TCO Certified, process chemicals template guidelines

Table 1: Factory information

Factory name: Give the name of each final assembly factory the applicant uses for certified models. Only fill in the areas under “factory name”.

Table 2: Chemical information

Factory: Match the chemical product to all the factories it is being used at. State only if the chemical product is used at factory 1 and/or 2 and/or 3 (factory name is already given in table 1).

Chemical product identification: Set a letter that identifies it as either product A or B or C etc. This is in order to track the chemical information given under table 3: “Worker protection”.

Chemical product name: Give the chemical name of the product. Here, only the commercial/trade name of the chemical product should be stated.

Chemical supplier: Give the name of the chemical product manufacturer.

Chemical applied: State if the chemical product is applied manually or automated.

Process description: From the A-F key choices that describe common processes, give only the corresponding letter (A-F) that best describes how the process is being carried out using the chemical product. Give additional information when requested (within brackets).

More than one letter can be given.

Process description
A: Product cleaning (name product part)
B: PCB wave soldering
C: Inspection cleaning
D: SMT Stencil cleaning
E: Red glue cleaning
F: Machine maintenance
G: Wave soldering maintenance
F: Other (name process)

Ingredient ID: Set a letter to each ingredient of the product. Use only Sub A, Sub B, Sub C etc. The ingredients information is normally based on SDS information. Full chemical product ingredients information must be given and add up to 100% of the product mixture.

Ingredient name: Each ingredient of the product must correspond to a letter in the ingredient column: Sub A, Sub B & Sub C to make up 100% of the product mixture.

CAS number: Give the corresponding CAS number to each ingredient.

Ingredient composition: The percentages must make up 100 % of the product mixture.

GreenScreen® list translator score: Completion of this section is optional. Most conservative score is the final result of combined scores. GreenScreen® list translator information and links to assessment tools such as Pharos and Toxnot can be found at:
https://www.greenscreenchemicals.org/learn/greenscreen-list-translator

High hazard endpoints (GHS): Give the relevant high hazard endpoints. This information can be obtained in the Safety Data Sheet (SDS). GHS provides specific guidance on how to determine GHS Toxicity Classification of mixtures that includes the 'Cut off limits' for when a toxic compound need not be included in the table.

High Hazard endpoints (GHS)	
(AA) Acute aquatic toxicity	**(IrS)** Skin irritation/corrosivity
(AT) Acute mammalian toxicity	**(M)** Mutagenicity and genotoxicity
(B) Bioaccumulation	**(N)** Neurotoxicity
(C) Carcinogenicity	**(P)** Persistence
(CA) Chronic aquatic toxicity	**(R)** Reproductive toxicity
(D) Developmental toxicity	**(Rx)** Reactivity
(E) Endocrine activity	**(SnS)** Sensitization - skin
(F) Flammability	**(SnR)** Sensitization - respiratory
(IrE) Eye irritation/corrosivity	**(ST)** Systemic/organ toxicity

Table 3: Worker protection information

Chemical product identification: This is the same as set in Table 2.

Type of room: Is the work carried out in an open floor plan or in a closed room there walls separate the work from common areas. State only if the room is open or closed.

Number of persons: The number of persons using the chemical product. This must include all shifts.

Ventilation: Section 8 of the SDS can give guidelines on the appropriate ventilation that must be provided to reduce risk for worker exposure.

Ventilation
Ventilated into the room
Local ventilation/exhaust
No ventilation

Type of PPE: Personal protective equipment, or PPE, is designed to provide protection from serious injuries or illnesses resulting from contact with chemicals. Choose from all the following PPE that must be provided to the worker using the hazardous chemical products. Guidelines for PPE are given in the SDS.

Type of PPE
Respiratory protection
Gloves
Face shield
Safety glasses
Chemical apron
Chemical resistant boots
Hazmat suit

PPE follows SDS recommendations: The SDS section 8 of the 16 section guidelines provides recommended levels of Personal Protective Equipment that must be provided to workers using the chemical product. State yes or no if the SDS recommendations are completely implemented.

Training: The risk for workers not using the provided PPE increases when they are untrained and inexperienced in the dangers of working with a specific substance. If trained correctly and knowledgeable about the chemical, the worker will be more motivated to protect their health and follow use guidelines. Factory Health and Safety management have the responsibility to implement and follow strict procedures making sure workers have the relevant training and competence in the substances they work with and know whom to report incidents or health problems to. Refresher training should also form a part of the training program.

From the following examples, state all of types of training provided to the worker:
Chemical handling: Section 7 of the chemical Safety Data Sheet (SDS) for guidance.
Hazard communication: Pictograms on labels provides understandable workplace information to workers about the identities and hazards of the chemicals.
Chemical exposure risk: Knowledge about the risks chemicals pose to the worker.

Correct PPE use: Provide training for the correct use of the PPE recommended in Section 8 of the SDS.
Refresher training: Workers need re-training in chemical handling to sustain effectiveness and avoid bad practices becoming routine.

Medical surveillance program (MSP): A surveillance program or periodic examinations that cover: initial, periodic and exit examinations help to identify and protect the health of employees and improve their working environments. If examinations are provided, enter all valid types: I = Initial, P = Periodic and E = Exit. If no examinations are provided enter: Not provided.

Type of medical surveillance: Biological monitoring or medical tests by an occupational health practitioner detect worker exposures to hazardous chemicals in their working environment through skin absorption or inhalation by measuring the amount of the chemical, to which the worker is exposed, in blood or urine examinations. If there is a MSP, state the type of biological monitoring carried out for those using the chemical product.

Medical surveillance intervals: Frequent intervals of medical surveillance help identify and overt the adverse health effects that long periods of exposure can lead to. Medical examinations should be regular since it helps the worker avoid serious illness, and help management identify areas for improvement. State the biological monitoring intervals in months.