Chemical Management Expectations for Suppliers

Introduction

Enacting policies and procedures designed to protect workers and the environment from exposure to harmful chemicals is part of our human rights commitment and priorities. Our goal is to establish policies and procedures that address potential impacts that workers may encounter while using chemicals during the manufacturing of Cisco products.

Guiding Principles

As technology and manufacturing processes continue to evolve in the electronics industry, so do chemical applications and the potential risks associated with their use during manufacturing. As a result, the full impacts of chemical exposure to human health are not always known, further complicating monitoring and measurement. In this context, Cisco commits to the following guiding principles and to working collaboratively through the supply chain to advance these principles in practice. Our goal is to enact policies and procedures designed to protect workers and the environment from exposure to hazardous chemicals.

Follow the Precautionary Principle. The precautionary principle should act as a guide when evaluating the onboarding and use of chemicals. If available data shows scientific uncertainty of potentially adverse effects, suppliers should prioritize the prevention of human or environmental harm by avoiding chemical use.

Commit to continuous improvement and capability building. We believe this is a critical step towards acknowledging and addressing the evolving nature of social and environmental risks from chemical use. By working with suppliers to continuously improve health, safety, and chemical management systems, we can address risks with agility.

Foster industry collaboration and collective learning. Collaboration across the electronics industry can amplify the ability to propagate best practices and achieve positive impacts. Suppliers are encouraged to participate in these groups to reduce duplication, align to standards, and to proliferate best practices further into supply chains.

Encourage transparency regarding chemical hazards. Upstream due diligence is an important process for supporting a better understanding of hazards associated with chemicals used in manufacturing. Cisco and its suppliers can influence the availability of relevant chemical hazard information needed to protect workers and the environment by conducting and participating in due diligence.

Worker engagement supports effective health and safety management. Workers who are adequately communicated to, informed, and trained on health and safety hazards are more likely to adhere to protocols designed to protect their safety. Workers, production staff, and management who are well informed about chemical hazards can support effective management systems to prevent unnecessary exposures. Cisco encourages effective, two-way communication between workers and their management to reinforce best policies and practices for safety.

Cisco's Expectations of Suppliers

At a minimum, suppliers must follow all applicable laws and Occupational Health and Safety regulations in the jurisdictions in which they operate. Suppliers shall maintain robust management systems throughout the entirety of the chemical lifecycle, including processes for evaluating chemicals and exposure risks, chemical onboarding, and safe use and end-of-use phases. Suppliers shall maintain accurate and up-to-date chemical inventories. They are to ensure that hazard information and Safety Data Sheets (SDSs)

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obtained from chemical vendors is both accurate and aligned to the UN Globally Harmonized System (GHS) of Classification and Labelling of Chemicals.

Suppliers shall also follow the National Institute for Occupational Safety and Health (NIOSH) Hierarchy of Controls as a framework for managing exposures. An effective decision-making process and methodology shall be implemented for weighing tradeoffs for cost, quality, and hazard, utilizing controls ranked from most effective (1) to least effective (5): (1) Elimination, (2) Substitution, (3) Engineering Controls, (4) Administrative Controls, (5) Personal Protective Equipment (PPE).

Elimination and Substitution are effective controls that reduce hazards. In alignment with the CEPN's list of Priority Chemicals, Cisco requires suppliers to stop the use of chemical ingredients listed in Table 1 by March 2024.

Table 1: Priority Chemicals to Phase Out from Use During Manufacturing Processes

Chemical Ingredient	CAS Number
Benzene	71-43-2
n-Propyl Bromide (nPB)	106-94-5
Methylene Chloride	75-09-2
Methanol	67-56-1
n-Hexane	110-54-3
N-Methyl-Pyrrolidone (NMP)*	872-50-4
Tetrachloroethylene	127-18-4
Toluene	108-88-3
Trichloroethylene	79-01-6
Ingredients shall not be used in cleaning agents or solvents during production. Concentrations in mixtures must be below GHS reporting values <0.1% or 1000 ppm.	
*Conditional use allowed for photoresist stripping	

Suppliers are to eliminate the use of ingredients in Table 1 through effective design or substitute their use with safer alternatives. Ingredients selected for elimination and substitution will be updated periodically by Cisco. When substituting chemicals, suppliers should rely on hazard assessment frameworks such as GreenScreen® for Safer Chemicals and consult databases such as IC2 Hazard Assessment Database to avoid shifting to chemicals with potentially worse hazards.

Engineering Controls are designed to protect workers by removing hazardous conditions. Suppliers must conduct routine inspections, tests, and maintenance designed to ensure controls operate as intended to prevent disease and injury. Suppliers must have an effective procedure designed to quickly address controls deemed ineffective and investigate worker reports of suspected failures.

Administrative controls and PPE have proven to be less effective than the above measures, transferring risk to workers[1]. For these reasons, we expect suppliers to provide effective training to workers on hazards and how to protect themselves by using well-maintained PPE properly and consistently. Workers must be able to identify and access health and safety information, SDSs, and training in a language they can understand for all workplace hazards they are exposed to. Training is to be provided before potential exposure to hazards and regularly thereafter. Workers shall be able to identify defective or faulty equipment and report health and safety concerns without fear of retaliation.

Suppliers shall routinely test exposure controls in compliance with Occupational Exposure Limits (OELs) set by local jurisdictions and strive towards meeting the most stringent OELs. Health examinations for workers are to be conducted prior to commencing work and at conclusion of employment in accordance with law.

[1] Centers for Disease Control and Prevention, https://www.cdc.gov/niosh/topics/hierarchy/

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Demonstrating and reaching conformance

Suppliers will be assessed for conformance to this policy through due diligence inquiry. If using priority chemicals (see Table 1), suppliers must provide Cisco with documented plans showing elimination or safer substitution will be completed as soon as practicable and no later than March 2024. The supplier is responsible for demonstrating that effective controls are in place and maintained until elimination or substitution is completed. Suppliers unable to demonstrate effective controls are subject to onsite assessment and corrective actions as directed by Cisco.

Cisco is committed enacting policies and procedures designed to improve working conditions and mitigate the potential for harmful impacts. To support management systems, Cisco encourages suppliers to obtain certifications and follow standards outlined by ISO45001 and ILO. As part of due diligence activities, Cisco will engage suppliers in manner designed to identify and mitigate risks. Where needed, Cisco will work with suppliers on training, coaching, and corrective action plan management to build suppliers' capabilities to reach conformance to this policy. Failure to make substantive and prompt efforts to comply with our policy will result in disqualification from consideration for future business with Cisco and may result in termination of existing business.

Additional resources are provided in Table 2 below to help suppliers better understand and meet Cisco's expectations. Should suppliers suspect they are non-conformant to this policy, they are encouraged to inform Cisco and request guidance for addressing, mitigating, and remediating human rights impacts. Inquiries about this policy may be directed to supplychainsustainability@cisco.com.

Table 2. Resources regarding Chemical Management

Reference and Hyperlink
Cisco Supplier Code of Conduct **B4 Industrial Hygiene, C3 Hazardous Substances, C5 Air Emissions, C6 Materials Restrictions**
National Institute for Occupational Safety and Health (NIOSH) **Prevention Through Design (Chemical Use Elimination)**
CEPN Alternative Assessment Guide & Worksheet **Guide & Worksheet for identifying and evaluating chemical substitutions**
CEPN Process Chemicals Data Collection Tool **Template for collecting chemical data from manufacturing facilities**
UN Globally Harmonized System of Classification of Labelling of Chemicals **International standard for communicating chemical hazards**
Treaty on the Functioning of the European Union **The Precautionary Principle**
ILO Guidelines on Occupational Safety and Health Management Systems **Tool for achieving continual improvement in OSH performance**
ILO Chemical Exposure Limits **ILO resource for various country level Occupational Exposure Limits (OELs)**
National Health Commission of People's Republic of China GBZ 2.1-2019 **Occupational Exposure Limits (OELs) set by China**

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