets for energy sources that make up 50-79% or more of your total energy use. This is to reward you for aiming to improve your most significant sources of energy use which will maximize environmental impact.

Suggested upload: consolidated targets for different energy sources

If yes, please tell us about your targets: (tool auto-calculates)

Fuel Source (pull down info from table above) Add option for: Overall energy / GHG emissions		**kWh (auto populated)**	**What is your target for change in energy use from this source?** *Enter a negative percentage for a reduction target, and a positive percentage for an increase target*	**Enter the target year**	**Is this a normalized or absolute target?**	**Proposed Emissions reduction (renewables does not calculate unless there is an applicable emissions factor)**	**Proposed kwH reduction**	**Describe the measures planned to achieve this target**
Fuel Oil	**Scope 1**		**-10%**		**Normalized Absolute**			***Text***
Electricity	**Scope 2**		**-30%**		**Normalized Absolute**			***Text***

TOTAL		X kWh		X CO2e	X kWh	

5. Does your facility have an implementation plan to improve energy use and/or GHG Emissions?
Improvements may be made by reducing energy use or improving GHG emissions by replacing existing energy sources with renewable sources. Please answer Yes if you have an implementation plan in place that demonstrates you are taking action to achieve your targeted reductions. Please choose Partial Yes if you have a plan but have not started on all action items. *You may download a sample implementation plan here*

Upload a copy of the plan

6. Has your facility improved energy consumption compared with its baseline? If yes, select all sources of energy that have been improved.

You will receive full points if you made reductions for energy sources that make up 80% or more of your total energy use. You will receive partial points if you made reductions for energy sources that make up 50-79% or more of your total energy use. This is to reward you for reducing your greatest sources of energy use which will maximize environmental impact.

We recommend that you show normalized reductions such as "electricity used per fabric meter was reduced by 2% in 2018." This is because normalized metrics show real improvement rather than reductions from business changes such as reduced production.

Suggested Upload: Energy tracking reports showing reductions for energy sources from last calendar year. Uploading utility bills is NOT required, however they should be available for the verifier to review at the time of verification.

If yes, please complete the energy reduction table: (tool auto-calculates)

Fuel Source (pull down info. From table above) Add one option in the drop-down " overall energy / GHG emissions"	**)**	**Select a baseline year**	**Indicate your facility's change in energy use from this source** *Enter a negative number for a reduction, and a positive number for an increase*		**Describe the strategies used to achieve this improvement**
Fuel Oil	**Scope 1**			***Quantity Unit of Measure*** • g • kg • lb • oz	***Text***

				• ton (metric) • ton (short) • kWh • MJ • mmBTU • BTU • Joule • cu ft • cu yard • liter • m3 • gal • CCF	
Electricity	**Scope 2**				***Text***
TOTAL			**X CO2e**	**X kWh**	

Energy– Level 3

7. Were your facility's annual Scope 3 greenhouse gas (GHG) emissions calculated in 2018? (This question is not scored.)

Report your facility's 2018 Scope 3 GHG emissions in co2e here
Describe your Scope 3 calculation here

The GHG Protocol categorizes these emissions into three broad scopes:

- *Scope 1: All direct GHG emissions. (this was covered in Level 1 energy tracking)*
- *Scope 2: Indirect GHG emissions from consumption of purchased electricity, heat or steam. (this was covered in Level 1 energy tracking)*
- *Scope 3: Other indirect emissions, such as the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, electricity-related activities (e.g. T&D losses) not covered in Scope 2, outsourced activities, waste disposal, etc. (Source: http://www.ghgprotocol.org/calculationg-tools-faq)*

Calculating Scope 3 emissions for your facility or business is an advanced practice that can be noted in this question. However, this question is unscored because Higg only gives Level 3 points for taking action that improves environmental impact directly. Calculating Scope 3 emissions can provide useful insights and/or support reporting, but it does not guarantee any environmental improvement has occurred.

Suggested Upload: documentation on calculation of scope 3 GHG emissions in the last calendar year

Section 3. Water Use

Applicability Test

You will first be asked to report on your level of water risk as well as quantity of water consumed in the following three questions below. These selections will direct you to the Higg questions that are most applicable for your facility.

If you are in a low-water risk area and use less than 35 m3 per day, you are considered a "Light Water User" and will only complete Level 1.

If you are in a high-water risk area and/or use more than 35 m3 per day, you are considered a "Heavy Water User" and will complete Levels 1, 2, and 3.

1. **How many days per year does your facility operate?**
2. **Use one of the following tools to assess your facility's water risk**
   - WRI Aqueduct Tool
   - WWF Water Risk Filter

3. **Select the tool used to assess your facility's water risk:**
   - WRI Aqueduct Tool
   - WWF Water Risk
4. **Is your facility location rated high/very high for overall water risk using this tool?**
   - Yes
   - No

Water Use – Level 1

1. Select all water sources used by your facility (see table below)

If you are unable to tell us the amount of water used from a source, the method being used to track it, and the frequency of measurement; please select No or Unknown as your answer option for the question: Does your facility track its water use from this source?

You will receive full points if you are completely tracking the quantity of water that your facility withdraws from all sources. You will receive partial points if you are completely tracking at least one of your sources, but are not yet tracking all of your sources.

Suggested uploads: Optional: annual summary of the water consumption for each type of water source. Uploading utility bills is NOT required, but these should be available during verification.

APPLICABILITY NOTE: This information will be used to auto-calculate average daily water use to determine applicability.

- If your facility site uses more than 35 m3/day, you are a HEAVY WATER USER
- If your facility site uses less than or equal to 35 m3/day, you are a LIGHT WATER USER

	Does your facility track water use from this source?	What quantity of water from this source was used in 2018?	Which method was used to track water use from this source?	What was the frequency of measurement?
Fresh Surface Water	Yes	*Quantity*	Meters	Continuously

	No Unknown	*Unit of Measure* • *CCF* • *cu ft* • *cu yard* • *gal* • *liter* • *m3* • *Ml*	Invoices Estimates	Daily Weekly Monthly Bimonthly Quarterly Annually
Rainwater				
Groundwater				
Produce/Process Water				
Municipal Water				
Wastewater from another organization				
Brackish Water/Seawater				
Total Water				

Water Use – Level 2

2. Has your facility set baselines for water use? If yes, select all water sources for which your facility has set a baseline.

If you are unable to tell us your baseline year and normalized quantity for a source; please select No or Unknown as your answer option for that source.

In order to demonstrate improvements or reductions, it's important to know what your starting point is. A "baseline" is a starting point or benchmark that you can use to compare yourself against over time. For example, if your factory used 80 m3 of water per 10,000 fabric meters in 2016, you will be able to compare your performance against this amount in years to come. In this example, "80 m3 of water per 10,000 fabric meters in 2016" is an example of a normalized baseline.

Water Source (fills from source selections above)	**Is the baseline absolute or normalized?**	**What is the baseline quantity? (#)** *If you are reporting a normalized baseline, it must be normalized by the production unit you specified in the Site Info section. Please make sure your normalization calculation reflects your production volumes from your baseline year, not from 2018.*	**Enter the baseline year**	**How was your baseline calculated?**	**Was the baseline verified?**

Fresh Surface Water	*Normalized Absolute*	Enter Quantity: _____ Select Numerator Units: • *CCF* • *cu ft* • *cu yard* • *gal* • *liter* • *m3* • *Ml* *Denominator Unit: populates from annual production selection in Site Info*	Dropdown of years (2000-2018)	Open Text	Yes No Unknown
Rainwater					
Groundwater					
Produced/Process Water					
Municipal Water					
Brackish Surface Water / Seawater					
Total Water					

3. Does your facility know what facility processes or operations use the most water?
It is important to understand what influences water withdrawal the most in your facility. This allows you to strategically target those factors in order to reduce water withdrawal. Please answer Yes only if you have documented incoming water, water loss and outgoing water in a water pipeline drawing/diagram/flowchart that is complete with meter locations.

Upload the methodology for identifying the highest water use factors
If you already uploaded a document above, enter "see attached"

What are the highest water use factors at your facility?

Suggested uploads: ranking of processes or services that consume the most water (with water consumption values).

4. Has your facility set targets for reducing water use? If yes, select all sources of water for which your facility has set a reduction target.

If you are unable to tell us your target amount, year and whether it is absolute or normalized for a source; please select No or Unknown as your answer option for that source.

You will receive full points if you set targets for water sources that make up 80% or more of your total water use. You will receive partial points if you set targets for water sources that make up 50-79% or more of your

total water use. This is to reward you for aiming to reduce your greatest sources of water withdrawal which will maximize environmental impact.

We recommend that you set normalized targets such as "reduce total water use by 30% by 2020". This is because normalized metrics show real improvement rather than reductions from business changes such as reduced production. For example, if your baseline was "80 m3 per 10,000 fabric meters in 2016" then a good normalized target might be: "Reduce total water use by 30% per fabric meter by 2020".

Upload: Documentation describing the targets in place to reduce the water withdrawal

If yes, please tell us about your targets: (tool auto-calculates)

Select source targeted to be improved (select one)	**=**	**What is your target for change in water use from this source?** *Enter a negative percentage for a reduction target, and a positive percentage for an increase target*	**Enter the target year**	**Is this a normalized or absolute target?**	**=**	**Describe the measures planned to achieve this target.**
All water Fresh surface water Rainwater Groundwater Produced/process water Municipal water Wastewater from another organization Brackish surface water/seawater		**-10%**		**Select one:** **Normalized** **Absolute** **Other** Guidance: The target setting should allow the facilities to express and set their own targets which may not fall in absolute or normalized target.		***Text***
+ Add new rows						***Text***
TOTAL	Xm3				Xm3	

5. **Does your facility have an implementation plan to improve water use?**
Please answer Yes if you have an implementation plan in place that demonstrates you are taking action to achieve your targeted reductions. Please choose Partial Yes if you have a plan but have not started on all action items. You may download a sample implementation plan here Implementation Plan Template

Please upload a copy of the implementation plan.

Suggested uploads: Please upload the water use reduction plan showing specific actions designed to achieve targeted reductions in water consumption.

6. Has your facility reduced water withdrawal, compared with your baseline? Select all water sources that have been reduced.

Source

- Select baseline year
- Indicate your facility's change in water withdrawal from this source (quantity and unit of measure)
- Describe the strategies used to achieve this improvement

*You will receive **full points** if you made reductions in the last calendar year for water sources that make up 80% or more of your total water withdrawals.*

***You will receive partial points** if you made reductions in the last calendar year for water sources that make up 50-79% of your total water withdrawals. This is to reward you for reducing your greatest sources of water withdrawal which will maximize environmental impact.*

***Select No** if you have no reductions in the last calendar year or are unable to state what your reductions are for a source as your answer option for that source.*

Suggested Upload: a) Evidence of normalized or absolute reduction of annual water withdrawal for at least one primary water sources (e.g. fresh surface water, groundwater etc.) that is attributable to actions taken by the site. b) Water tracking reports showing reductions of the normalized water withdrawal in the last calendar year

If yes, complete this table:

Select source that was reduced		**Describe the strategies used to achieve this improvement.**
All water Fresh surface water Rainwater Groundwater Produced/process water Municipal water Wastewater from another organization Brackish surface water/seawater	Quantity Unit of Measure • *CCF* • *cu ft* • *cu yard* • *gal* • *liter* • *m3* • *Ml*	
+ Add new rows		

Water Use – Level 3

7. Has your facility implemented a water balance or another analysis to evaluate the traceability of water intake vs. usage (i.e. which processes) and output (i.e. to wastewater treatment plant)?

Please answer Yes if your facility has fully implemented a water balance to fully understand the traceability of water intake vs. usage and outputs in the facility. A complete water balance must include the below information. Please answer Partial Yes if you have completed a partial water balance, but have an action plan to complete all requirements.
The incoming water in the facility: amount and water sources.
The quantity of water used during the production process
The quantity of water recycled/reused in the facility
The quality of wastewater generated
The wastewater generated in the facility
The volume of water discharged after the own treatment
The frequency which the water balance is updated

Upload the methodology for analyzing the water balance.
How was the water balance analysis conducted

Section 4. Wastewater

Applicability Test

1. Does your facility generate industrial wastewater?

2. Does your facility have Zero Liquid Discharge?
- Yes = **ZLD TREATMENT**

3. Do you treat industrial and domestic wastewater separately or together?

4. Where is your domestic wastewater treated?
- Treated onsite only and discharge to the environment after treatment = **DOMESTIC ONSITE**
- Treated offsite only = **DOMESTIC OFFSITE**
- Treated onsite and offsite = **DOMESTIC ONSITE + OFFSITE**
- Sent to septic system = **SEPTIC**
- Not treated = cannot proceed

5. Where is your industrial wastewater treated?
- Treated onsite only = **INDUSTRIAL ONSITE**
- Treated offsite only = **INDUSTRIAL OFFSTE**
- Treated onsite and offsite **= INDUSTRIAL ONSITE + OFFSITE**
- Not treated = **STOP**

6. Where is your combined (industrial and domestic) wastewater treated?
- Treated onsite only = **INDUSTRIAL ONSITE**
- Treated offsite only = **INDUSTRIAL OFFSITE**
- Treated onsite and offsite **= INDUSTRIAL ONSITE + OFFSITE**
- Not treated = **STOP**

Wastewater – Level 1

1. Does your facility track its wastewater volume?

Wastewater tracking should include water that is either discharged, reclaimed/recycled or reused at your site

Industrial: include all manufacturing and/or commercial activities within your facility site such as industrial processing, lubrication, maintenance etc.

Domestic: include all domestic wastewater generation including wastewater/effluent from dormitories, bathrooms, showers, and kitchens, etc.

Suggested Upload: Annual wastewater discharge monitoring record (quantity)

If yes, please complete this table:

Type (fills from applicability selection)	**Industrial Wastewater**	**Domestic Wastewater**	**Combined Industrial and Domestic**
What was the total quantity of industrial wastewater discharged from your facility in 2018?	m3/year	m3/year	m3/year
Which method was used to track industrial wastewater volume?	Meters Invoices Estimates	Meters Invoices Estimates	Meters Invoices Estimates
What was the frequency of measurement?	Continuously Daily Weekly Monthly Bimonthly Quarterly Annually	Continuously Daily Weekly Monthly Bimonthly Quarterly Annually	Continuously Daily Weekly Monthly Bimonthly Quarterly Annually
What was the final discharge point for your facility's industrial wastewater?	Offsite Wastewater Septic or Lagoon Environment: Land Environment: Water Recycled / reused in the facility	Offsite Wastewater Septic or Lagoon Environment: Land Environment: Water Recycled / reused in the facility	Offsite Wastewater Septic or Lagoon Environment: Land Environment: Water Recycled / reused in the facility
Provide any additional comments			

2. Do you have the name and contact information of the offsite wastewater treatment plant?

This information is important because environmental contamination from improper treatment must be addressed regardless of where the problem originates. This information can help your factory, the community, and local businesses prevent or cleanup accidental environmental contamination in the case of a failure.

You will receive full points if you know your wastewater treatment plant and are able to upload a contract. Please note that a contract will be required during verification for all factories in China.

- Name:
- Address:
- Ownership:
- Do you have a copy of the contract with the wastewater treatment plant?
    - Please upload documentation if available
    - If you cannot upload the documents, please describe here:

Upload: a) Signed contract with the off-site wastewater treatment plant; b) A permit and contractual agreement for your facility to show that they are allowed to discharge into the off-site wastewater treatment plant

3. Does your facility have a back-up plan if there is an emergency situation related to wastewater?

It is critical that your facility have a backup plan in the event of a wastewater treatment failure in order to prevent untreated effluent from being discharged to the local environment. If you do not have a backup process that can handle your average daily capacity, you cannot score points or complete Level 1.

Select all strategies included in your facility's back-up plan for wastewater

- Emergency Production Shutdown
- Holding Tank
- What is the size of your facility's holding tank?
- Secondary Treatment
- Discharge to Offsite Water Treatment Plant
- Other Backup Process

- **What is your facility's wastewater treatment handling capacity per day?**

Upload: Documented emergency backup process that is sufficient to treat the average daily amount of wastewater discharged by the facility site.

4. Is hazardous sludge (chemical / industrial) disposed of properly?

How is your sludge disposed of?

- Hazardous Waste Treatment
- Incinerated controlled conditions
- Landfilled
- Open burning
- Fuel Blended
- Composted
- Fertilizer (applied to land)

Upload: a) Sludge analysis or test results from last 12 months (if non-hazardous is selected); b) permits or manifests for proper disposal or land application.

5. Is non-hazardous sludge disposed of properly? (Domestic wastewater only)

Suggested Upload: Sludge analysis or test results

Non-hazardous sludge can be disposed of through any method though you must provide documented evidence that your facility's sludge is not hazardous.

How is your sludge disposed of?

- Hazardous Waste Treatment
- Incinerated controlled conditions
- Landfilled
- Open burning
- Fuel Blended
- Composted
- Fertilizer (applied to land)

Suggested Upload: a) Sludge analysis or test results from last 12 months (if non-hazardous is selected); b) permits or manifests for proper disposal or land application.

6. Does your facility treat septic wastewater before it is discharged?

- If yes, please describe

How does your site unload your septic tank once full?

- Describe where it is discharged
- Describe how it is treated after discharge
- Please upload documentation if available

Do you have a plan to upgrade your septic tank to a more modern wastewater treatment approach?.

Suggested Upload: a) Documentation that your facility treats septic wastewater before it is discharged; b) Plan to upgrade your septic tank to a more modern wastewater treatment approach.

Wastewater– Level 2

7. **Is your facility reporting against a wastewater standard?**

- Wastewater Standard (*e.g., ZDHC Wastewater Guideline or other)*

Please indicate which wastewater standard you are reporting against:

- ZDHC Wastewater Guideline
- BSR
- IPE
- Customer/Brand
- If other, please describe

- **Have you tested and met all parameters specified in the standard?**
  - Yes
  - No (If no complete the detections table below)

- **Are your parameter results available on the standard's platform? (*e.g. ZDHC Gateway or IPE database*)**

If ZDHC Wastewater Guideline was selected:

- **Does your test result also show no detection of parameters in Table 2A-N Chemical Groups?**

Upload test results

Detections Tables

Wastewater Standard:

Select parameters which were not met	**Indicate the quantity detected**	**Units**	**Indicate the limit**	**Units**	**Indicate ZDHC Level, if applicable**	**Upload your action plan for the substance detected / If you don't have a document to upload, describe your plan**
Ammonium-N *Antimony* *AOX* *Arsenic* *BOD5* *Cadmium* *Chromium (VI)* *Chromium, total* *Cobalt* *COD* *Coliform [bacteria/100 ml]* *Colour [m-1] (436nm; 525; 620nm)* *Copper* *Cyanide*	*Quantity Unit of Measure*	*Dropdown references units from WW guideline*	*Quantity Unit of Measure*	*Dropdown references units from WW guideline*	Foundational Strategic Aspirational	*Type or upload*

Lead *Mercury* *Nickel* *Oil and Grease* *Persistent Foam* *pH* *Phenol* *Silver* *Sulfide* *Sulfite* *Temperature [°C]* *Total-N* *Total-P* *TSS* *Zinc* *Nonylphenol (NP), mixed isomers* *Octylphenol (OP), mixed isomers* *Octylphenol ethoxylates (OPEO)* *Nonylphenol ethoxylates (NPEO)* *Other*						

8. Have you requested wastewater quality test results from the offsite wastewater treatment plant?

It is important to be aware of any wastewater quality violations at the wastewater treatment plant in the event that your facility is contributing to environmental contamination. Although your facility does not have authority over the offsite wastewater treatment plant, please provide evidence of your request for wastewater quality results, even if quality results were not provided. This question is intended to provide you with more information in case you are able to take any action to assist the wastewater treatment plan in proper treatment and discharge to the environment.

Upload: a) Documentation of your request to offsite wastewater treatment plant for wastewater quality records; b) Off site wastewater treatment plant quality records (if provided)

Wastewater – Level 3

9. Does your facility reuse and/or recycle process wastewater as process water (closed loop)?

- Enter the percentage of wastewater treated and recycled back into your production processes

Answer Yes if you have wastewater treatment in place to reuse and/or recycle at least 50% or more of your production wastewater back into production processes. The reused and/or recycled water must be used in production processes - other uses like irrigation, toilets are excluded. The actual treatment technologies may include be chemical or biological such as membrane filtration or Zero Liquid Discharge

Suggested Upload: a) Records demonstrating closed-loop recycling (process water to process water) and/or b) List of water reduction achievement(s) according to the location where water is captured for recycling OR the location where recycled water is used.

Section 5. Air Emissions

Applicability Test

You will first be asked to select which operations or processes that emit air pollution are present in your factory. These selections will direct you to the Higg questions that are most applicable for your facility.

If you have any air-emitting operations (e.g., boiler), you will answer questions about operating emissions in all levels.
If you have any air-emitting production processes (e.g., solvents or adhesives), you will answer questions about production emissions in all levels.
If you don't have any facility operation or production air emissions, you will not need to complete this section.

1. **Does your facility contain any of the following operations equipment?**

- Boiler
  - If yes, tell us size:
    - Small: less than 50 MW
    - Medium: 50 MW - 300 MW
    - Large: more than 300 MW
- Generators
- Engines
- Ovens
- Heating and ventilation
- Refrigerant device
- Air conditioning
- Other sources of known air emissions from facility operations
- Other sources of volatile organic compounds (VOCs)

If any of the above are selected: ***Has Operating emissions - proceed to applicability question 2. (Refrigerants will have own table).***

2. Does your facility conduct any of the following processes or use any of the following substances?

- Yarn spinning or synthetic fiber manufacturing
- Finishes
- Solvents
- Adhesives/cementing
- Printing
- Dyeing
- Tenterframes or other heating process
- Spot cleaners
- Sprayed chemicals or paints
- Other sources of ozone depleting substances (ODSs)

If any of the above are selected: *Has production emissions*

If options are selected from both Q1+ Q2: Has both operating and production emissions

If none of the above options apply: skip entire section.

Air Emissions – Level 1

1. Does your factory have any air emissions from facility operations that:

- Are not regulated by a permit?
  - Yes
  - No
- Are regulated by a permit, but you are not in compliance.
  - Yes
  - No

Select all sources of air emissions relevant to your facility's operations that are not regulated by a permit, or for which your facility is not in compliance with its permit

Since you demonstrated compliance with your air permit in the Permits section, please only enter data for emissions that are not tracked by a permit or that are not in compliance with a permit. This question excludes emissions from production processes.

Source	What equipment is this source linked to?	What pollutants are present that are not regulated by a permit or have been found to be out of complian	Reason for reporting pollutant	What quantity of air emissions were emitted by this source in 2018?	Is this source of emissions regulated by a government agency?	If yes, what is the compliance status of the source?	If your facility is out of compliance, how long have you had this problem?	If your facility is out of compliance, upload the action plan for the substance detected	If you cannot upload a copy, please describe the action plan:

		ce with a permit?							
(*Auto-populate from applicability test on operation steps*) Stack Vent Heating and ventilation Refrigerant device Air conditioning Other sources of known air emissions:	*Type*	*Particulate Matter 10 (PM 10)* *Particulate Matter 2.5 (PM 2.5)* *Nitrogen Oxides (NOx)* *Sulphur Oxides (SOx)* *Volatile Organic Compounds (VOCs)* *Ozone Depleting Substances (ODS)* *Other toxic air pollutants, please describe* *Water vapor/steam*	*Out of compliance with permit* *Not regulated by a permit*	*Quantity* *Units* *G* *Kg* *Lb* *Oz* *ton (metric)* *ton (short)*	*Yes* *No* *Unknown*	*In compliance* *Out of compliance*	0-3 months 3+ months	*Type or upload*	

2. Select all sources of air emissions that result from production processes

This question tracks the presence of indoor air quality emissions from production processes. This includes fugitive sources from production processes (sources without a chimney that emit into the building outside through windows, doors, etc.).

Permit compliance does not apply to this question, as indoor air quality emissions are infrequently regulated.

Source (Refrigerant Type)	**What pollutants are known or likely to be present?**	**What quantity of air emissions were emitted by this source in 2018?**	**What method was used to track emissions from this source?**	**Provide any additional comments**
Auto-populate selections from applicability test on production steps	*Text*	*Quantity* *Unit* • *G* • *Kg* • *Lb* • *Oz*	*Measured* *Invoices* *Estimates*	

		• *ton (metric)* • *ton (short)*		

3. Did your facility add additional refrigerants to any existing equipment in 2018?

Having to add refrigerants to existing equipment indicates the system has a leak. If CFC-based refrigerants are maintained in the building, you must reduce annual leakage to 5% or less and reduce the total leakage over the remaining life of the equipment to less than 30% of its refrigerant charge.

This question will contribute to your GHG-emissions calculation so it's important for you to enter accurate data about leak quantities. Please note that your GHG result is intended to provide directional insight into your opportunities to improve, but is not a formal GHG calculation to be used for public reporting.

Select Refrigerant	**Quantity of refrigerant added to existingequipment in 2018 (exclude refrigerant added to newly purchased equipment for the first time)**	**Units:**	**What method was used to track emissions from this source?**	**What is your plan for fixing this leak?**
R-10 (PCC) R-11 (CFC) R-12 (CFC) R-12B1 (H) R-12B2 (H) R-13 (CFC) R-13B1 (H) R-14 (PFC) R-20 (HCC) R-21 (HCFC) R-22 (HCFC) R-22B1 (H) R-23 (HFC) R-30 (HCC) R-31 (HCFC) R-32 (HFC) R-40 (HCC) R-41 (HFC) R-50 (HC) R-110 (PCC)	*Numeric*	*g* *kg* *lb* *oz* *ton (metric)* *ton (short)*	*Measured* *Calculated Leakage Rate* *Estimated*	

R-111 (CFC) R-112 (CFC) R-112a (CFC) R-113 (CFC) R-113a (CFC) R-114 (CFC) R-114a (CFC) R-114B2 (H) R-115 (CFC) R-116 (PFC) R-120 (HCC) R-121 (HCFC) R-121a (HCFC) R-122 (HCFC) R-122a (HCFC) R-122b (HCFC) R-123 (HCFC) R-123a (HCFC) R-123b (HCFC) R-124 (HCFC) R-124a (HCFC) R-125 (HFC) R-E125 (HFC) R-130 (HCC) R-130a (HCC) R-131 (HCFC) R-131a (HCFC) R-131b (HCFC) R-132 (HCFC) R-132a (HCFC) R-132b (HCFC) R-132c (HCFC) R-132bB2 (H) R-133 (HCFC) R-133a (HCFC)				

R-133b (HCFC) R-134 (HFC) R-134a (HFC) R-E134 (HFC) R-140 (HCC) R-140a (HCC) R-141 (HCFC) R-141B2 (H) R-141a (HCFC) R-141b (HCFC) R-142 (HCFC) R-142a (HCFC) R-142b (HCFC) R-143 (HFC) R-143a (HFC) R-143m (HFC) R-E143a (HFC) R-150 (HCC) R-150a (HCC) R-151 (HCFC) R-151a (HCFC) R-152 (HFC) R-152a (HFC) R-160 (HCC) R-161 (HFC) R-170 (HC) R-E170 (HC) R-211 (CFC) R-212 (CFC) R-213 (CFC) R-214 (CFC) R-215 (CFC) R-216 (CFC) R-216ca (CFC) R-217 (CFC)				

R-217ba (CFC) R-218 (PFC) R-221 (HCFC) R-222 (HCFC) R-222c (HCFC) R-223 (HCFC) R-223ca (HCFC) R-223cb (HCFC) R-224 (HCFC) R-224ca (HCFC) R-224cb (HCFC) R-224cc (HCFC) R-225 (HCFC) R-225aa (HCFC) R-225ba (HCFC) R-225bb (HCFC) R-225ca (HCFC) R-225cb (HCFC) R-225cc (HCFC) R-225da (HCFC) R-225ea (HCFC) R-225eb (HCFC) R-226 (HCFC) R-226ba (HCFC) R-226ca (HCFC) R-226cb (HCFC) R-226da (HCFC) R-226ea (HCFC) R-227ca (HFC) R-227ca2 (HFC) R-227ea (HFC) R-227me (HFC) R-231 (HCFC) R-232 (HCFC) R-232ca (HCFC)				

R-232cb (HCFC) R-233 (HCFC) R-233ca (HCFC) R-233cb (HCFC) R-233cc (HCFC) R-234 (HCFC) R-234aa (HCFC) R-234ab (HCFC) R-234ba (HCFC) R-234bb (HCFC) R-234bc (HCFC) R-234ca (HCFC) R-234cb (HCFC) R-234cc (HCFC) R-234cd (HCFC) R-234da (HCFC) R-234fa (HCFC) R-234fb (HCFC) R-235 (HCFC) R-235ca (HCFC) R-235cb (HCFC) R-235cc (HCFC) R-235da (HCFC) R-235fa (HCFC) R-236cb (HFC) R-236ea (HFC) R-236fa (HFC) R-236me (HFC) R-FE-36 (HFC) R-241 (HCFC) R-242 (HCFC) R-243 (HCFC) R-243ca (HCFC) R-243cb (HCFC) R-243cc (HCFC)				

R-243da (HCFC) R-243ea (HCFC) R-243ec (HCFC) R-244 (HCFC) R-244ba (HCFC) R-244bb (HCFC) R-244ca (HCFC) R-244cb (HCFC) R-244cc (HCFC) R-244da (HCFC) R-244db (HCFC) R-244ea (HCFC) R-244eb (HCFC) R-244ec (HCFC) R-244fa (HCFC) R-244fb (HCFC) R-245ca (HFC) R-245cb (HFC) R-245ea (HFC) R-245eb (HFC) R-245fa (HFC) R-245mc (HFC) R-245mf (HFC) R-245qc (HFC) R-251 (HCFC) R-252 (HCFC) R-252ca (HCFC) R-252cb (HCFC) R-252dc (HCFC) R-252ec (HCFC) R-253 (HCFC) R-253ba (HCFC) R-253bb (HCFC) R-253ca (HCFC) R-253cb (HCFC)				

R-253ea (HCFC) R-253eb (HCFC) R-253ec (HCFC) R-253fa (HCFC) R-253fb (HCFC) R-253fc (HCFC) R-254cb (HFC) R-254pc (HFC) R-261 (HCFC) R-261ba (HCFC) R-262 (HCFC) R-262ca (HCFC) R-262fa (HCFC) R-262fb (HCFC) R-263 (HFC) R-271 (HCFC) R-271b (HCFC) R-271d (HCFC) R-271fb (HCFC) R-272 (HFC) R-281 (HFC) R-290 (HC) R-C316 (CFC) R-C317 (CFC) R-C318 (PFC) R-3-1-10 (PFC) R-329ccb (HFC) R-338eea (HFC) R-347ccd (HFC) R-347mcc (HFC) R-347mmy (HFC) R-365mfc (HFC) R-4-1-12 (PFC) R-5-1-14 (PFC) R-400 (CFC)				

R-401A (HCFC) R-401B (HCFC) R-401C (HCFC) R-402A (HCFC) R-402B (HCFC) R-403A (HCFC) R-403B (HCFC) R-404A (HFC) R-405A (HCFC) R-406A (HCFC) R-406B (HCFC) R-407A (HFC) R-407B (HFC) R-407C (HFC) R-407D (HFC) R-407E (HFC) R-407F (HFC) R-408A (HCFC) R-409A (HCFC) R-409B (HCFC) R-410A (HFC) R-410B (HFC) R-411A (HCFO) R-411B (HCFO) R-411C (HCFO) R-412A (HCFC) R-413A (HFC) R-414A (HCFC) R-414B (HCFC) R-415A (HCFC) R-415B (HCFC) R-416A (HCFC) R-417A (HFC) R-417B (HFC) R-418A (HCFC)				

R-419A (HFC) R-420A (HCFC) R-421A (HFC) R-421B (HFC) R-422A (HFC) R-422B (HFC) R-422C (HFC) R-422D (HFC) R-423A (HFC) R-424A (HFC) R-425A (HFC) R-426A (HFC) R-427A (HFC) R-428A (HFC) R-429A (HFC) R-430A (HFC) R-431A (HFC) R-432A (HO) R-433A (HO) R-433B (HO) R-433C (HO) R-434A (HFC) R-435A (HFC) R-436A (HC) R-436B (HC) R-437A (HFC) R-438A (HFC) R-439A (HFC) R-440A (HFC) R-441A (HC) R-500 (HCFC) R-501 (HCFC) R-502 (CFC) R-503 (HCFC) R-504 (HCFC)				

R-505 (HCFC) R-506 (HCFC) R-507[A] (HFC) R-508[A] (HFC) R-508B (HFC) R-509[A] (HCFC) R-510[A] (HC) R-511[A] (HC) R-600 (HC) R-600a (HC) R-601 (HC) R-601a (HC) R-610 (HC) R-611 (HC) R-630 R-631 R-702 R-704 R-717 R-718 R-720 R-728 R-729 R-732 R-740 R-744 R-744A R-764 R-784 R-1112a (CFO) R-1113 (CFO) R-1114 (PFO) R-1120 (HCO) R-1130 (HCO) R-1132a (HFO)				

R-1140 (HCO) R-1141 (HFO) R-1150 (HO) R-1216 (PFO) R-1218 (PFO) R-1233zd (HCFO) R-1234yf (HFO) R-1234ze (HFO) R-1270 (HO)				

4. Does your facility have control devices or abatement processes for on-site emissions to air? If yes, select all sources of emissions that have abatement processes.

Please answer Yes only if you have control device(s) installed and in operation. If you have evidence of plans to install control devices, please choose Partial Yes. This question does not include controls for indoor air quality emissions from production processes.

Suggested Upload: Emission testing records from control devices or abatement processes
Unknown

Source	What control device, abatement process, or safety equipment was used for this source of air emissions?	What was the frequency of monitoring?	Provide any additional comments
Auto-populate selections from applicability test and Q1 on operations steps *Stack* *Vent* *Refrigerant device* *Heating and ventilation* *Air conditioning*	*Text*	*Continuously* *Daily* *Weekly* *Monthly* *Bimonthly* *Quarterly* *Biannually* *Annually*	

5. Does your facility have control devices or abatement processes for indoor air quality issues from production processes? If yes, select all sources of air quality issues that have abatement processes.

Please answer Yes only if you have control device(s) installed and in operation. If you have evidence of plans to install control devices, please choose Partial Yes.

Suggested Upload: Emission testing records from control devices or abatement processes.

Source	What control device, abatement process, or safety equipment was used for this source of air emissions?	What was the frequency of monitoring?	Provide any additional comments
Auto-populate selections from applicability test on production steps	*Text*	*Continuously* *Daily* *Weekly* *Monthly* *Bimonthly* *Quarterly* *Biannually* *Annually*	

Air Emissions – Level 2

6. Has your facility gone beyond permit requirements to achieve a higher level of air performance in Nitrogen Oxides (NOx), Sulfur Oxides (SOx), and Particulate Matter (PM)?

- Yes
- No

If yes, specify the level.

- Level 1: Foundational
- Level 2: Strategic
- Level 3: Aspirational

Upload emissions testing results for PM, S02, and NOx

Please refer to the air standard in the guidance document to determine if you've met a foundational, strategic, or aspirational level of air emissions performance.

Air Emissions – Level 3

7. Do you have a process for implementing modernized equipment to reduce or eliminate air emissions and indoor air quality issues at your facility?

Please select Yes if you have a documented plan to upgrade machinery or if all machinery has been upgraded to the most modern version as that is one of the best ways to control pollutants and achieve a higher level of air performance.

Please upload documentation if available

Upload: Documentation of plans/process for equipment upgrades or documentation of recent upgrades

Section 6. Waste

Waste – Level 1

1. Which non-hazardous waste streams does your site produce? Select all that apply:

Includes production and domestic waste. You will receive full points if you are completely tracking the quantity of all waste streams that your facility generates. You will receive partial points if you are completely tracking at least one of your waste sources, but are not yet tracking all of your sources.

It is important to also specify how each waste stream is being disposed of in order to identify opportunities to increase your use of preferred disposal methods (e.g., reuse, recycling, properly controlled energy recovery, incineration, and biological/chemical treatment) and reduce landfilling and/or uncontrolled incineration.

Suggested Upload: Waste Manifest

- Materials (please specify)
- Metal
- Plastic
- Paper
- Cans
- Food
- Glass
- Cartons
- Other

For each selected, please complete the volume tracking table:

Please specify material type	**Description**	**What quantity of non-hazardous waste was generated by this source in 2018?**	**Quantity** *Unit of Measure*	**Which method was used to track this waste source?**	**How was this waste disposed of?**	**Provide any additional comments**
Auto-populate from selections above		*Numeric*	*Kilograms* *Liters* *Tons* *Other (please specify)*	*Weighed* *Estimated*	• Reuse • Recycled • Energy recovery • Incinerated • Onsite incineration • Landfill • Onsite landfill/dumping • Physical-chemical-biological treatment (please specify) • Other)	

Add new row +						

2. Which <u>hazardous</u> waste streams does your site produce? Select all that apply:

You will receive full points if you are completely tracking all hazardous waste sources AND are disposing of hazardous wastes through a licensed and permitted hazardous waste contractor. Please refer to the guidance documents for information on reporting on drums or barrels.

Production Waste
- Empty chemical drums and containers
- Film and Printing Frame
- Wastewater treatment sludge (industrial / domestic)
- Expired / unused / used chemicals (waste oil, solvents, reactants, etc…)
- Compressed Gas Cylinders (refrigerants, etc.)

Contaminated materials (please specify)

Domestic Waste
- Batteries
- Fluorescent light bulb
- Ink cartridges
- Waste oil and grease (from cooking)
- Empty containers (cleaning, sanitizing, pesticides, etc...)
- Electronic Waste
- Coal combustion residuals (fly ash and bottom ash/coal slag)
- Other

Suggested Upload: Hazardous waste manifests

For each selected, please complete the volume tracking table:

Source	**Description**	**What quantity of hazardous waste was generated by this source in 2018?**	**Which method was used to track this waste source?**	**How was this waste disposed of?**	**Are all hazardous waste transporters, treatment, and disposal facilities licensed and permitted?** *If there are no legal regulations for hazardous waste in your area, choose "Not Applicable"*	**Describe your waste management and disposal processes for this source**
Auto-populate from selections above		*Quantity Unit of Measure*	*Weighed Estimated*	• Reuse • Recycled • Energy recovery • Incineration • Onsite incineration • Landfill	*Yes* *No* *NA (no legal regulations for hazardous waste)* *Upload a copy of the permit*	

				• Onsite landfill/dumping • Physical-chemical-biological treatment • Other (please specify)		
Add new row +						

3. Does your facility segregate all waste streams into non-hazardous and hazardous waste, and store them separately?

Please answer Yes if you segregate hazardous and non-hazardous waste for appropriate management.

Suggested Upload: Photos of segregated storage sites

- Yes
- No
- Unknown

4. Does your facility have well-marked, designated hazardous waste storage areas?

Hazardous wastes pose a greater risk to the environment and human health than non-hazardous wastes and thus require a stricter control regime. It's important to segregate hazardous wastes and secure storage areas and containers to eliminate risk to workers and the environment.

Suggested Upload: Photos of segregated storage sites

- Yes
- No
- Unknown

The hazardous waste storage area is ventilated, dry and protected from the weather, and fire risk.

- Yes
- No

The hazardous waste storage area is protected from unauthorized employees (i.e. locked).

- Yes
- No

The hazardous waste storage area is clearly marked.

- Yes
- No

Storage containers are in good condition, appropriate for their contents, closed and clearly labeled with their contents.
- Yes
- No

Where liquid wastes are stored, the floor is solid and non-porous, containers have lids, there are no water drains that the liquid could spill into, and there is no evidence of spilled liquid.
- Yes
- No

Flammable substances are kept away from sources of heat or ignition, including the use of grounding and explosion-proof lighting.
- Yes
- No

5. Does your facility have well-marked, designated non-hazardous waste storage areas?

Non-hazardous wastes can pose contamination risks (e.g., pollution, waste being dispersed by the wind, food waste leachate) and risks to workers (e.g., fire, sharp objects).

Suggested Uplaod: Photos of segregated storage sites
- Yes
- No
- Unknown

The non-hazardous waste storage area is ventilated, dry and protected from the weather, and fire risk.
- Yes
- No

-

The non-hazardous waste storage area is clearly marked
- Yes
- No

Storage containers are in good condition, appropriate for their contents, closed and clearly labeled with their contents.
- Yes
- No

-

Flammable substances are kept away from sources of heat or ignition, including the use of grounding and explosion-proof lighting.
- Yes
- No

6. Does your facility forbid open burning and dumping on-site?

Burning waste on facility premises (inside or outside) with no air emissions control equipment and without special authorization from your environmental legal agency should be forbidden. If you do incinerate on-site, please explain the technology, the approval process, and how you control air emissions in the comment field provided.

Open burning is forbidden

- Yes
- No

If open burning is not forbidden, please describe the technology used and how you control air emissions

Open dumping is forbidden

- Yes
- No

If open dumping is not forbidden, please describe the technology used and how you control air emissions

7. Does your facility provide training to all employees whose work involves hazardous waste handling (such as maintenance and custodial staff)?

You will be awarded full points if all topics were included in your training. If some, but not all, topics were included you will be awarded partial points

Suggested Upload: List of trained individuals, training materials (including calendar), certifications

- Yes
- Partial Yes
- No
- Unknown

If yes, please select all topics included in your training:

- Proper handling
- Storage and disposal techniques and procedures
- Specific operational procedures for waste minimization
- Use of personal protective equipment
- Other

If other, please specify:

Waste – Level 2

8. Has your facility set a baseline for solid waste? If yes, select all sources of waste for which your facility has set a baseline:

In order to demonstrate improvements or reductions, it's important to know what your starting point is. A "baseline" is a starting point or benchmark that you can use to compare yourself against over time. For example, if your factory produced 15 kg of domestic waste per product in 2016, you will be able to compare your performance against this amount in years to come. In this example, "15 kg of domestic waste per product in 2016" is an example of a normalized baseline. Please note that you may need to set separate baselines for total amount of waste generated and disposal method.

- Yes
- No
- Unknown

Waste Source (fills from source selections above)	**Is the baseline absolute or normalized?**	**What is the baseline quantity?** *If you are reporting a normalized baseline, it must be normalized by the production unit you specified in the Site Info section. Please make sure your normalization calculation reflects your production volumes from your baseline year, not from 2018.*	**Enter the baseline year**	**How was your baseline calculated?**	**Was the baseline verified?**
Source	*Normalized* *Absolute*	Quantity + Unit of Measure • g • kg • lb • oz • ton (metric) • ton (short) • barrels (16 kg/ea) • CCF • cu ft • cu yard • gal • liter • M3 • Ml If other, please specify:	Dropdown of years	Open text	If yes, tell us date and auditing party. Not req
+ Add new row					

9. Did you set a baseline for waste disposal methods for your facility's overall waste?

- Yes
- No

If yes, indicate which methods.

Waste Source (fills from source selections above)	**What is the baseline quantity?** *Enter the percentage of your facility's waste source that was disposed using this method*	**Enter the baseline year**	**How was your baseline calculated?**	**Was the baseline verified?**
Source	*Normalized* *Absolute*	Dropdown of years	Open text	If yes, tell us date and auditing party. Not req
+ Add new row				

10. Does your facility set formal targets to reduce waste quantity?

You will receive full points if you set targets for waste streams that make up 80% or more of your total waste generated. You will receive partial points if you set targets for waste sources that make up 50-79% or more of your total waste generated. This is to reward you for aiming to reduce your greatest sources of waste generation which will maximize environmental impact.

- Yes
- No
- Unknown

Select all sources of waste for which your facility has set a quantity or improvement target.

If yes, please tell us about your targets: (tool auto-calculates)

Select source targeted to be improved (select one)*	**M3 (auto-populated from total above)**	**Action Taken**	**What is your target change for waste generated from this source?** *Enter a negative percentage for a reduction target, and a positive percentage for an increase target*	**Normalized or Absolute Target? (select one)**	**What is the target year?**	**Proposed kg reduction**	**Describe the measures planned to achieve this target**
Total waste <select from dropdown of your waste sources (e.g., plastic, glass, etc.)>		Eliminate or reduce waste generation at the source; Reuse waste (without any modification of the waste); Increase quantity of waste recycling;	**-10%**	**Select one:** **Normalized** **Absolute** **Other** Guidance: The target setting should allow the facilities to express and set their own targets which may not fall			***Text***

		Use another treatment that have lower impact on the environment (e.g., energy recovery), please describe.		in absolute or normalized target.			
+ Add new rows							***Text***
TOTAL	Xm3					Xkg	

11. Did you set a target for improving waste disposal methods for your facility's overall waste?

- Yes
- No

If yes, indicate which methods.

Examples of improvements to disposal methods include: Eliminate or reduce waste generation at the source; Reuse waste (without any modification of the waste); Increase quantity of waste recycling; Use another treatment that has lower impact on the environment (e.g., energy recovery)

Select source targeted to be improved (select one)*	**M3 (autopopulated from total above)**	**Action Taken**	**What is your target change for this method of disposal?** *Enter a negative percentage for a reduction target, and a positive percentage for an increase target*	**Normalized or Absolute Target? (select one)**	**What is the target year?**	**Proposed kg reduction**	**Describe the measures planned to achieve this target**
Total waste <select from dropdown of your waste sources (e.g., plastic, glass, etc>		Eliminate or reduce waste generation at the source; Reuse waste (without any modification of the waste); Increase quantity of waste recycling;	**-10%**	**Select one:** **Normalized** **Absolute** **Other** Guidance: The target setting should allow the facilities to express and set their own targets which may not fall in			***Text***

		Use another treatment that have lower impact on the environment (e.g., energy recovery), please describe.		absolute or normalized target.			

12. Does your facility have an implementation plan to reduce waste quantity or improve type of treatment?

- Yes
- Partial Yes
- No
- Unknown

Please answer Yes if you have an implementation plan in place that demonstrates you are taking action to achieve your targeted reductions or improvements. Please choose Partial Yes if you have a plan but have not started on all action items. You may download a sample implementation plan here: https://www.dropbox.com/s/fm2ilfjcqnw93ew/Template_Implementation%20Plan.xlsx?dl=0

Upload a copy of the plan.

This should be a waste reduction plan showing specific actions designed to achieve targeted reductions in waste consumption

13. Has your facility reduced waste quantity or improved type of treatment, compared with the established baseline?

You will receive full points if you made reductions for waste sources that make up 80% or more of your total waste generated. You will receive partial points if you made reductions for waste sources that make up 50-79% or more of your total waste generated. This is to reward you for reducing your greatest sources of waste which will maximize environmental impact.

We recommend that you show normalized reductions such as "hazardous waste per product was reduced by 80% in 2018". This is because normalized metrics show real improvement rather than reductions from business changes such as reduced production.

- Yes
- No
- Unknown

Select all sources of waste for which your facility made improvements.

If yes, complete this table:

Select source that was reduced	Select baseline year		Describe the strategies used to achieve this improvement
Populate dropdown of options from table above		%	
+ Add new rows			

14. Has your facility improved waste disposal methods for overall waste in 2018, compared with the baseline?

- Yes
- No

If yes, indicate which methods:

Select method that was used	Select baseline year	**What was the percentage change?** Enter a negative percentage for a reduction, and a positive percentage for an increase	Describe the strategies used to achieve this improvement
Populate dropdown of options from table above		%	
+ Add new rows			

Waste – Level 3

15. Does your facility validate the final disposal and treatment of all hazardous wastes?

Hazardous waste poses serious risk to the environment when improperly treated and disposed of. It is considered leading practice for a facility to take extra steps to confirm that their waste contractors are properly transporting, storing, treating and disposing of hazardous wastes from your facility site. Facilities should screen, validate and check contractors every three years.

- Yes
- No
- Unknown

If yes, upload supporting documentation.

Describe how you work with your facility's waste contractors to ensure appropriate disposal during the waste treatment.

16. Has your factory diverted at least 90 percent of all discarded materials from landfills, incinerators and the environment?

Zero waste to landfill is defined as diverting 90% of all discarded materials from landfills, incinerators and the environment. If you can demonstrate that you divert 90% or more of all waste please answer Yes to this question.

Suggested Upload: Waste inventory and waste manifests showing >90% diversion from landfills/incinerators

- Yes
- No
- Unknown

Please describe how this is implemented.

17. Does your facility upcycle some of its waste or insert its waste into a circular economy system?

Suggested Upload: Pictures or process flows, showing type and amounts of waste that are recycled into products of the same or higher value

- Yes
- No
- Unknown

If yes, describe how.

Section 7. Chemicals Management

Applicability Test
The following questions are used to determine which chemicals questions apply to your facility and do not contribute to your score.

Select all of the processes performed at your facility (Yes/No):

- Dyeing or other wet processing
- Printing
- Laundry or washing
- Cementing or gluing
- Fiber extrusion or yarn spinning
- Slashing during weaving

- Leather tanning
- LaminationExtrusion, assembly, finishing of plastic parts
- Metal Finishing
- Welding
- Other production processes that require chemicals

If any are selected, you are a facility that **uses chemicals in production processes.**

If none are selected, you are a facility that **uses chemicals in facility tooling and/or operations only**

Chemicals Management - Level 1

1a. Does your facility keep an inventory of chemicals used and the suppliers of each chemical product?

A complete chemical inventory includes: chemical name and type, supplier/vendor name and type, Safety Data Sheet (SDS) date of issuance, function, hazard classification, location used, storage conditions and location, quantities, CAS number(s), lot numbers, MRSL compliance, purchase date, and expiration dates (if applicable). You will be awarded full points if you have a complete inventory for all applicable chemicals in your facility. If you track all chemicals in a partial inventory, you will be awarded partial points. Similarly, if you have a detailed inventory but do not yet track all applicable chemicals, you will be awarded partial points.

For facilities that do not use chemicals in production: You should inventory all chemicals that are related to the manufacturing processes and tooling/equipment category, including spot cleaners, machine grease/lubricants, and effluent treatment plant chemicals. For facilities with only tooling/operations chemicals, If you do not have any chemicals that may touch product (e.g. cleaning products) and/or do not use chemicals to maintain or lubricate machines, you may select "not applicable".

Upload: a) Chemical Inventory List; b) Safety Data Sheet (SDS), Global Harmonization System (GHS) compliant or equivalent; c) Permits where applicable for certain sensitive chemicals to be stored or used (e.g. explosive materials); d) List of purchased chemicals and corresponding purchase records for the past full year.

- Yes
- No
- Unknown
- Not Applicable

Check all types of chemicals included in the inventory

- **All chemicals used in manufacturing processes (including chemicals in production, spot cleaners, and wastewater treatment plant chemicals where applicable)**
  - Yes
  - No
  - Not Applicable
- **All chemicals used in tooling/equipment (lubricants and grease)**
  - Yes
  - No
  - Not Applicable
- **All chemicals used to operate and maintain the facility**
  - Yes
  - No
  - Not Applicable

Please upload documentation if available.

Upload: a) Chemical Inventory List; b) Safety Data Sheet (SDS), Global Harmonization System (GHS) compliant or equivalent; c) Permits where applicable for certain sensitive chemicals to be stored or used (e.g. explosive materials); d) List of purchased chemicals and corresponding purchase records for the past full year.

1b. Does your facility's chemical inventory include chemical identification data? Check all that apply:

Not all information needs to be in one single document, but it needs to be easily accessible in relevant documents (e.g., first in first out documentation)

- Chemical name and type
- Supplier/vendor name and type
- Safety Data Sheet (SDS), Global Harmonization System (GHS) compliant or equivalent
- Function
- Hazard classification
- Where used
- Storage conditions and location
- Quantities

1c. Does your facility's chemical inventory include the following data? Select all that apply:

- CAS number or numbers (when in a mixture)
- Lot numbers
- MRSL compliance
- Purchase date
- Expiration dates (if applicable)

For data not included in your facility's chemical inventory, is there an action plan for obtaining this data?

- Yes
- No

Upload your action plan for obtaining this data.

If you don't have a document to upload, describe your plan:

CM-1a Applicability (these tables do not contain new scoring information, but are intended to provide a visual of the applicability and yes/partial arrangements)

	Chem in Production		**Chem in Tooling / Operations Only**	
	Yes	**Partial Yes**	**dYes**	**Partial Yes**
• All chemicals used in manufacturing processes (including chemicals in production, spot cleaners, and ETP chemicals where applicable)	X	X (must select to move on)	X or NA	X or NA
• All chemicals used in tooling/equipment (lubricants and grease)	X	X (able to move on without)	X or NA	X or NA
• All chemicals used to operate and maintain the facility	X	(able to move on without)	X	

CM-1b and 1c Applicability

	Chem in Production		Chem in Tooling / Operations Only	
	Yes	**Partial Yes**	**Yes**	**Partial Yes**
CM-1b: Chemical name and type Supplier/vendor name and type Safety Data Sheet (SDS), Global Harmonization System (GHS) compliant or equivalent - availability and date of issuance Function Hazard classification Where used Storage conditions and location Quantities	X	X	X	X
CM-1c: CAS number or numbers Lot numbers (quantities are recorded in batch #) MRSL compliance Purchase date Expiration dates (if applicable)	X (must complete for full points)	(able to move on without - half points)	X (must complete for full points)	(able to move on without - half points)

2. Does your facility make Safety Data Sheets (SDS) available to employees for all chemicals used?

Safety Data Sheets must be Global Harmonization System (GHS) compliant. Please select "partial yes" if you meet Safety Data Sheet requirements, but they are not yet GHS-compliant.

For facilities that do not use chemicals in production: Safety Data Sheets are required for all chemicals that are related to the manufacturing processes and tooling/equipment category, including spot cleaners, machine grease/lubricants, and effluent treatment plant chemicals. If you do not have any chemicals that may touch product (e.g. cleaning products) and/or do not use chemicals to maintain or lubricate machines, you may select "not applicable".

- Yes
- Partial Yes
- No
- Unknown
- Not Applicable (see guidance for definition)

Are Safety Data Sheets posted where hazardous chemicals are stored?

- Yes
- No

Are Safety Data Sheets available in languages workers understand (at least sections directly related to operational worker safety and storage requirements, such as first aid, hazard, and flammability information)?

- Yes
- No

Please upload documentation if available.

Upload: a) Chemical inventory list (skip if previously uploaded); b) Safety Data Sheet (SDS), Global Harmonization System (GHS) compliant or equivalent (skip if previously uploaded); c) Globally Harmonized System - Classification, Labelling and Packaging (GHS CLP); d) Emergency Response Plans; e) Documentation of Spill Control/Containment equipment; f) Documentation of Appropriate PPE being utilized by the workforce; g) Training documentation

3. Does your facility train all employees who use chemicals on chemical hazards, risk, proper handling, and what to do in case of emergency or spill?

Trainings must be documented and cover chemical hazards and identification; MSDS/SDS; signage; compatibility and risk; proper storage and handling; personal protective equipment and procedure in case of emergency, accidents, or spill; access restriction to chemical storage areas; potential environmental impact of the chemicals in tanks; the physical protection provided to employees in the area(s) where the factory uses, stores and transports these containers; and their individual duties associated with monitoring and maintaining this protection. Select partial yes if you do not have documentation or you have not covered all topics listed.

- Yes
- Partial Yes
- No
- Unknown

If yes, please upload supporting documentation.

Upload: a) Sample training; b) Training calendar; c) Employee training attendee list

4. Does your facility have a chemical spill and emergency response plan that is practiced periodically?

Chemical spill and emergency response plans must meet detailed requirements as specified in guidance, and all workers must participate in a practice drill twice a year. Please select Partial Yes if you have a chemical spill and emergency response plan, but that does not yet meet all requirements or you do not have practice drills. For facilities that do not use chemicals in production: Answer Yes if you meet requirements for chemicals and spill response plans, however twice-annual practice drills are not required.

- Yes
- Partial Yes
- No
- Unknown

Does your facility keep records of all employee and environmental incidents related to chemical spills and emergency response?

- Yes
- Partial Yes
- No
- Unknown

Please upload documentation if available.
Upload: Emergency response plan/procedure (skip if previously uploaded).

5. Does your facility have appropriate and operable protective and safety equipment, as recommended by the Global Harmonization System compliant (or equivalent) Safety Data Sheet, in all areas where chemicals are stored and used?

Protective and safety equipment may include spill response kits (size, type and location appropriately adapted for the chemical), showers and eyewash tested regularly, fire extinguishers maintained regularly, adapted Personal Protective Equipment (PPE) appropriate for the chemical (based on MSDS/SDS) such as appropriate gloves, protective masks, long handle scoops, etc.

Equipment should follow specifications in the GHS-compliant or equivalent Safety Data Sheet, be clearly visible for all relevant workers (e.g., not stored in a storage cupboard with locks; and in close proximity to the relevant area), well-maintained, and checked regularly for functionality by relevant staff. There is no Partial Yes option for this question.

For facilities that do not use chemicals in production: This applies to all chemicals that are related to the manufacturing processes, tooling/equipment category, and operating chemicals that do not touch product.

- Yes
- No
- Unknown

Please upload documentation if available.
Upload: a) Schedule for internal checks/audit for chemical safety that covers relevant chemical exposure risks and safety equipment, with clear designation of responsibilities and outcome of the checks/audits; b) Inventory list of PPEs and safety equipment with schedules of stock replenishments, equipment maintenance or replacements, where applicable (skip if previously uploaded).

6. Does your facility have chemical hazard signage and safe handling equipment in the areas of the facility where chemicals are used?

Your facility should post signage at all areas where chemicals are stored or used. Signage should depict the hazard classification(s) of chemicals. The most critical areas for signage include: receiving and delivery, chemical storage areas (centralized warehouse and temporary storage areas), chemical process areas, manufacturing/production areas, waste chemicals storage (including chemical residues and expired chemicals), and laboratories, toolshop, maintenance areas. Handling equipment should be available at relevant locations and correspond with the safety requirement and hazard communication/signage for each particular chemical. There is no Partial Yes option for this question.

For facilities that do not use chemicals in production: This applies to all tooling and operations chemicals in your factory.

- Yes
- No
- Unknown

Please upload documentation if available.
Upload: Schedule for internal checks/audit for chemical safety that covers relevant chemical exposure risks and communication (signage placement and updates), with clear designation of responsibilities and outcome of the checks/audits (skip if previously uploaded)

7. Does your facility select and purchase chemicals based on their hazards and MRSL / RSL requirements?

MRSL is a Manufacturing Restricted Substance List. Facilities typically are aware of Restricted Substance Lists (RSL); however, the industry has recently evolved to focus on Manufacturing Restricted Substance Lists (MRSL) to further environmentally-friendly chemical use in addition to Restricted Substance Lists. MRSL is important because a facility that uses compliant chemicals, in accordance with technical specification directions, has better environmental outcomes for the various facility discharges as well as more consistent RSL material compliance.

Please answer Yes only if all chemicals purchased meet RSL/MRSL purchasing requirements and you have documentation to support this. Please select Partial Yes if you purchased chemical(s) that do not meet MRSL/RSL requirements, but you have a documented plan for eliminating these chemicals next year.

For facilities that do not use chemicals in production: All purchased chemicals must meet these requirements with documentation available that includes certificates of analysis for the composition and MSDS / SDS and technical data sheets where applicable. RSL should be included in your facility's purchasing to prevent violations from accidentally occurring, and it also relieves you from having to demonstrate a full RSL-compliance program in Higg.

- Yes
- Partial Yes
- No
- Unknown

Please upload documentation if available.

If yes, do all chemicals purchased and used in production meet the facility's chemical purchasing policy?

- Yes
- No

If no, do you have a process or plan for eliminating chemicals that do not meet the facility's chemical purchasing policy?

- Yes
- No

Please describe the process or plan.

8. Does your facility have an environmental and occupational health and safety program specific to chemicals management?

Chemicals health and safety programs must have a designated person or team, meet legal health and safety requirements, and have written procedures for chemical storage, handling, usage, disposal, and environmental controls for waste or discharge to the environment. Please select Partial Yes if your chemicals health and safety program is complete, but not yet documented in writing.

- Yes
- Partial Yes
- No
- Unknown

Please upload documentation if available.

Upload: a) Letter of appointment, job description, organization chart; b) Curriculum Vitae of responsible person/team; c) Environmental Health and Safety procedures related to chemical storage, handling, usage, and disposal ; d)
Chemical Inventory with identified hazards with MSDS, technical sheets available to and used by Environmental Health and Safety personnel (skip if previously uploaded); e) Permits with operating limits and relevant laws governing health and safety requirement for chemical storage, operations, and disposal (skip if previously uploaded); f) Chemical accident and spill records (skip if previously uploaded); g) Health and Safety Log (First Aid and health station)

9. Does your facility have well marked, designated chemical storage and temporary storage areas?

Proper chemical storage is as important to safety as proper chemical handling. Often, seemingly logical storage ideas, such as placing chemicals in alphabetical order, may cause incompatible chemicals to be stored together. Facilities must demonstrate that all storage areas are well-marked and properly managed to prevent contamination and safety risks. Temporary storage happens at the point of work where chemicals are applied, such as a screen-printing station. Temporary storage questions only apply to factories that use chemicals in production processes.

You will be awarded full points if you meet all storage criteria. Partial points will be awarded if you meet half of all storage criteria.

- Yes, it has both chemical storage and temporary storage areas
- Yes, it only has chemical storage areas
- No
- Unknown

If yes, select all that apply:

	Storage	Temporary Storage
The chemical storage area is ventilated, dry and protected from the weather, and fire risk.	X	X
The storage area is protected from unauthorized employees (i.e. locked).	X	
The chemical storage area is clearly marked.	X	X

The chemical storage area has easy entry and exit in case of any emergencies.	X	X
Storage containers are in good condition, appropriate for their contents, closed and clearly labeled with their contents.	X	X
Floor in storage area is solid and non-porous, there are no water drains that the liquid could spill into, and there is no evidence of spilled liquid.	X	X
Secondary containment is available for solid and liquid chemicals in tanks, drums, and temporary containers (where applicable) to ensure no unintended releases occur	X	X
Incompatible substances (such as strong acids and strong bases) are stored separately.	X	X
Flammable substances are kept away from sources of heat or ignition, including the use of grounding and explosion-proof lighting.	X	X
Temporary storage containers are closed and labeled with contents, lot, and hazard class.		X

Please upload documentation if available.
Upload: a) Facility drawing or emergency response plan with local authorities where applicable (skip if previously uploaded); b) Storage/usage permit with restrictions (if applicable); c) Local fire codes

MSDS/SDS and technical sheets in local language (skip if previously uploaded); d) Chemical labeling on chemical containers (original labeling, no handwritten labels); e) Floor plan of chemical storage areas, specifying categorization and placements of different types of chemicals; f) Storage in/out log, FIFO records, for each chemical specifying date of arrival at storage, lot number, chemical expiration dates, date of dispatch to production, etc. (skip if previously uploaded); g) Management audits/inspections checklists of chemical storage areas; h) Standard operating procedures for proper chemical storage.

10. Does your facility train employees responsible for the chemical management system on Restricted Substance Lists (RSLs) and Manufacturing Restricted Substance Lists (MRSLs)?

MRSL and RSL trainings must be conducted by a knowledgeable employee and come with documentation showing who, when, where, and how they were trained on MRSL and RSL. Please select Partial Yes if training has been provided but is not yet well-documented.

- Yes
- Partial Yes
- No
- Unknown

Please describe the RSL and MRSL trainings conducted in the last calendar year

Please upload documentation if available

Upload: a) Job Descriptions (skip if previously uploaded); b) MRSL/RSL training record(s) with names, date, topic of training, brief description of what was trained

11. Does your facility have a documented process to systematically identify, monitor and verify compliance with all product Restricted Substance Lists (RSLs)?

Please upload documentation if available

- Yes
- Partial Yes
- No
- Unknown

Please upload documentation if available.

x

Upload: a) Technical Data/Specification sheets (TDS) for all chemicals; b) Recipes for processes where chemicals are used; c) Purchased materials list with Letter of Compliance to RSL for all chemicals; d) Chemical inventory - verify all chemicals are covered and checked for RSL compliance at least on annual basis, check the dates of previous check.

12. Does your facility have a documented process to systematically monitor, update and demonstrate compliance with Manufacturing Restricted Substance Lists (MRSLs)?

Facilities must incorporate an MRSL into their business practices. Establishing an effective MRSL program is complicated and may take several years to fully implement in your factory. Please refer to the guidance documents for more information.

- Yes
- Partial Yes
- No
- Unknown

Does your facility require its chemicals suppliers to do the same?

- Yes
- No
- Unknown

Does your facility require its washing and printing subcontractors to do the same?

- Yes
- No
- Unknown
- Not Applicable

Please describe these processes.

Please upload documentation if available.

Upload: a) Chemical Inventory (skip if previously uploaded); b) Chemical review policy and process flow; c) List of non-conforming chemicals; d) Phase out plan for non-conforming chemicals, if any; e) MRSLs applicable to the facility e.g. own MRSL, customers' MRSL, or ZDHC MRSL; f) Positive lists from chemical suppliers (skip if previously uploaded); g) Email communication or communication trail between facility and its chemical suppliers and subcontractors (if any) regarding MRSL compliance; h) Letter of compliance to MRSL with chemical name, date of issuance, and test reports; i) Documented periodical screening process against ZDHC Chemical Gateway (where applicable) and the Level of Conformance of each chemical screened. Dated records of previous screenings and schedule of future screening.

13. Can all of your production chemicals be traced from the manufacturing process back to chemical inventory?

Chemicals traceability is necessary so that a facility can trace the source of a RSL and/or MRSL failure and take action. Please answer Yes only if your facility can trace all chemicals in production recipes back to the chemical inventory. If only some of the chemicals in production recipes can be traced back to the chemical inventory, please choose Partial Yes.

- Yes
- Partial Yes
- No
- Unknown

Please upload documentation if available.

Upload: a) Recipe cards, chemical formulation sheets, and process instructions (where applicable), containing all traceable information (i.e. chemical name and available quantity); b) Chemical Inventory (skip if previously uploaded); c) Chemical mixing process log, lab records (e.g. color lab, washing lab, etc.)

Chemicals Management – Level 2

14. Does your facility have an implementation plan to improve your chemicals management program?

We recognize that it may take many factories years to fully complete all Level 1 requirements for a robust chemicals management program. If you have a plan for achieving full completion of Level 1 requirements, please upload it here.

- Yes
- No
- Unknown

Please upload documentation if available.

Upload: Documented plan for achieving full completion of Level 1 requirements. This plan should include: a) Which questions were not fully achieved why; b) People responsible and a targeted date for achieving requirements for those questions which were not met.

15. Does your facility have an implementation plan to reduce the use of hazardous chemicals beyond chemicals specified by regulations and/or Restricted Substance Lists / Manufacturing Restricted Substance Lists?

Having hazardous chemicals does not mean that you have violated RSL or MRSL; your facility may have hazardous chemicals that are permitted on-site but that must be handled appropriately and eventually phased out. Please refer to the guidance documents for more information.

- Yes
- Partial Yes
- No
- Unknown

Please upload documentation if available.

Upload: a) A hazardous chemical(s) list with an action plan with assigned responsibilities and a timeframe for action; b) Alternative chemical trials in laboratory or pilot facility documents with conclusions to proceed or decline.

16. Does your facility source already-approved or preferred chemicals from a positives list beyond chemicals specified by regulations and/or Restricted Substance Lists / Manufacturing Restricted Substance Lists?

Please answer Yes only if more than 10% of the chemical formulations in the chemical inventory (% based on the number of chemicals, not the volume) are sourced from a positive list such as ZDHC Chemical Gateway, bluesign, GOTS, and/or Oeko-Tex. If you have chemicals from a positives list that make up less than 10% of your inventory, please choose Partial Yes.

For facilities that do not use chemicals in production: Please answer Yes only if more than 50% of the chemical formulations in the chemical inventory (% based on the number of chemicals, not the volume) are sourced from a positive list such as ZDHC Chemical Gateway, bluesign, GOTS, and/or Oeko-Tex. If you have chemicals from a positives list that make up less than 50% of your inventory, please choose Partial Yes.

- Yes
- Partial Yes
- No
- Unknown

Please upload documentation if available.

Upload: a) Demonstrate access to a positive list (example: bluesign bluefinder licence); b) Chemical inventory listing the chemical formulations and the corresponding chemical supplier - chemicals sourced from a positive list should be identified in the chemical inventory (skip if previously uploaded); c) Purchasing support documents (skip if previously uploaded); d) Purchasing contract language to support sourcing chemicals from positive lists (skip if previously uploaded); e) Process documentation to identify internal and external responsibilities (skip if previously uploaded)

Chemicals Management – Level 3

17. Does your facility collaborate with brands and/or chemical suppliers to select chemicals for alternatives assessment?

It's critical that value chain partners work together on alternatives in order to prevent a regrettable substitution that results in a product failure or non-compliance. You will be awarded partial points if you are collaborating on alternatives for all categories of chemicals. You will be awarded partial points if you are only prioritizing alternatives for some categories of chemicals.

- Yes
- No
- Unknown

Indicate which chemicals:

- All chemicals used in manufacturing processes
  - Yes
  - No
- All chemicals used in tooling/equipment (lubricants and grease)
  - Yes
  - No
- All chemicals used to operate and maintain the facility
  - Yes
  - No

Please upload documentation if available.

Upload: a) Prioritized list of alternatives for chemicals; b) MRSL/RSL, substances of concern list, REACH SVHC List (skip if previously uploaded); c) Minutes from collaborative meeting between facility, customers, and chemical suppliers regarding alternatives.

18. Does your facility contribute a chemical analysis against human and environmental hazard criteria (e.g., persistent, bio-accumulative, and toxic) to this alternatives process?

Please answer Yes if a hazardous chemicals assessment has been conducted in the facility and you are using this information to prioritize action and encourage chemical use towards safer alternatives. The assessment must include an evaluation of the hazard associated with an hazardous substance and an assessment of the exposure. Answer Partial Yes if you have conducted an assessment but have not prioritized further action.

- Yes
- Partial Yes
- No
- Unknown

Please upload documentation:*Suggested Upload: a) Hazardous Chemicals assessment report; b) Evidence the facility has evaluated the alternatives against hazard criteria.*

19. Does your facility contribute an analysis of lifecycle impacts to this alternatives process

Your facility should optimize chemicals used, manufacturing processes, and machinery to reduce energy and water consumption associated with a production step. An example would be choosing a different dyestuff in order to reduce water consumption during a dyeing process. Please answer Yes if you have evaluated the environmental impacts (e.g., impacts on water usage, energy usage, waste, wastewater, and disposal) of replacing chemicals in your factory.

- Yes
- Partial Yes
- No
- Unknown

Please upload documentation:
Suggested Upload: a) bluesign BlueXpert assessment; b) Lifecycle Assessment studies; c) Documented metrics for water, energy, waste, etc.; d) Third party assessments.

20. Can your manufacturing process chemicals be traced from product lot number back to chemical lot number?

- Yes
- Partial Yes
- No
- Unknown

Please answer Yes only if ALL chemicals used in processes or in mixtures can be traced to the temporary/working storage and main warehouse where consistent records are available and maintained to the lot number. If you can trace some but not all chemicals back to the lot number, please answer Partial Yes.

Suggested Upload: a) Product batch card including batch number, dates and production quantity; b) Recipe cards, formulation sheets, process instructions (where applicable), containing all traceable information i.e. chemical name, lot number, and quantity; c) Chemical mixing/blending process log, lab records (e.g. color lab, washing lab, etc.), including relevant information e.g. chemical name and quantity used in mixtures; d) Chemical storage log, including temporary/working storage and main warehouse with consistent records i.e. storage in/out log with chemical lot number, quantity, and dates (stored and dispatched for usage).

21. Does your facility have a documented Quality Assurance (QA) Program that includes performance of chemicals?

Please answer Yes only if you have a process in place to randomly select and verify a chemical's compliance to a known standard such as an MRSL or RSL via an organoleptic and chemical analysis on at least an annual basis. This QA program should include: 1) the evaluation of the quality and performance efficacy of each chemical formulation used, 2) ensuring the process recipes of how each chemical formulation are to be used are strictly followed, 3) process controls are strictly followed, and 4) ongoing assessment of production quality with supporting records. Answer Partial Yes if your facility utilizes customer testing reports traceable to work orders and recipes to verify chemical supplier conformance.

- Yes
- Partial Yes
- No
- Unknown

Please upload documentation:
Suggested Upload: a) Quality department with associated records such as customer test reports, analytical laboratory test reports by chemical by lot; b) Chemical supplier analytical test report; c) SOP for purchasing chemicals from qualified suppliers (skip if previously uploaded); d) Quality reports to senior management; e) In-house records of the analysis performed during last season; f) Test reports records from external labs of the analysis performed during last season and check that they are in accordance with MRSL requirements; g) Analysis results traceable to their corresponding internal orders and finished good batch.

22. Do your contractors/subcontractors source already-approved or preferred chemicals from a positives list to replace chemicals not already included in RSL/MRSL?

Please select Yes if your facility has a system in place that requires all contractors and subcontractors to have a preferred chemicals list and verify its use. You may choose Partial Yes if you have an action plan to engage suppliers by requesting the selection of chemicals from a positive list.

- Yes
- Partial Yes
- No
- Unknown

Please upload documentation:
Suggested Upload: a) Description of the procedures; b) Communications with the suppliers and subcontractors showing confirming the practice of sourcing chemicals from positive lists; c) Higg verification report from suppliers / subcontractors showing that they meet the criteria.

23. Does your facility have documented business goals, processes and actions showing commitment (e.g., equipment, process, choice of substitute chemicals) to new sustainable chemistry innovation?

Please answer Yes only if you can demonstrate that business decisions take responsible chemical management and innovation into consideration by incorporating responsible chemicals into its own business agreements and documented business goals. You may choose Partial Yes if you can otherwise demonstrate that business decisions take responsible chemical management and innovation into consideration.

- Yes
- Partial Yes
- No
- Unknown

Does your facility communicate its goals, processes and actions to Brands and Suppliers?

- Yes
- No
- Unknown

Please upload documentation:*Suggested Upload: a) Description or examples of current chemistry R&D projects/investments; b) Examples of how you have incorporated responsible chemistry into your own business agreements.*