

# Conditions of Use and Occupational Exposure Scenarios

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# Defining Condition of Use

## What is a Condition of Use (COU)

- TSCA § 3(4) defines the conditions of use as “the circumstances, as determined by the Administrator, under which a chemical substance is intended, known, or reasonably foreseen to be manufactured, processed, distributed in commerce, used, or disposed of.”
- Broad categories that may apply to any part of a chemical’s lifecycle (from manufacturing to disposal)
- Each chemical has its own set of COUs, and the number of COUs a chemical has can vary from less than 10 to dozens
- e.g. Manufacturing, Cleaning and Degreasing Product, Distribution, Lubricant

# Where COUs come from

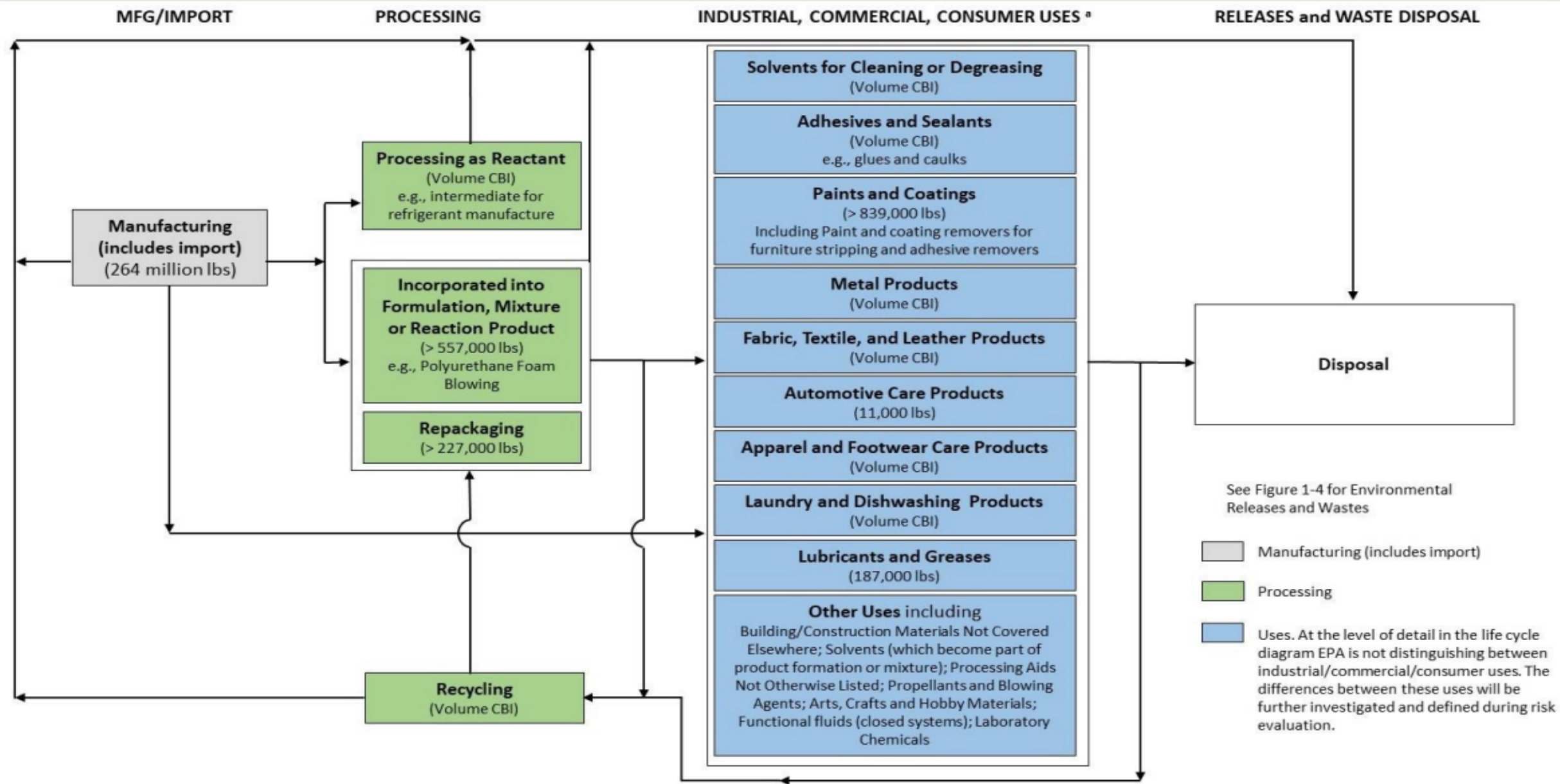
## How EPA gets Information on a Chemical's COUs

- Chemical Data Reporting (CDR)\*, Toxic Release Inventory (TRI)\*\*, government and commercial trade databases, publications, industry websites and groups, safety data sheet databases, mass balances, and public comments.
- TSCA Section 3(4) grants EPA discretion to determine the circumstances that are appropriately considered to be conditions of use for a particular chemical substance.
- TSCA Section 3(2) excludes food, drugs, cosmetics, devices, and pesticides

\*<https://www.epa.gov/chemical-data-reporting>

\*\*<https://www.epa.gov/toxics-release-inventory-tri-program>

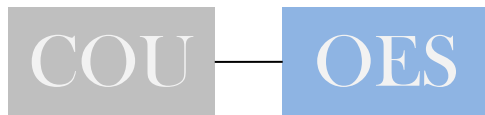
# Example Life Cycle Diagram for Semi-volatile



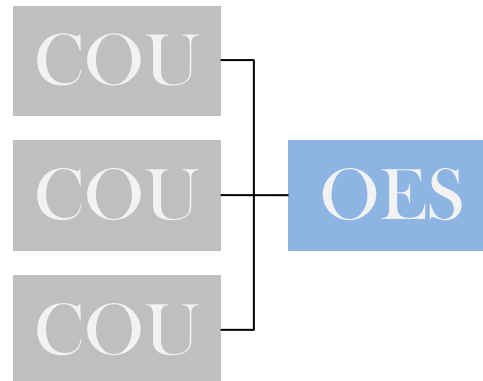
# Occupational Exposure Scenario (OES) and Mapping to COUs

- COUs are critically reviewed to determine potential occupational exposure scenarios (OES)
- Establishing OESs helps conceptualize and organize types of exposure to make clear what information is needed for assessing risk
- Mapping COUs and OESs is an essential step in an occupational exposure evaluation and can come in a few forms:

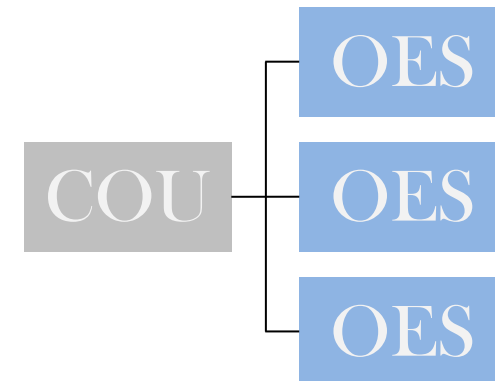
Possibility 1



Possibility 2



Possibility 3



# Example Crosswalk for Semi-volatile

**Table 1-1. Crosswalk of Conditions of Use to Occupational Exposure Scenarios Assessed in the Risk Evaluation**

Life Cycle Stage	Category <sup>a</sup>	Subcategory <sup>b</sup>	Assessed Occupational Exposure Scenarios
	Repackaging	Unknown function for oil and gas drilling, extraction, and support activities	Section 2.4 – Repackaging
		Solvents (which become part of product formulation or mixture) for all other chemical product and preparation manufacturing	
		CBI functions for all other chemical product and preparation manufacturing	
	Recycling	Recycling	Section 2.20 – Waste Handling, Disposal, Treatment, and Recycling
Distribution in commerce	Distribution	Distribution	Section 2.4 – Repackaging
Industrial, commercial and consumer uses	Solvents (for cleaning or degreasing) <sup>d</sup>	Batch vapor degreaser (e.g., open-top, closed-loop)	Section 2.5 – Batch Open-Top Vapor Degreasing
		In-line vapor degreaser (e.g., conveyORIZED, web cleaner)	Section 2.6 – ConveyORIZED Vapor Degreasing
		Cold cleaner	Section 2.7 – Cold Cleaning
		Aerosol spray degreaser/cleaner	Section 2.8 – Commercial Aerosol Products (Aerosol Degreasing, Aerosol Lubricants, Automotive Care Products)
	Metal products not covered elsewhere	Degreasers – aerosol and non-aerosol degreasers and cleaners e.g., coil cleaners	Section 2.8 – Commercial Aerosol Products (Aerosol Degreasing, Aerosol Lubricants, Automotive Care Products)  Section 2.19 – Miscellaneous Non-Aerosol Industrial and Commercial Uses

# Challenges with COU/OES Mapping

## **Challenge 1: Identification of significant COUs and OESs**

- Opportunity – earlier or regular engagement with industry groups during risk assessment

## **Challenge 2: Required level of “resolution” with COUs and OESs (identifying, sorting, and handling “minor” uses and exposure scenarios)**

- Opportunity – development of clear decision logic for determining which COUs/OESs are assessed.

## **Challenge 3: Development of good process descriptions**

### **a. Understanding the chemical properties and behavior during the use**

- Opportunity - earlier or regular engagement with industry groups during risk assessment

### **b. Knowledge of safety controls in place**

- Opportunity – development of survey of industry practices, or regular engagement during risk assessment

### **c. Knowledge of worker behavior**

- Opportunity - utilization of studies and models on these topics