

SDSs in the Wild

SCHC 2023 Annual Meeting

Set the Stage



Gather all the information



SDS is done!



Out it goes, into the WILD

SDSs in the Wild

Workplace – HazCom – Employer Basics and Practical Perspective

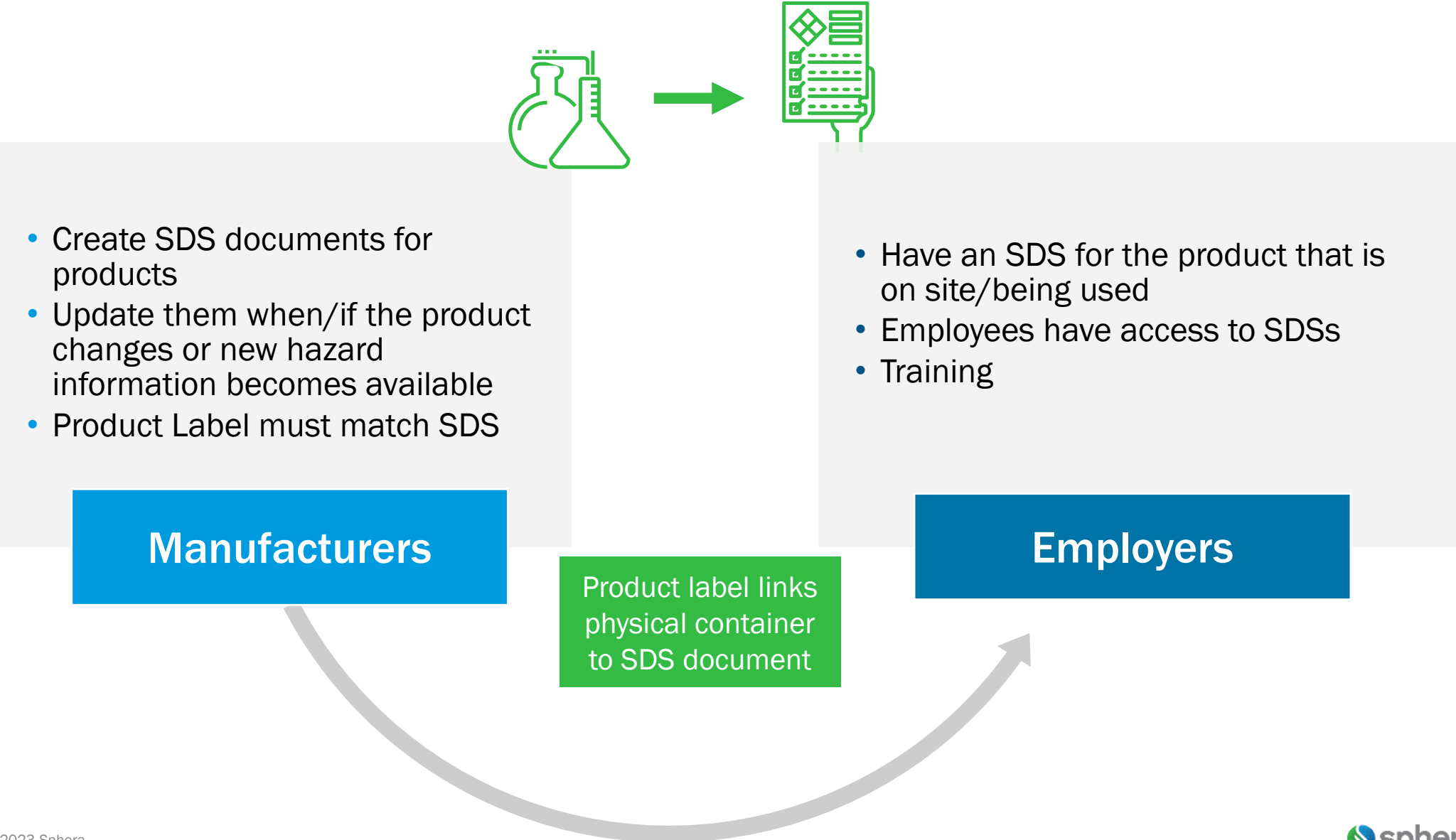
Workplace – Other Uses

Compliance with other regulations

Consumer use

Product Stewardship – using raw material SDSs

Workplace – HazCom



Practical Implications for SDSs – Manufacturers & Employers

SDS UPDATE DRIVERS  →



EMPLOYER
PERSPECTIVE



Product label links physical container to SDS document. **Product Label must match the SDS.**

Internal

- Business process change/
Business decisions
- Composition change (reformulation)
- Merger/Acquisition/Rebranding

External

- Change to regulations
- Classification changes from new data
- Composition change
(raw material change)

Workplace – Employee Exposure Records

- **1910.1020 – Employee exposure records** – SDS being retained for 30 years can be one aspect of compliance for this requirement.
- SDSs (and their predecessor MSDSs) – can live a long time!
 - *An MSDS from 1993 may still be on file for record keeping purposes. Could be referenced in some situations.*

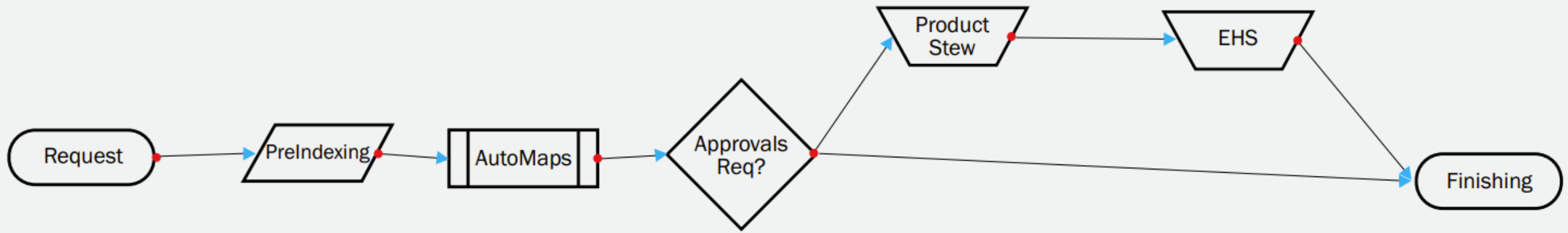
Material Safety Data Sheet		U.S. Department of Labor		
May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.		Occupational Safety and Health Administration (Non-Mandatory Form) Form Approved OMB No. 1218-0072		
IDENTITY (As Used on Label and List)		Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.		
Section I				
Manufacturer's Name		Emergency Telephone Number		
Address (Number, Street, City, State, and ZIP Code)		Telephone Number for Information		
		Date Prepared		
		Signature of Preparer (optional)		
Section II – Hazardous Ingredients/Identity Information				
Hazardous Components (Specific Chemical Identity, Common Names)	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Section III – Physical/Chemical Characteristics				
Boiling Point		Specific Gravity (H ₂ O = 1)		
Vapor Pressure (mm Hg)		Melting Point		
Vapor Density (AIR = 1)		Evaporation Rate (Butyl Acetate = 1)		
Solubility in Water				
Appearance and Odor				
Section IV – Fire and Explosion Hazard Data				
Flash Point (Method Used)	Flammable Limits	LEL	UEL	
Extinguishing Media				
Special Fire Fighting Procedures				
Unusual Fire and Explosion Hazards				
(Reproduce locally)				
OSHA 174, Sept. 1985				

Workplace – Industrial Hygiene (IH)

Information provided on the SDS is consulted for IH evaluations for the workplace scenario being evaluated:

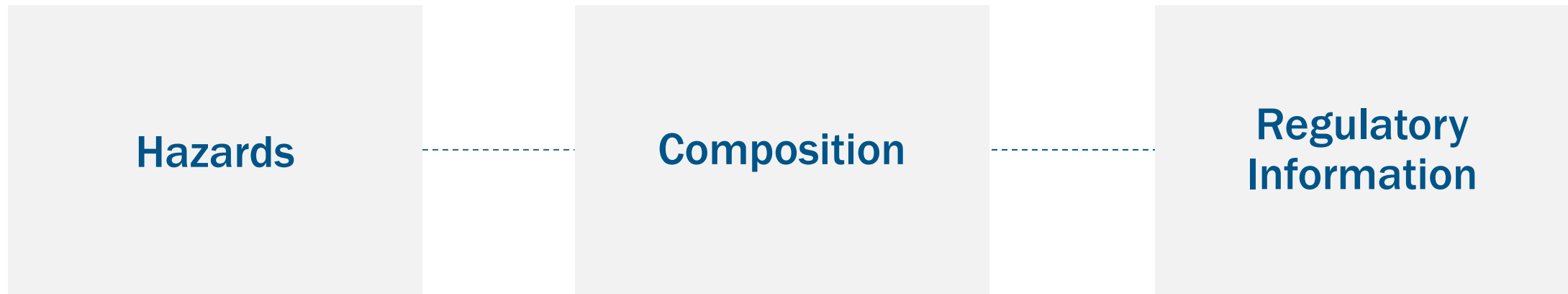
- Exposure limits in section 8 as a component of exposure monitoring
- Ventilation
- PPE
- Hazards & Composition are also critical to IH evaluations





Workplace – Screening/Approval

SDSs provide inputs to this process:



Workplace – Emergency Response



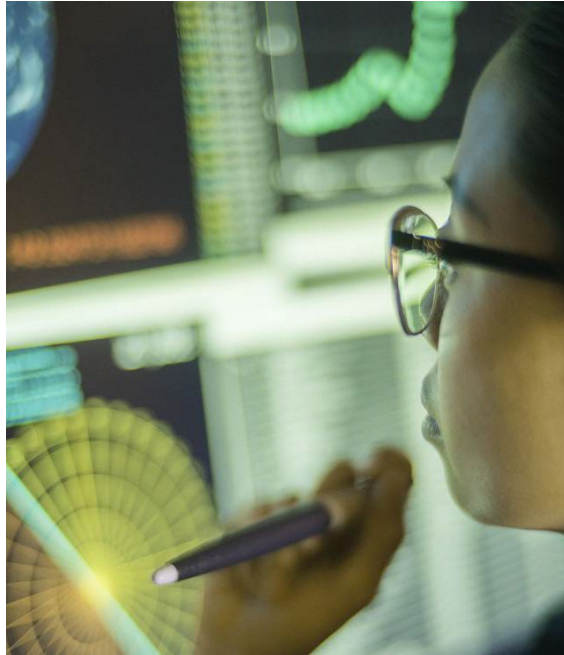
On Site



Off Site



Planning



Other Compliance Efforts

Prevention/planning for accidents

Environmental Reporting

Understanding impacts of a new or updated regulation

Inventory Status



Prevention/Planning for Accidents & Environmental Reporting

Scenario:

For a specific substance identified in the regulation

- IF the substance is present at a facility above a certain quantity, then something must be done like a report submitted (with or without associated fees based on quantity present), an evaluation done or some action taken.

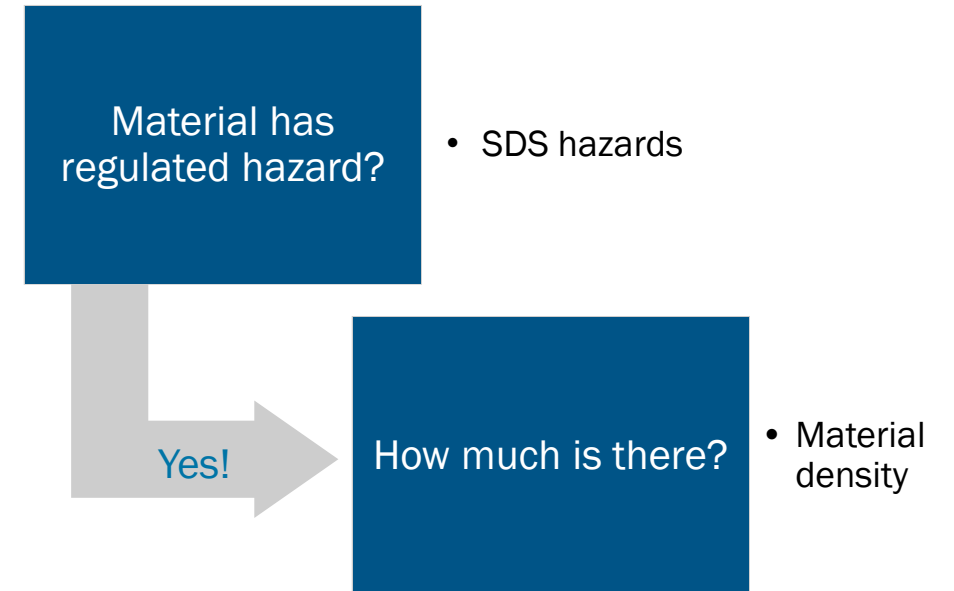
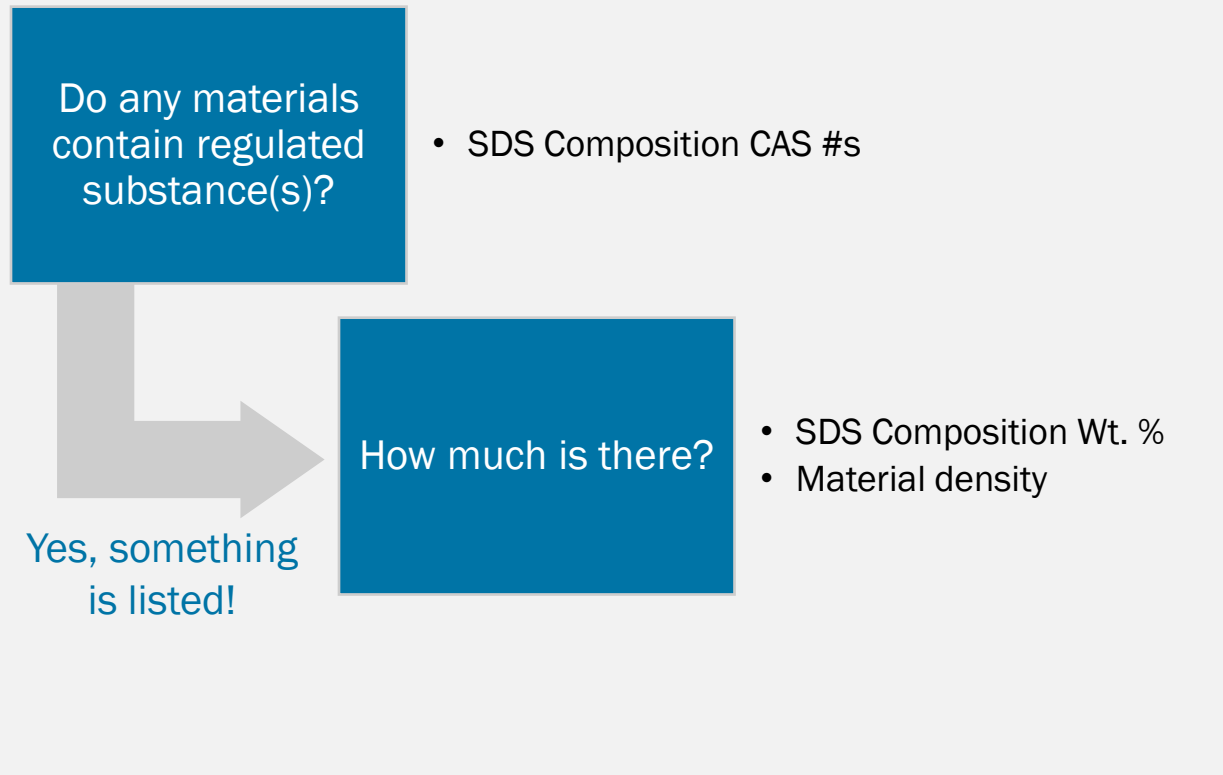
Another similar scenario:

For hazardous materials OR a material with a particular classification identified in the regulation

- IF the material is present at a facility above a certain quantity, then something must be done like a report submitted (with or without associated fees based on quantity present), an evaluation done or some action taken.

Where does the SDS come in here?

Scenario Process – How Does the Facility Determine They Have to Act?



An Example Scenario

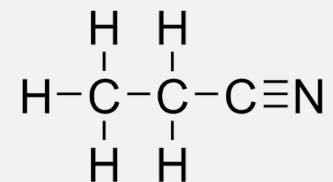
SDS Composition:

Kaolin	1332-58-7	= 1 % To = 5 %
Cellulose	9004-34-6	= 1 % To = 5 %
Calcium hydroxide	1305-62-0	= 1 % To = 5 %
Propionitrile	107-12-0	= 35% To = 50 %
Carbon black	1333-86-4	= 1 % To = 10 %
Graphite	7782-42-5	= 1 % To = 10 %
Mica	12001-26-2	= 1 % To = 5 %
Talc	14807-96-6	= 1 % To = 5 %
Phenol-Formaldehyde polymer	9003-35-4	= 30 % To = 40
Methenamine	100-97-0	= 1 % To = 5 %
Coal, anthracite	8029-10-5	= 1 % To = 5 %

On site: present at a maximum amount at any one time of *350 gallons* during the year

Material density: 9.12 lbs/gallon

Classification: Eye Irritation 2, Germ Cell Mutagenicity 2, Skin Irritation 2, Skin Sensitization 1, Specific Target Organ Toxicity Repeated Exposure 2



Propionitrile:

- Is a regulated substance
- Threshold = 1500 lbs.

Scenario – the Calculations & Outcome

Propionitrile: Threshold = 1500 lbs.

Propionitrile	107-12-0	= 35% To = 50 %
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- Amount on site: 350 gallons
- Material density: 9.12lbs/gal

STEP 1: Convert 350 gallons to pounds

350 gallons*9.12lbs/gal = **3192 lbs** of the material which contains Propionitrile on site

STEP 2: Determine amount of the substance present

Min (35%)	Mean (42.5%)	Max (50%)
0.35*3192	0.425*3192	0.5*3192
1117 lbs.	1356.6 lbs.	1596 lbs.

STEP 3: Compare to threshold

	Min (35%)	Mean (42.5%)	Max (50%)
Amount of Propionitrile	1117 lbs.	1356.6 lbs.	1596 lbs.
Propionitrile threshold: 1500 lbs.			
Result	Not reportable	Not reportable	Reportable

Actual percentage of propionitrile = 37% (1181 lbs.).
 More precise information makes this not reportable.
 Companies are making business decisions on how to use this information: Do we use min, mean or max to report, OR do we get better formulation data?

Understanding Impacts of a New or Updated Regulation

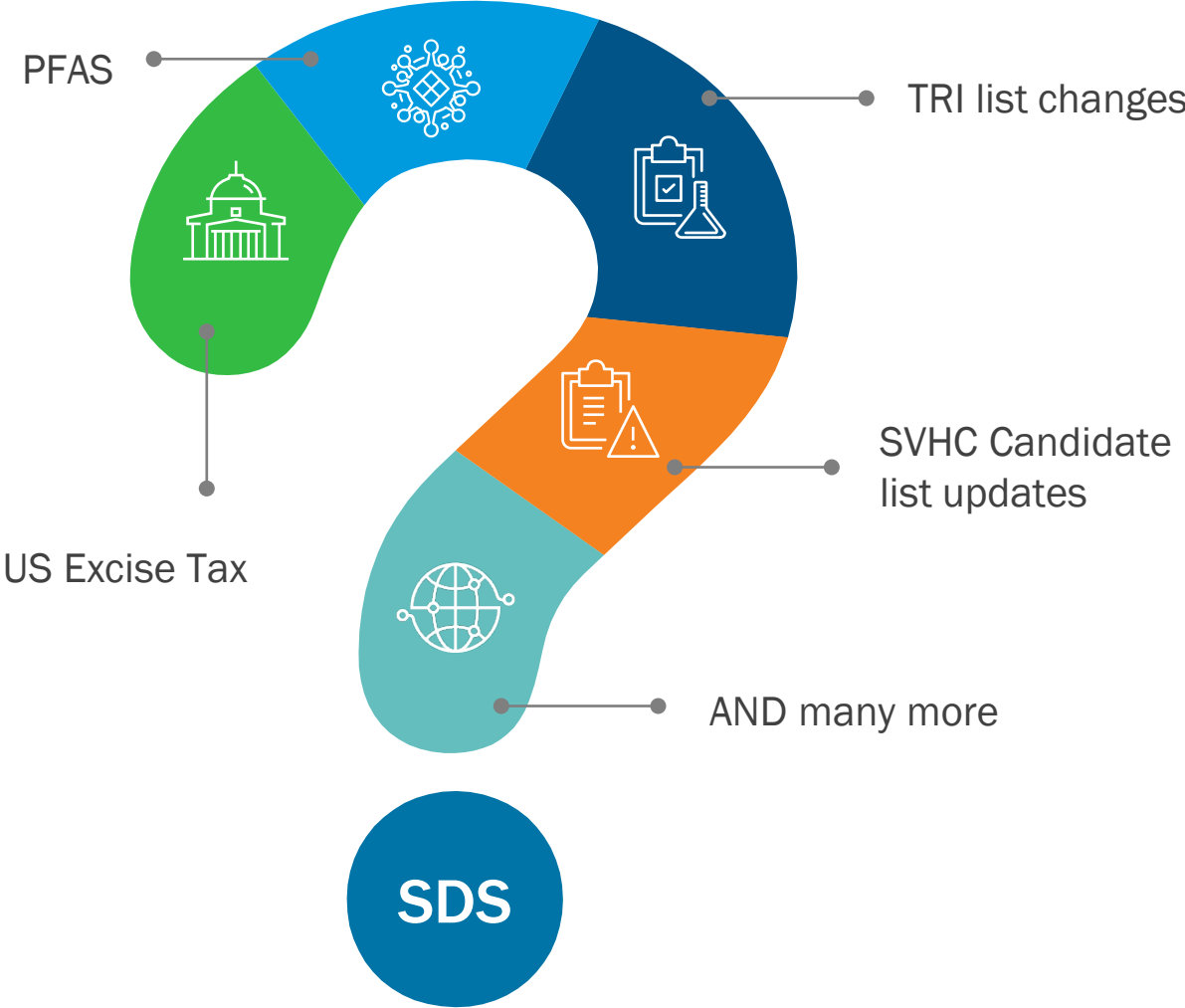
Are we/will we be impacted?

Scenario:

New final or draft regulation publishes.

Director asks:

“Does this impact us? Any gaps for us?”



SDS composition is a place to start



Inventory Status



Manufacturers must be concerned with inventory status too

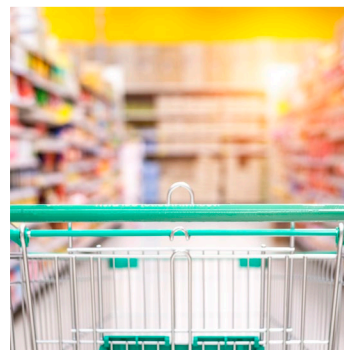


SDSs don't have complete composition



Refer to section 15 for inventory compliance status

Consumer Use



SDS not required

People know about them



Increased consumer scrutiny

Product Stewardship – Use of SDSs for Product Compliance

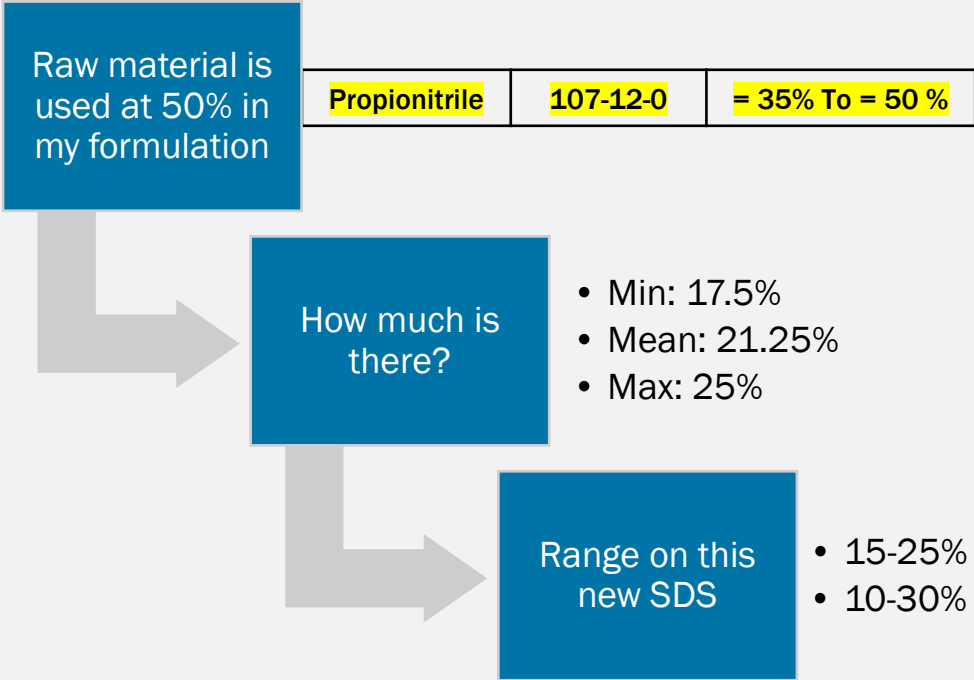


Product Development
Evaluating a new raw material.

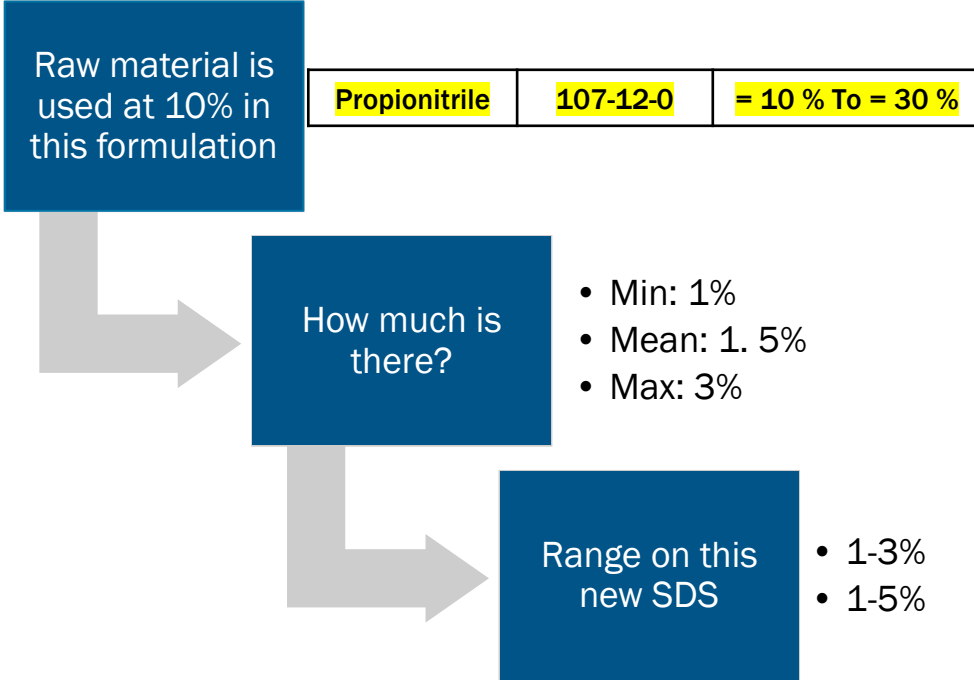


SDS Authoring
Raw material Composition

Scenario – Raw Material SDS Use – a Game of Telephone

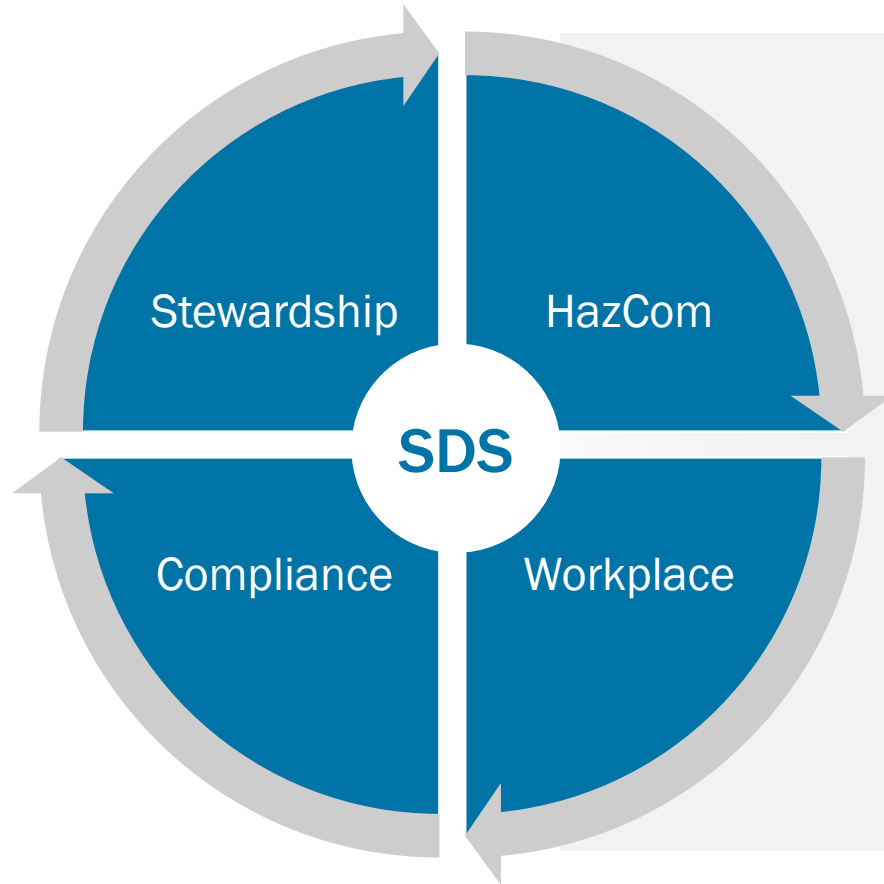


Actual percentage in this material = 18.75



Actual percentage in this material 1.875

Concluding Thoughts



- ☑ Last forever...
- ☑ Essential document for many aspects of compliance and doing business (beyond hazcom).
- ☑ Used for so much more than their required or intended purpose



Questions?



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