

# Chemical Management Policy

Featherlite is dedicated to upholding the highest standards of environmental care and safety in the handling and use of chemicals within our manufacturing processes. This Chemical Management Policy reflects our commitment to responsible practices that protect human health and the environment.

## Compliance and Oversight

**Regulatory Compliance** Featherlite conducts thorough reviews and compliance checks to ensure the authorized facilities adhere strictly to both local and international environmental health and safety regulations.

**Ethical Standards** We uphold a zero-tolerance policy towards any violations related to human and ecosystem health. Featherlite ensures that all parts of the business are free from any historical or current compliance issues at the time of their integration.

**Implementation of Chemical Management Practices** Featherlite's approach includes detailed plans for the safe management of chemicals through their lifecycle, from procurement to disposal. We focus on:

- Establishing robust systems for chemical inventory management, ensuring safety in storage, usage, and disposal.
- Implementing best management practices that consider global safety standards, including emergency response and risk management protocols.

## Impact Reduction and Continuous Improvement

**Reduction Strategy** our strategic goal is to minimize the environmental and health impacts of chemicals used within our operations.

**Promoting Safer Alternatives** Featherlite is committed to the assessment and adoption of safer chemical alternatives wherever feasible.

Featherlite's Chemical Management Policy is a living document, reflecting our ongoing commitment to environmental responsibility and safe chemical management. We continuously seek to improve our practices through innovation, adherence to global standards, and active engagement with our stakeholders. This policy serves as a cornerstone of our sustainability strategy, guiding our actions and ensuring accountability across all levels of the organization.



**Arune Chellaram**

**Associate Director**

Dated: 27.08.2024

# Chemical Impact Reduction Strategy

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## **1. OBJECTIVE:**

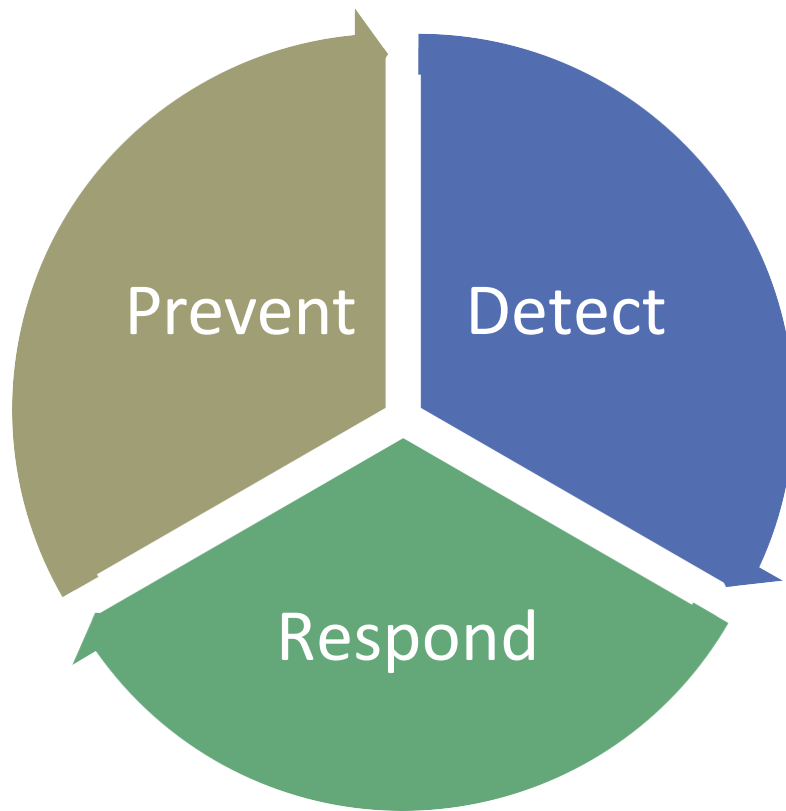
The objective of this document is to identify, assess and understand the probable risks on usage of the chemicals in our products & processes (including manufacturing, operations & Maintenance) and,

The same shall be done in order to eliminate the chemicals which could cause potential hazards in line with Interstate chemicals clearinghouse-Alternate Assessment Guide – Version 1.0

## 2. Definitions

### Chemical Risk Mitigation

Actions and control measures that are put into place to reduce or eliminate the risks associated with the specific chemicals or processes



## Prevent:

Implementation of measures to reduce risks by preventing exposure, release, or theft



## Detect:

System or processes used for early detection of chemical release, exposure, loss, or theft and confirmation techniques to confirm chemical following and incident (whether accidental or malicious)



## Response:

Institution or facility's action (or response) to a chemical incident whether accidental or malicious



## Persistent, bio accumulative, Toxic (PBT)

Chemicals or Persistent organic Pollutants (POP'S) are organic compounds that are resistant to environmental degradation. Because of this they have been observed to persist in the environment, to be capable of long-range transport, bio accumulate in human and animal tissue. Bio magnify in food chains and to have potential significant impacts on human health and the environment.

E.g. DDT

## Endocrine Disruptors (ED)

These are naturally occurring compounds or manmade chemicals that may interfere with the production or activity of hormones of the endocrine system leading to adverse health effects. Many of these chemicals have been linked with developmental, reproductive, neural, immune and other problems in wildlife and laboratory animals.

E.g. DDT

## Reproductive Toxicants (RT)

These are substances that adversely affect the male and the female reproductive systems expressed as alterations in sexual behavior, decreases in fertility, or loss of the fetus during pregnancy.

E.g. Mercury, Poly chlorinated Bi Phenyls (PBC'S)

A **Carcinogen** is a substance that is capable of causing cancer in Humans or animals. If a substance is known to promote or aggravate cancer, but not necessarily cause cancer, it may also be called a carcinogen.

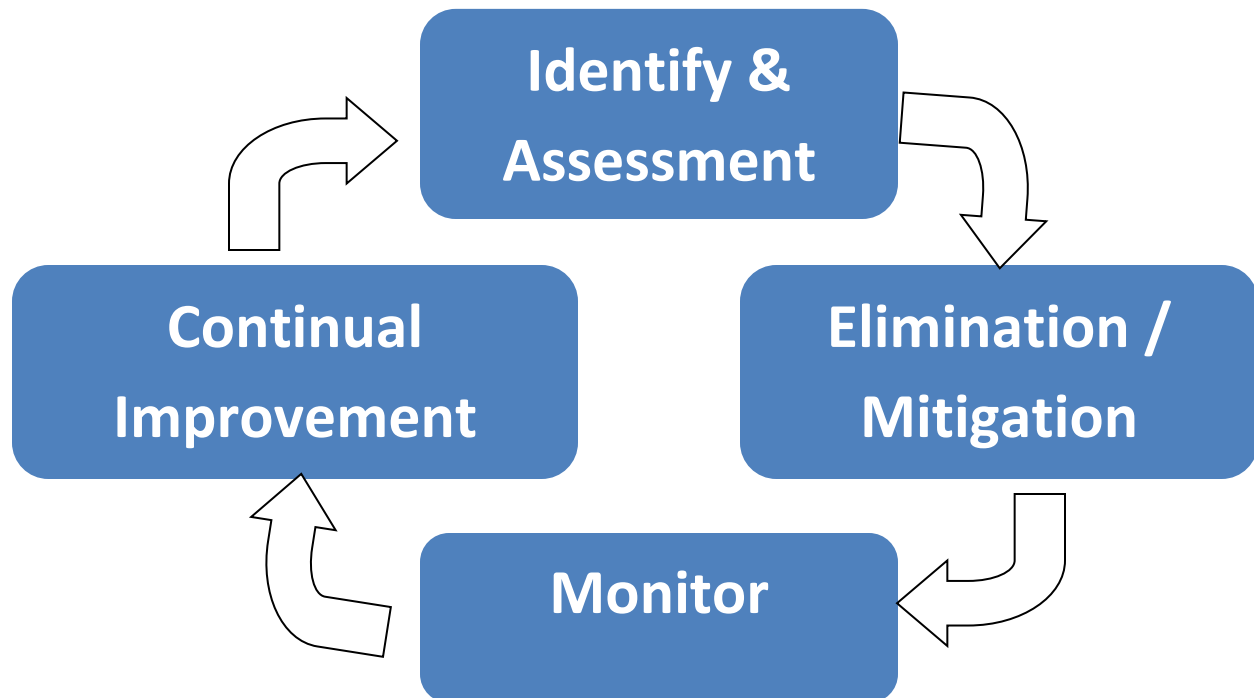
E.g. Pesticides, Tobacco smoke.

## **What is a CAS Registry Number (CASRN)?**

CAS registry Number (often referred to as a CAS Number) is a unique numeric identifier which designates only one substance and link to wealth of information about a specific chemical substance.



## 2. Chemical Risk Management Approach:



### **Mitigation control Measures**

Hierarchy of Controls” has been used by many organization when referring the chemical safety risks. There are five major categories of measures for controlling chemical risks.

1. **Elimination**
2. **Substitution**
3. **Engineering Controls**
4. **Administrative Controls**
5. **Personal Protective Equipment (PPE)**

## Elimination or Substitution:

Removing the hazard by not using/storing/having the chemical or replacing the chemical with something less dangerous.



## Engineering Controls:

Physical changes that isolate people from the hazard



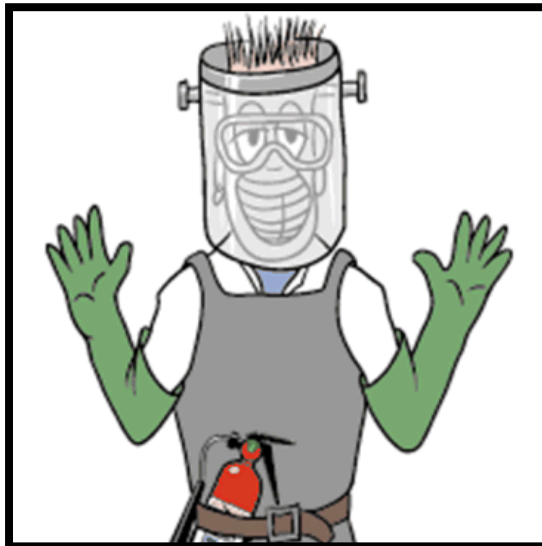
## Administrative Controls:

Policies, procedures, standards and guidelines used to control risks



## Personal Protective Equipment:

Devices worn by the worker to protect against hazards in the laboratory



## Comparison of “Hierarchy of Controls” to Mitigation Measures

Prevent	Detect	Respond
Elimination	Administrative	Administrative
Substitution	Engineering	PPE
Administrative		
Engineering		
PPE		

## 4. Method of Implementation

Featherlite assess the chemicals and choose alternatives as per below steps :

SL NO.	STEP	REFERENCE DOCUMENTS
1	Identify Chemicals of Concern	<ul style="list-style-type: none"> <li>• Purchase data</li> <li>• MSDS</li> <li>• F01 - List of chemicals</li> <li>• F02 – Chemical Assessment - Process/Maintenance/operations</li> <li>• F03 - Chemical BOM</li> </ul>
2	Initial Evaluation	<ul style="list-style-type: none"> <li>• Based on CAS Reg. No. (MSDS)</li> </ul>
3	Scoping	<ul style="list-style-type: none"> <li>• F04 - Chemical Evaluation &amp; Alternate Assessment Form</li> <li>• Continual improvement program based on PDCA Approach Ex. Kaizens</li> </ul>
4	Identification of Alternatives	
5	Evaluate Alternatives	

### 4.1. Identify Chemicals of Concern

All the departments which need the raw materials/ chemicals will place MRS (Material Requisition Slip) to the purchase department, based on the requirement along with the quantity, reason of requirement, etc.,

Purchase department will refer to the approved vendor list for these materials, if the required material is not listed in the vendor list, enquiries are made with competent vendors and quotations are obtained. Also TDS and MSDS may be obtained for all materials.

If the required material is already existing in the purchase register, purchase orders are issued; if not quotations are evaluated from the head of the purchase and MSDS are obtained and negotiated, purchase orders are released after that.

All samples obtained must be identified and should be recorded in the sampling register and

At the time of procurement, purchase department will ensure to follow the legal requirements and maximum threshold limits.

Chemicals of concern are identified through:

Legislative mandate.

☒ Regulation.

☒ Consumer concern.

☒ Business concerns including greening of product line and regulation avoidance.

☒ Corporate or government policies that address individual hazard properties of chemicals, such as carcinogenicity, mutagenicity or reproductive toxicity, or combinations of hazard properties, such as persistence with bioaccumulation potential and/or toxicity (PBT).

☒ Other.

## Ref. Documents :

- Chemical BOM,
- F01 - List of chemicals - Process/Maintenance/operations
- Purchase data
- MSDS

## 4.2. Initial Evaluation

Initial evaluation is carried out on the raw material / chemical and documents whether or not the chemical of concern is truly needed in the product or process. If it is possible to eliminate the chemical of concern without substitution and maintain the function of the product, an AA is not necessary. To documents the information used to reach the conclusion and eliminates the chemical from the product. If, however, the Initial Evaluation indicates that an AA is necessary, then to proceeds to the next step.

## Ref. Documents :

- F01 - List of chemicals - Process/Maintenance/operations - Based on CAS Reg. No.
- F02 – Chemical Assessment - Process/Maintenance/operations

## 4.3. Scoping

Once an Alternate Assessment (AA) is deemed necessary, FOS identifies whether stakeholder involvement would improve the process and, if so, to what degree (level) stakeholders will be involved. And also determines which of the three frameworks is appropriate for the chemical, product, or process under review

### 4.3.1. Frameworks Module:

The Frameworks Module guides practitioners in how to use the results from the other AA modules to identify the best alternatives to chemicals of concern in products or processes of

concern that are feasible and meet the needs of the organization. Three distinct frameworks to decision-making are presented. The module explains how they can be used and the strengths and weaknesses of each method.

FOS determines which of the three frameworks will be appropriate for the AA

## 4.3.2. Sequential Framework

In the Sequential Framework, the modules selected are evaluated in a linear order. Only those alternatives identified as most favorable continue on for evaluation.

The Sequential Framework identifies which modules are recommended for an adequate assessment, along with a proposed order for their implementation.

## 4.3.3. Simultaneous Framework:

In the Simultaneous framework, data are collected on all potential alternatives for each of the selected modules. Once the data are collected, the potential alternatives are compared simultaneously using one of three decision methodologies.

### Ref. Documents:

- **F04 - Chemical Evaluation & Alternate Assessment Form**
- **Continual improvement program based on PDCA Approach Ex. Kaizens (Doc # FOS-MR-04)**

## 4.3.4. Hybrid Framework

In the Hybrid Framework, both the Sequential and Simultaneous Frameworks are used. Potential alternatives are first screened through a limited number of modules using the Sequential Framework. The remaining pool of alternatives is then compared using the Simultaneous Framework.

Note: During implementation, refer & follow as detailed in standard “Alternatives Assessment Guide, version 1.0”

## 4.4. Identification of Alternatives

Alternatives may include chemical substitutions, alternative materials, or products redesign OR process modification or redesign, eliminating the need for a chemical. At this point, the widest range of possible alternatives is researched, including emerging technologies.

If there are many potential alternatives, an initial screen using lower levels of the Hazard Module and the Performance Evaluation Module can help screen out less favorable alternatives saving time and resources. Otherwise, all of the alternatives identified in the Identification of Alternatives Module should undergo evaluation. The number of alternatives to evaluate will

typically narrow through the process of evaluation, based on technical, economic, health and safety, and other considerations.

## Ref. Documents:

- F04 - Chemical Evaluation & Alternate Assessment Form
- Continual improvement program based on PDCA Approach Ex. Kaizens (Doc # FOS-MR-04)

## **4.5. Evaluate Alternatives**

Evaluation of alternatives should be based on Hazard, Performance Evaluation, Cost and Availability, and Exposure Assessment modules in that order.

### **Hazard Module:**

The Hazard Module helps the assessor determine what hazards exist for the chemical of concern in a product or process. The hazards associated with the chemical of concern are compared to those, if any, associated with potential alternatives. As a result of this evaluation, the most favorable alternatives are identified, i.e., those with the lowest hazard. These most favorable alternatives proceed to further evaluation.

### **Performance Evaluation Module:**

The Performance Module helps the assessor ensure that the alternatives considered are technically feasible for the desired application and that the product meets performance requirements. Without this assurance, companies are unlikely to adopt specific alternatives as safer alternatives for their products or processes.

### **Cost and Availability Module:**

The Cost and Availability Module helps the assessor evaluate whether potential alternatives are price competitive and available in sufficient quantity to meet manufacturing needs. Any alternative that is not found both in sufficient amounts and at an adequate price should be identified as a less favorable alternative. The Cost and Availability Module also helps the assessor identify life cycle costs, i.e., costs that are transferred from one phase to another in the product life cycle.

### **Exposure Assessment Module:**



The Exposure Assessment Module evaluates potential exposure scenarios and determines whether the alternative poses a greater exposure risk to human health and the environment than the chemical of concern. It is used after the Hazard Module to reduce risk. By applying hazard screening first, one can narrow down the options to those that represent the lowest risk as having both the lowest hazard AND lowest exposure potential. These are preferred alternatives.

At this point, FOS should also identify which, if any, of the optional assessment modules to include in the AA. Selection of optional modules is left to the assessor although these decisions need to be documented and transparent. The three optional modules include:

## **Materials Management Module:**

The Materials Management Module evaluates how a potential alternative will impact natural resources and generate both hazardous and non-hazardous waste. Designing products for material recovery and/or benign release into the environment can lead to systemic solutions. This module emphasizes alternatives that can further the concept of 'Cradle-to-Cradle' design.

## **Social Impact Module:**

The Social Impact Module evaluates whether a potential alternative will unduly shift burdens (or benefits) from one community of people to another. It evaluates impacts of an alternative to workers, communities, and societies involved in its manufacture, transport, use, and disposal.

## **Life Cycle Module:**

The Life Cycle Module provides additional information to decision makers on issues, topics, and impacts not addressed in other modules. The Life Cycle Module is used after the Performance Evaluation, Hazard, Cost and Availability, and Exposure Assessment modules to gather relevant information about the entire product life cycle. The use of life cycle thinking can support selection of alternatives and help avoid the shifting of impacts across the life cycle.

## **Ref. Documents:**

- **F04 - Chemical Evaluation & Alternate Assessment Form**
- **Continual improvement program based on PDCA Approach Ex. Kaizens (Doc # FOS-MR-04)**

## 5. INFERENCE:

Once the selected framework has been decided and the modules applied, the result identifies one or more favorable alternatives. If multiple favorable alternatives are identified, selection of which alternative to employ is left to the FOS. If, however, no favorable alternative remains, it may be necessary to return to previous decision points and evaluate alternatives that were binned as less favorable.

The document post assessment is updated and maintained in “List of Chemicals” wrt following categories -

- Manufacturing / process
- Maintenance / operations
- Housekeeping

### Ref. Documents:

- **F02 – Chemical assessment summary**
- **F04 - Chemical Evaluation & Alternate Assessment Form**
- **Continual improvement program based on PDCA Approach Ex. Kaizens (Doc # FOS-MR-04)**

### **Note:**

During implementation, refer & follow as detailed in standard “ICC - Alternatives Assessment Guide, version 1.0”