



Intel Material Supplier EHS Expectations Training

Supply Chain Ramp and Regulations



Disclaimer: The facts and scenarios presented are based on the currently available information. Global regulatory expectations are evolving, and as they do we will engage with the supply base to review any new requirements and/or expectations.

Acknowledgments: Intel Materials Risk Assessment Team - ATGM, PE EHS, TD EHS, Corporate EHS

Company Vision

“If it is smart and connected, it is best with Intel.”

Company Mission

“Utilize the power of Moore’s Law to bring smart, connected devices to every person on Earth.”

Objectives

At the end of this class you should:

- Understand why Intel is requesting information on suppliers related to EHS
- Know how to meet Intel's expectations
 - Information disclosure: What/when/how
 - Change management

Key Topics

- Background and Motivation
- Types of Materials in Scope
- Information required
 - As a function of stage in the development cycle of at Intel
 - Based on type of material
 - Method for disclosing and protecting supplier IP
- Examples
- Resources

Background and Motivation

Predictable Silicon Track Record

Executing to Moore's Law

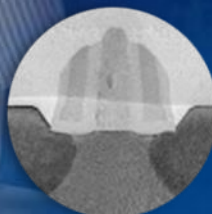
Enabling new devices with higher functionality & complexity while controlling power, cost, and size



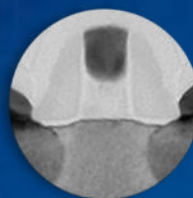
180 nm
1999



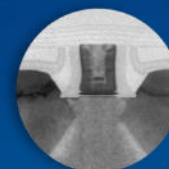
130 nm
2001



90 nm
2003



65 nm
2005



45 nm
2007



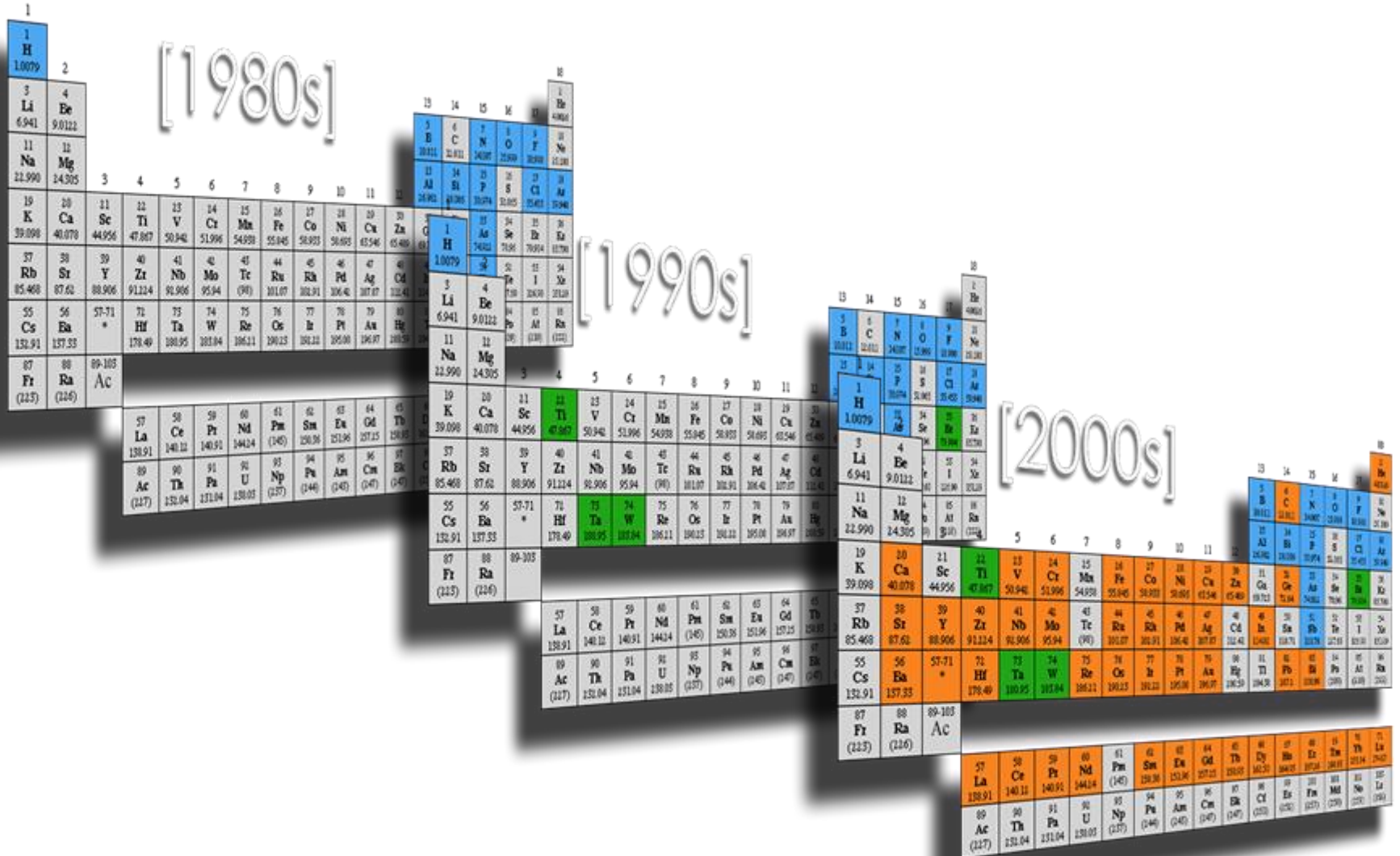
32 nm
2009



22 nm
2011

New Chemistry Challenges --

From SEMATECH (Semiconductor Manufacturing Technology)

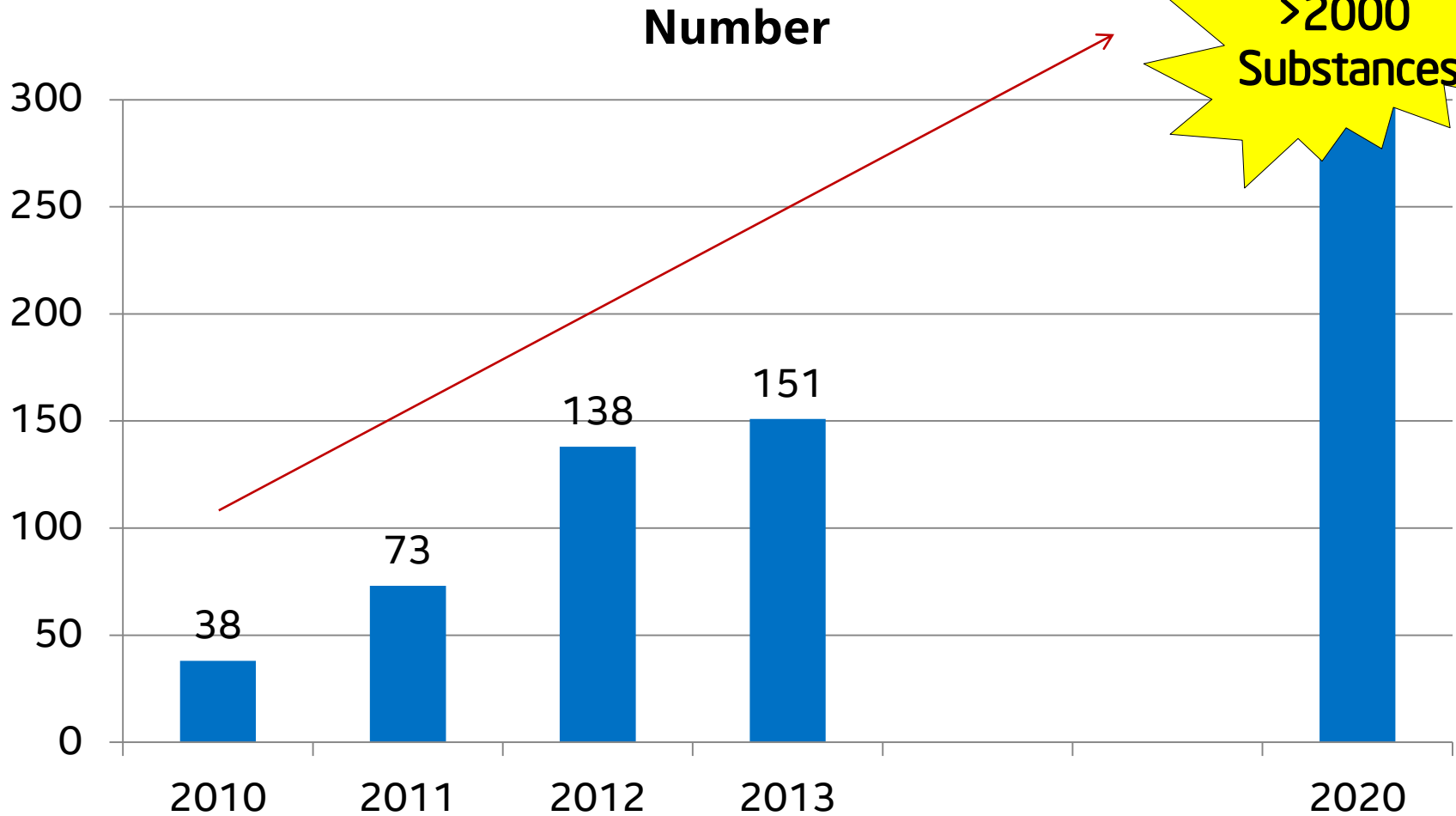


EHS Global Regulations – Increasing



- Un GHS
- UN Convention on Persistent Organic Pollutants
- UN Strategic Approach to Chemicals Management
- UN/OECD Due Diligence Guidance for "conflict minerals"

New Materials continually added to Candidate Lists = "Black List" for some (EU)



How do we use the information provided?

To assess and mitigate risks to our:

- Supply chain
 - Ensure we can procure needed materials
 - Ensure we can legally receive/use the material in each manufacturing site
- Manufacturing processes
 - Ensure we have the controls in place in our factories to protect our people and the environment
- Final Products
 - Ensure our products meet the regulatory requirements of each country we ship/sell to
- Note – We also help to enable Innovation by influencing legislation to “make sense” while maintaining protection of human health & the environment

Type of Materials in Scope

Regulations Can Apply More Broadly than to the “CHEMICAL” Itself

All substances on their own



Substances in mixtures



Substances in Articles



Chemicals: Single Substance or Mixture

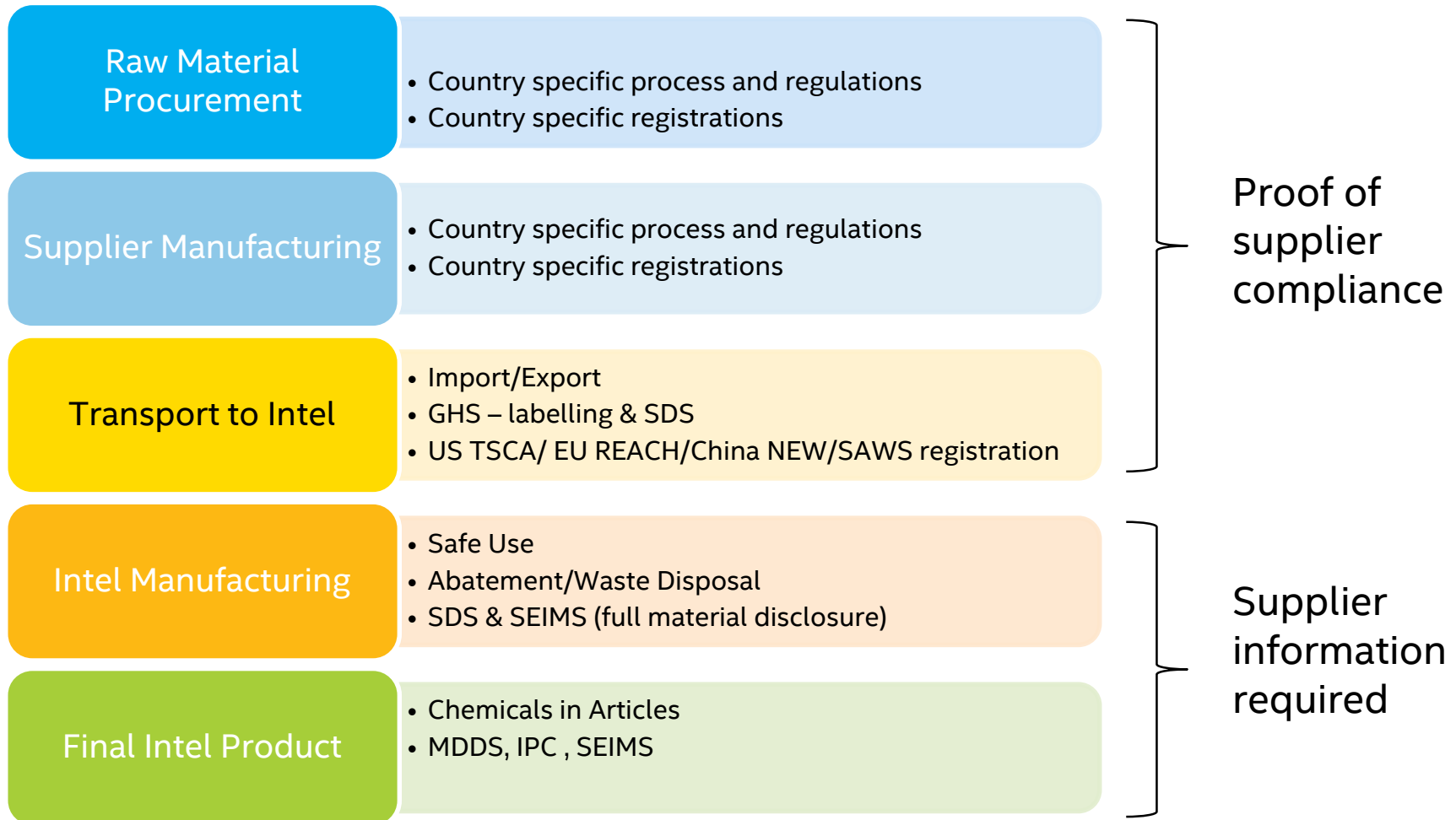
- Types
 - Liquid chemicals (i.e. sulfuric acid, photoresists)
 - Gases (i.e. silane, diborane)
 - Solders, Pastes, Underfill
 - Precursors
 - Metal targets & Anodes
- What needs to be done depends on the hazard of the substance
- Definition: Hazardous is any chemical that is classified as a health, physical, environmental hazard – any other “equivalent” level of concern

Articles

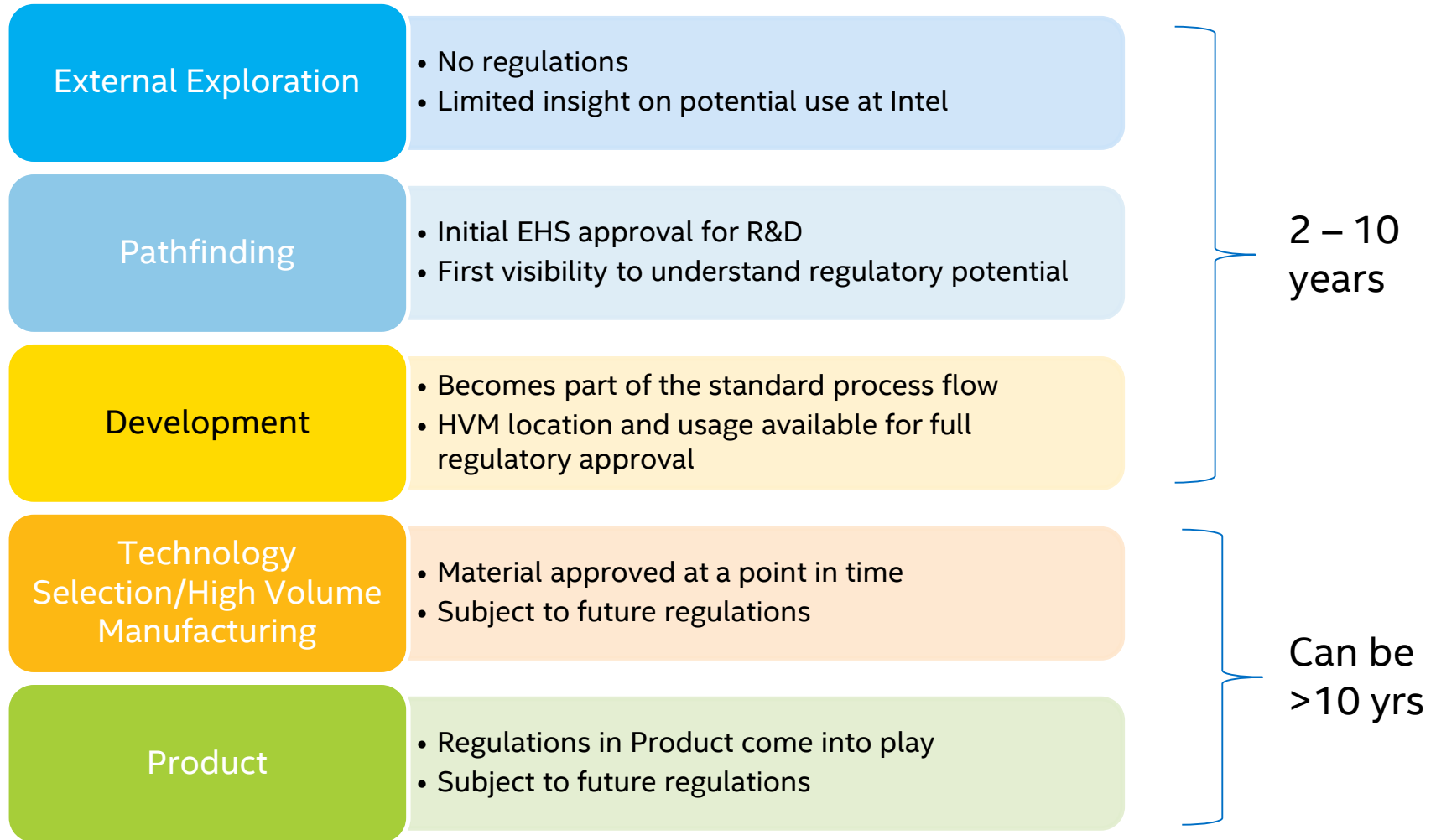
- Types - Boards, Substrates, CPUs, cables
- What needs to be done depends on the “hazard” listing of the substances within, how much, if released, etc..
- Definition: An "article" means a manufactured item: (1) which is formed to a specific shape or design during manufacture (2) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (3) which does not release, or otherwise result in exposure to, a hazardous chemical under normal conditions of use

Determining Regulatory Requirements, Information Disclosure and Timing

Goal: Ensure regulatory requirements are met at each stage of the material lifecycle



Balance the information requests with potential impact



Material Types & Information Required

	(M)SDS	IP DATA (SEIMS)	Complaint Container label	Regulatory Declaration	IPC 1752 (MDDS) or IEC 62474	Examples
Chemicals (not in Final product)	X	X	X	X		Acetone, Wafer coat, Fluorinert
Chemicals in final product	X	X	X	X	X	Underfill, paste, solders, Thermal interface material
Articles (in final product)	X (sub-components)	X		X	X	Substrates, capacitors, heat spreaders


Intel's Material Selection Phases and EHS Needs

Material Selection Phase	What EHS information is needed	Why
External Exploration	None – Understand what would be required	No surprises if selected
Pathfinding & Development	Safety Data Sheet for R&D chemical IP data for parts in final product OR Negative declaration to Intel's Product Ecology Watch list or IP data	Basic understanding of materials
Technology Development	Safety Data Sheet (SDS) for chemicals if different than R&D	Basic understanding of materials
(leading candidates)	Early Timeline for SEIMS (IP data) request	Full understanding of materials
(leading candidates)	Declaration that all chemicals will meet country regulatory requirements (TSCA, MEP, MOH, SAWS...)	Required to legally import/use
(materials selection)	Material Declaration Data Sheet (MDDS), IPC or IEC for articles	Full understanding of final product
	Updated MDDS, IPC or IEC if needed	

SEIMS

REG

Intel's Material Selection Phases and EHS Needs

Material Selection Phase	What EHS info is needed	Why
Technology Selection	Updated SDS with exact/new chemical name Container label that matches SDS	Required by law; ensures basic HAZCOM
	Additional Test Data upon request	Meet Customer requirements
	IP data into SEIMS – REQUIRED	Understand full material risk
	Conflict minerals requirements 	Intel can be conflict free
Material Selection /HVM	SDS's and labels to match for each material in all languages where used	Required by each country to have SDS/Label in native language – basic HAZCOM
	IP data into SEIMS if not done so	Understand full material risk
	Final declaration that Country specific registrations , regulatory requirements complete	Ensure we can legally use material in each country

Note – Intel would like ALL SDS & Labels to be in the GHS format for Pathfinding, Development & HVM



Change Management

What if a Material Changes?

- Material Changes must be managed using Intel's white paper system
- Any change to a Container LABEL must be done through a Level 5 white paper (Fab materials), Assembly Materials: Class 3 or 4 white paper for ATGM
- Any updates to an existing SDS must be submitted to Mailbox - Intel_MSDS@intel.com
- Keep up to date with Changing Global Regulations that could impact your products
 - May have to notify Country Regulators of certain changes

Lessons Learned – Continuous Areas of Improvement

Common Supplier EHS Issues - SDS's

- Missing Country specific address in section 1
- Ingredients in section 2 do not add up to 100 percent
- Product Identifier does not match container label
- SDS's not provided in native language
- Over classified or misclassified
- SDS information “conflicts” with label
- SDS updates not sent to Intel Mailbox

Common Issues continued – Labels

- No HAZCOM label
- Not all “Containers” are labelled
- Label in English ONLY when need to be in Spanish, Chinese, Baha, Vietnamese
- Product Name on label does not match Product Identifier on SDS
- Label not in GHS required format
- Label missing basic required information
- Label different than label elements specified in Section 2 of SDS



?

Common Issues continued – Other

- SEIMS data is missing
- Inputted SEIMS data does not list specific percentages
- Supplier regulatory declarations do not specify TSCA exemptions
- Supplier regulatory declarations are incomplete



Summary

Summary – Supplier Requirements

- Correctly Classify your materials
- Provide “compliant” SDS’s to Intel in all required Languages (GHS preferred)
- Label ALL Chemical containers with “complaint” label in all languages (GHS preferred) that MATCH SDS
- Have a legal entity or an Only Representative in each country of Export
- Register/Notify chemicals in all countries of export as required
- Provide regulatory declarations to Intel for each country of import/export
- Provide full disclosure of materials (SEIMS)
- Provide MDDS, IPC, EPC information

Summary

- Understand Intel EHS Requirements
- Understand and comply to ALL country regulations where products may need to go
- Go to <https://supplier.intel.com/supplierhub/>
- Become familiar with Intel's EHS policies and procedures for the supply chain
- Be proactive- understand upcoming worldwide regulations that impact your materials



Thank You & Questions

Backup/Detail

GHS – Labels & SDS

What is GHS ?

GHS = Global Harmonized System of Classification and Labelling of Chemicals

- The NEW HAZARD COMMUNICATION
- Worldwide initiative to promote standard criteria for classifying chemicals
- System uses pictograms, hazard statements, and the signal words “Danger” and “Warning” to communicate hazards on
 - Supplier product container labels
 - Supplier safety data sheets
- Primary goal of GHS is better protection of human health and the environment



Country Specific GHS Status & Implementation – Phased in

- Each Country has a regulatory agency and regulation that “implements” the “GHS” requirements
 - Example - US – Occupational Safety & Health Administration (OSHA) through 29 CFR 1910.1200 - HAZCOM Standard

Site	Implementation	Links
China	Completed May'11 New***: China published new std adopting UN GHS Rev 4; implementation date is Nov 2014	
CR	6mths transition after standard is released. Likely April'13 (waiting for standard to be released- it's past due)	Draft. Last signature. No mention of change to the draft copy. Did not receive clear understanding of the enquiry to MOH (classification and small packaging enquiry). 2 nd follow up will be done.
VN	Effective March'12. (Now). Due May'14 for substances and May'16 for mixtures	http://www.moit.gov.vn/vn/Pages/Vanbanphapluat.aspx Circular No. 04/2012/TT-BCT Decree No. 108/2008 and Circular 28/2010/TT-BCT
US	Effective , March 26'12. (Now) Due June'15 for substance and mixture.	http://www.osha.gov/dsg/hazcom/index.html Hazard Communication Standard (HCS)
Msia	Released Oct'13: 1 year implementation	http://www.dosh.gov.my/index.php?option=com_content&view=article&id=994:peraturan-peraturan-keselamatan-dan-kesihatan-pekerjaan-pengelasan-pelabelan-dan-helaian-data-keselamatan-bahan-kimia-berbahaya-2013-p-u-a-310-2013&catid=485:main-slide-banner-seasonal&Itemid=1191&lang=en
EU	Adopted – Pure substances must be in compliance; Deadline for mixtures is May 31, 2015	Adopted GHS as part of the CLP & REACH regulation.
IS	Follows EU or US	

Chemical Suppliers regulatory obligations

- Correctly Classify Hazardous materials using the Globally Harmonized System (GHS)
- Provide GHS safety data sheets (SDS)
 - **In EVERY LANGUAGE OF COUNTRY SHIPPED TO**
- Label all chemical containers per GHS and country specific guidelines
 - **IN EVERY LANGUAGE OF COUNTRY SHIPPED TO**
- Ensure label on container matches the Product Identifier in Section 1 of the SDS
- Ensure Country specific registration requirements are met

Chemical Classifications

Chemicals must be classified using a harmonized system (GHS) that provides standardized language for:

- Health Hazard Categories
- Physical Hazard Categories
- Environmental Hazard Categories*



Safety Data Sheets

- Under the new GHS Haz Com Standards, Material Safety Data Sheets (MSDS) are now called Safety Data Sheets (SDS).
- All SDSs must have a consistent 16-section format.
- Suppliers must ensure that SDSs are compliant and in each native language
- Updates to SDS's as needed – Send updates to Intel_MSDS@intel.com



Safety Data Sheets (SDSs)

New 16-section standardized SDS format required

[Section 1](#) – Identification

- Country Specific Address
- Phone Numbers

[Section 2](#) – Hazard(s) identification

[Section 3](#) – Composition / Information
Ingredients

[Section 4](#) – First-aid Measures

[Section 5](#) – Fire-fighting Measures

[Section 6](#) – Accidental Release
Measures

[Section 7](#) – Handling and Storage

[Section 8](#) – Exposure Controls/PPE

[Section 9](#) – Physical and Chemical Prop.

[Section 10](#) – Stability and Reactivity

[Section 11](#) – Toxicological Information

[Section 12](#) – Ecological Information*

[Section 13](#) – Disposal Consideration*

[Section 14](#) – Transport Information*

[Section 15](#) – Regulatory Information*



[Section 16](#) – Other information including date of
preparation of last revision

Container Label Elements

Note – A “Universal” label is BEST if feasible

- Symbols called “Pictograms”
- Signal Words
- Hazard Statements
- Precautionary Statements
- Product Identification
- Supplier/Manufacturer Identification

GHS HAZCOM Label Example

2 	1 Sulfuric Acid 3 Danger! May be harmful if swallowed. Causes severe skin burns and eye 4 damage. Fatal if inhaled. Harmful to aquatic life.	2 
Do not breathe dust/fume/gas/mist/vapors/spray. Wear protective gloves/protective clothing/eye protection/face protection. Wear respiratory protection.		
5 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.		
In case of fire Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.		
See Material Safety Data Sheet for further details regarding safe use of this product.		
6 Sigma-Aldrich 3050 Spruce Street SAINT LOUIS MO 63103 USA Telephone : +18003255832		
1 Product Identifier	4 Hazard Statements	
2 Pictograms	5 Precautionary Statements	
3 Signal word, "Danger!"	6 Supplier Information	



CHECK LABELS ON CHEMICAL CONTAINERS



What is a Container?

- Innermost package that contains the Chemical
- Examples - Syringe, bag, jug, jar, drum, tote, tube that contains the chemical
- If “small” then must have at a minimum
 - Product Identifier, pictogram, Manufacture name & phone number
 - Signal word, and A statement indicating full label is provided on outside package



Chemical Drums

SDS Section 1 must match Label Number 1

SDS Section 1



GHS Label



Section 1: Identification of the substance/mixture and of

1.1. Product identifier

Trade name : Sulphuric Acid >=96%
Substance name : sulphuric acid
Index-No. : 016-020-00-8
CAS-No. : 7664-93-9
EC-No. : 231-639-5
Registration number : 01-2119458838-20-xxxx

2  **1** Sulfuric Acid **2** 

3 Danger. May be harmful if swallowed. Causes severe skin burns and eye damage. Fatal if inhaled. Harmful to aquatic life.

4 Do not breathe dust/fume/gas/mist/vapors/spray. Wear protective gloves/protective clothing/eye protection/face protection. Wear respiratory protection.

5 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

In case of fire Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

See Material Safety Data Sheet for further details regarding safe use of this product.

6 Sigma-Aldrich 3050 Spruce Street SAINT LOUIS MO 63103 USA Telephone : +18003255832

1 Product Identifier	4 Hazard Statements
2 Pictograms	5 Precautionary Statements
3 Signal word, "Danger!"	6 Supplier Information

Note: Label Elements Specified in SDS must match container label





Chemical Approval

Chemical Approval - Two focus areas

Initial chemical procurement for R&D testing

- Initial chemical approval prior to purchase or shipment by review of SDS
- Initial understanding of potential regulations impacting chemical ingredients (ingredients not always fully disclosed)
- Approval contingent on R&D volumes, chemicals not entering into commerce
- May require full material disclosure (IP data)

Transfer /Select chemicals for HVM manufacturing

- Final review for use at Intel and receiving sites
- All proprietary ingredients entered into SEIMS
- Full Materials Risk Assessment Completed
- All SDS's and container labels in native language

Full Material Disclosure (SEIMS)

Why full material disclosure?

Only way to perform a COMPLETE & COMPREHENSIVE risk assessment



What is meant by FULL material disclosure?

All Ingredients

- Ingredients required to be listed on the SDS
- Intellectual property claimed ingredients
- Intentionally added ingredients
- Any byproduct ingredient required for form, fit & function

Information required

- Ingredient name
- Chemical Abstract Number (CAS)
- Percentage of Ingredients must total 100 %

How is the data protected/stored?

- Intel's **S**upplier **EHS IP M**anagement **S**ystem (**SEIMS**) is a secure database
- SEIMS is a separate database, that is only accessible to certain EHS people
- SEIMS is accessible to Intel suppliers through Intel's external Supplier Portal System (SPS) at <http://supplier.intel.com>

Your Role as Suppliers

- Get SEIMS training and access SEIMS through Intel's supplier portal <http://supplier.intel.com/>
 - *Training is available in many languages*
- Ensure that your IP disclosures are covered under an existing Non-Disclosure Agreement (NDA) – some suppliers have several NDAs with Intel
- Know your Intel Environmental Health and Safety contact to notify after you have uploaded IP information into SEIMS

SEIMS Supplier Training

URL - https://supplier.intel.com/static/EHS/SEIMS_Training.htm



[About Intel](#)

[Press Room](#)

[Contact us](#)

[Registration](#)

[Site Map](#)

[Support](#)

Supplier.intel.com

Environmental Health and Safety

Information for Construction Suppliers

[Intel Construction EHS Manual](#)

[Corporate EHS Standards](#)

[EHS Minimum Performance Requirements](#)

[Construction Ergonomics BETE](#)

[Construction Excellence Award \(SSLEA\)](#)

[Construction Rewards/Recognition](#)

[Site Specific Contractor Programs](#)

[Contractor Safety Web Orientation Training](#)

[Contractor Safety Web Application](#)

[Worldwide Safety Leadership Team \(SLT\) Contacts](#)

EHS Other Information

Supplier Videos & Job Aids

This section provides training that is applicable to ALL Suppliers and to Internal Admins and Users that will be using the Supplier EHS IP Management System (SEIMS) application. The information below is pertinent to how to request an account to use the SEIMS Application. This page was also designed to give you some basic information about SEIMS and to assist you with some rudimentary videos on how to accomplish various tasks as an EHS Supplier.

- [System Supplier Login Job Aid](#) (Adobe® Acrobat® .pdf, 367KB)
- [Request Account Link](#) (To begin the request for an account)
- [SEIMS Overview](#) (Macromedia® Captivate® .HTML, 1KB)
- [How to login to the SEIMS application?](#) (Macromedia® Captivate® .HTML, 1KB)
- [How do I update an NDA description?](#) (Macromedia® Captivate® .HTML, 1KB)
- [How do I add a product to an existing NDA?](#) (Macromedia® Captivate® .HTML, 1KB)
- [How do I activate or inactivate a product?](#) (Macromedia® Captivate® .HTML, 1KB)
- [How do I delete a product?](#) (Macromedia® Captivate® .HTML, 1KB)
- [How do I manage files and ingredients for a product?](#) (Macromedia® Captivate® .HTML, 1KB)

SEIMS Help Videos & Documents are available For the Suppliers

[Return to slide 20](#)

Intel Product Risk Assessments

Basic Product Compliance

- Intel products must comply to global hazardous substances regulations
- Full disclosure of the regulated substances contained in any products, components, and parts being incorporated into Intel final product is required.
- This includes packaging provided to Intel or on behalf of Intel. For outsourced manufacturers, this includes packaging around products produced by the manufacturer on behalf of Intel.

Product Compliance Requirements

- Supplier Self-Assessment Form (Substance Watch List)
- Intel Environmental Product Content (EPC) specification 18-1201
 - Intel's specification that outlines the product content requirements related to EH&S, RoHS, REACH, etc.
 - Lists reportable, controlled and prohibited substances
 - Scope - all suppliers and outsourced manufacturers
 - Ensures Intel's world wide product reporting requirements are met
 - Referenced in supplier contracts, purchase orders and product Statements of Work (SOW)
 - All material, packaging suppliers and outsourced manufacturers must read and agree to specification requirements
- https://supplier.intel.com/static/EHS/Environmental_Product_Content_Specification.pdf

Product Compliance Declarations

- Suppliers must declare substances by downloading the [Supplier Declaration Form \(IPC/IEC\)](#) which includes disclosures for RoHS, JIG and REACH regulations, plus Intel's low halogen initiative
- Login to the [Supplier Environmental Compliance \(EC\) Portal](#) to view parts data, upload declaration forms, and complete the conformance statement to Intel's Product Content spec
- How <https://supplier.intel.com/static/environment/product-compliance/>

Conflict Mineral Free Assessment

- Supplier has a publically available conflict minerals policy
- Supplier has completed the EICC/GeSI Conflict Minerals reporting template and provided a copy to Intel
- Supplier has identified all the Ta, Sn, W & Au smelter/refiner(s) in their supply-chain
- Supplier has performed due diligence in validating their supply chain is conflict free.
- Supplier has executed risk assessment in eliminating high risk smelters from their supply chain.

Lessons Learned – Continuous Areas of Improvement -PE

Common Issues IPC/IEC Form – Covered in GEMS

- Uploading to Intel Supplier Portal for the IPC-1752 or IEC 62474
- Weights not adding up to 100%
- Variable weight items normalized to 1 mg (pastes, fluxes, underfill, etc.)
- Forms not locked (IPC/IEC)
- Missing supplier signatures
- Completing EPC signature form

Common Issues: IPC/IEC Form

- Errors in IPC/IEC form content
- Incomplete reporting IPC/IEC
- Misreporting (oxides)
- Incomplete understanding of materials
- Incomplete analytical test capabilities or material understanding
- Missing 3rd party lab report mailed to the supplier manager

Issues within the supply chain

Supply chain...	Issue...
Lack of information about substances in formulations	Unable to check that formulation is being used legally
Lack of information about substances in dried coatings / adhesives etc.	Unable to meet legal obligations to provide information on SVHCs to customers

Issues within the supply chain

Supply chain...	Issue...
Too specific or too general information on uses in the Chemical Safety Report	Checking that substances are being used legally will be a laborious exercise
Failure to register / Failure to check that the substance is being registered for their use	Substance could be lost due to supplier failure to engage in the REACH registration process for their use of a substance.

Supplier Regulatory Declarations

Supplier MUST Declare to Intel country specific substance regulatory information

General

- Suppliers must have a legal entity in each country to perform the registration/notification duties
- Complete for each country that Intel will use
- Types of information needed
- Substance registration status, Registration numbers
- Substance Notification status, Notification numbers
- Substance listed on SNUR, Authorization and/or restrictions list
- Some EXAMPLES
- U.S. TSCA listed or Exempted
- China MEP new substance registration or notification
- EU REACH Pre-registration, Registration, Authorization, Restriction
- EU CLP notification
- Malaysia Notification

Example: Supplier Declaration



Dear Supplier:

Date: November 1, 2013

Intel, as a downstream user of chemicals needs to ensure that each substance within every product meets the regulatory requirements of the country of use. Each supplier is expected to fulfill all of the regulatory requirements as required by each country specific law. In some instances, the supplier must have a legal entity and/or appoint an Only Representative to fulfill these duties in each country.

To the best of our understanding the following duties must be fulfilled by the supplier/manufactures and/or legal entity if supplying to:

All Countries:

1. GHS formatted Safety Data Sheet in the native language of each country
2. Innermost and External (DOT) Chemical container Labels meeting local Hazard Communication Requirements and DOT requirements

United States:

1. TSCA PreManufacture Notice (PMN) or Low volume exemption (LVE) of all substances
2. SNUR, Is the substance attached to any EPA SNUR? If yes, explain

China:

1. Ministry of Environmental Protection (MEP) new-chemical registration
2. MEP control-chemical licensing
3. Ministry of Commerce Control chemical license
4. Customs approval of China GHS Chemical Label/SDS

Costa Rica:

1. Registration with Costa Rica Ministry of Health

Vietnam:

1. To be supplied

Israel:

1. To be supplied

If shipping to other countries not listed above, other regulations will apply and a declaration is required. Please note: Materials are potential candidates, and do NOT imply final material selection by Intel.

Company Name:		Completed by:	Date:
Representative: Legal Entity Name	Address	Phone:	Email:

IF IP ingredient, state IP. Add additional rows as needed or send separate document that meets the same intent, for multiple ingredients or products.

Product Name	Product Reference ID	CAS #	TSCA status (PMN or LVE)	SNUR - Y/N	China MEP Inventory Listed (Yes/No)	Control Chemical License (Required/Issued)	Costa Rica MCHS Registration	Other

Return completed form or direct questions to:

Dawn Speranza Graunke
Intel Materials EHS
Office: (503) 613-3156
Dawn.s.graunke@intel.com or Dawn.Speranza@intel.com

Victor Fan
Intel Materials EHS
Office: (503) 613-3090
Victor.s.fan@intel.com

Disclaimer: This publication is intended for guidance only and while the information is provided in utmost good faith and has been based on the best information currently available, is to be relied upon at the user's own risk. This is not intended to be a comprehensive treatment of the subject matter and is not intended to provide legal advice or to serve as a substitute for legal counsel. No representations or warranties are made with regards to its completeness or accuracy and no liability will be accepted for damages of any nature whatsoever resulting from the use of or reliance on the information. You should consult legal counsel to determine the applicable law for your situation.

- Each individual chemical used in the formulation must be registered in each country that Intel will use the material.
- Delay in registrations may result in delay in use of the material



Europe - REACH

What

- Reach is European community regulation on chemical substances and their safe use
- It requires the Pre registration, Registration, Evaluation, Authorization and Restriction of chemical substances:
 - Pure
 - Within Mixtures
 - Within articles

Why

- Improve the protection of human health and the environment through better knowledge of the intrinsic properties of chemicals

Who

- Chemical Suppliers/manufacturers who make or import > 1 ton per year or any amount of an authorized chemical
- Intel's chemicals to Ireland

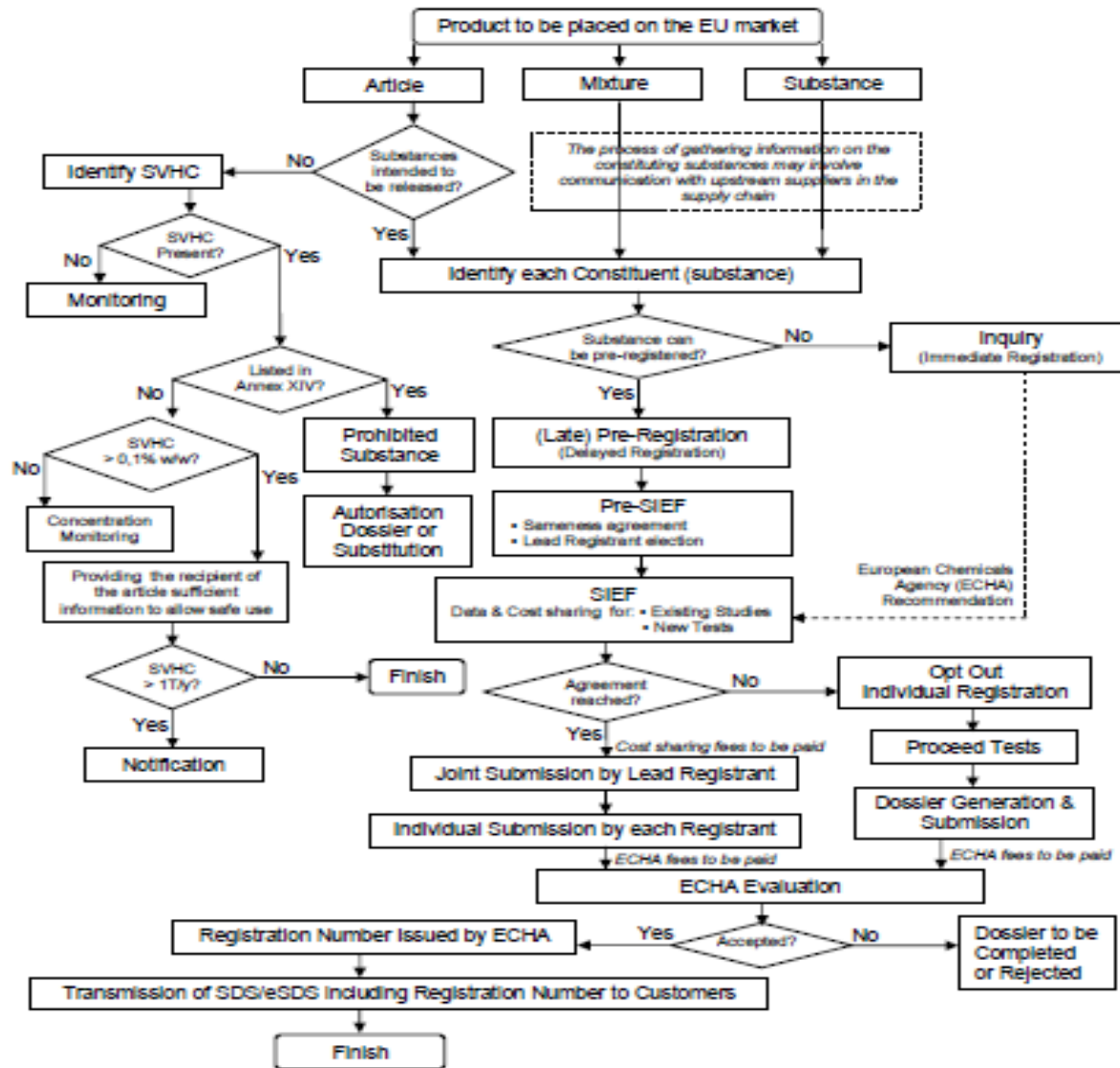
When

- Pre-registration – Now – all existing chemicals
- Full registration phases in 2010, 2013, 2108 based on tonnage and hazard
- Now - Declare products that contain candidate SVHC's

How

- Chemical Suppliers/manufacturers must gather information on properties and uses and register in a central database with ECHA
- ECHA will evaluate a percentage of submittals and may ask for more information
- ECHA will place SVHC's on the candidate list for eventual inclusion in Authorization
- Intel must collaborate with suppliers to ensure our uses and risk management measures are understood

REACH COMPLIANCE FLOWCHART



Europe - Classification, Labeling & Packaging (CLP)

What

- The EU regulation that align Europe's system to classify and label chemicals in accordance with the Global Harmonization system (GHS)

Why

- Update the classification, labels and MSDS's of existing chemicals to meet the GHS criteria

Who

- All Suppliers/Manufacturers/importers of Dangerous Chemicals – no Threshold

When

- Now – All substances must be notified
- Pure substances must be changed to GHS by 2010 (use up old stock till 2012)
- Mixtures must be changed by 2015 (use up old stock by 2015)

How

- Suppliers must send Notification on the classification to ECHA
- Update Chemical container label with new pictograms and phrases
- Update Safety data Sheets to meet GSH standards
- Intel has a white paper process to help manage the label change

Chemical Management in China

Measures for Environmental Management of New Chemical Substances (Order no 7) – China REACH

- Notification of new chemical substances
- Registration of import/export of toxic chemical
- China Ministry of Environment Protection (MEP) oversees import/manufacture licenses & notifications

Supplier Expectations

- Ensure substances supplied to Intel are on inventory
- Prepare and submit notifications as required or through Chinese entity
- Carry out post notification requirements
 - Prepare and implement compliance plan of registrations & notifications
- Provide certificates as required
- Constant and rapidly changing regulatory environment



U.S. Toxic Substance and Control Act (TSCA)

Primary law that oversees chemical products in commerce

TSCA addresses the production, importation, use, and disposal of specific chemicals

EPA has authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances

- Significant New Use Rules (SNURs) restrict chemicals – PFOS

Supplier expectations

- Ensure all substances supplied to Intel are on the TSCA inventory or exempted
- List information on MSDS
- Follow any restriction provisions



Other Intel EHS Initiatives

Supply Chain Sustainability Program

“Respect for people and our planet extends to our supply chain”

The icon for 'Supplier Expectations' features a blue background with a grid of white squares. A large, semi-transparent white number '1' is overlaid on the grid. The text 'Supplier Expectations' is written in white, bold, sans-serif font across the middle of the grid.

Supplier Expectations

We set clear legal compliance, ethics, and corporate responsibility expectations through our supply chain communications and training. We collaborate with our suppliers, as well as with the Electronic Industry Citizenship (EICC) and other industry associations on key initiatives we believe will have a lasting impact.

The icon for 'Supplier Accountability' shows a diverse group of people of various ethnicities and ages smiling. The text 'Supplier Accountability' is overlaid in white, bold, sans-serif font.

Supplier Accountability

We incorporate corporate responsibility requirements into our management systems, scorecards, and assessments, and work proactively with suppliers to source products and tools that help reduce our environmental impact.

The icon for 'Recognizing Performance' features a stylized globe of the Earth with green continents and blue oceans. The text 'Recognizing Performance' is overlaid in white, bold, sans-serif font.

Recognizing Performance

We provide regular feedback to suppliers on their achievements and progress. To reinforce our expectations, we integrate corporate responsibility considerations into our supplier awards and Supplier Continuous Quality Improvement Program.

Intel Supply Chain Sustainability Program Summary

Supplier expectations:

- Performance to Supplier Report Card Sustainability Criteria
 - Publicly post multi-year environmental program with objectives and goals tied to metrics
 - Complete annual Carbon, Water, Waste Data Collection
 - Complete an annual refresh of the RA2 supplier self assessment
 - Plan/schedule RA3 Audit if applicable
- Complete annual refresh of Supplier Ethical Expectations (SEE) training
- Ensure your contracts contain the latest ESG contract language; (i.e. Anti-Corruption and EICC contract clauses)

RESOURCES

Web site for Intel Suppliers EHS Expectations & Training



[Registration](#)

[Site Map](#)

[Support](#)

[About Intel](#)

[Press Room](#)

[Contact us](#)

Supplier.intel.com

Respect for people and our planet. This principle underlies our business practices and we expect the companies we do business with to apply the same principle. Intel is working to continuously improve transparency and promote corporate responsibility throughout the global electronics supply chain.

[Supplier Login](#)

[Registration Information for Intel Suppliers](#)

Environment

- [Conflict Free Minerals \(pdf\)](#)
- [Construction](#)
- [Env Health & Safety](#)
- [Sustainable Procurement](#)

Social

- [Supplier Diversity](#)
- [Human Rights](#)

Governance

- [Business Continuity](#)
- [Contingent Workforce](#)

Partnering with suppliers that look toward the future

We are committed to environmental and social sustainability that does not end with the innovation inside our walls. It extends to our entire global supply chain—to the people and organizations we choose to do business with. We actively seek suppliers who continuously work to improve transparency, promote corporate responsibility, and support diversity.



HOT TOPICS

[Anti-Corruption Laws and Intel Expectations](#)

We expect you - our **suppliers, agents, consultants** - to conduct business with uncompromising integrity and operate within the same boundaries of business ethics to achieve our objectives. Our interactions with governments and state-owned enterprises, both as customers and as stakeholders have increased dramatically.

March 2015

QUICK LINKS

- [Accounts Payable/Supplier Payments](#)
- [Audiocasts](#)
- [Commercial Invoices and Packing Lists \(pdf\)](#)
- [Corporate Responsibility](#)
- [Ethics Reporting](#)
- [Supplier Imperatives](#)

HIGHLIGHTS

- [Information for potential suppliers](#)

Disclaimer

Intel, the Intel logo are trademarks of Intel Corporation in the U.S. and/or other countries.

*Other names and brands may be claimed as the property of others.

All information provided here is subject to change without notice. Contact your Intel representative to obtain the latest Intel product specifications and roadmaps.

Statements in this document that refer to Intel's plans and expectations for the quarter, the year, and the future, are forward-looking statements that involve a number of risks and uncertainties. A detailed discussion of the factors that could affect Intel's results and plans is included in Intel's SEC filings, including the annual report on Form 10-K.

Any forecasts of goods and services needed for Intel's operations are provided for discussion purposes only. Intel will have no liability to make any purchase in connection with forecasts published in this document.

Trademark Information

*Other names and brands may be claimed as the property of others.

Copyright ©Intel Corporation. All rights reserved. Intel Corporation, 2200 Mission College Blvd., Santa Clara, CA 95052-8119, USA.

© 2015 Intel Corporation

