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# PURPOSE

This standard establishes the minimum requirements for chemical and direct material screening at TI sites worldwide. This includes the minimum requirements for the screening of new and reformulated chemicals or direct materials, the use of existing chemicals or direct materials in a new or changed process, and the re-evaluation of existing chemicals or direct materials if new information regarding hazards or customer concerns is received.

The requirements of this standard will help ensure the safe management of chemicals or direct materials in support of TI’s commitment to provide a safe and healthy workplace, to protect the environment, meet customer requirements, and meet the requirements of QSS008-001.

# SCOPE

The provisions of this standard apply to all TI operations using chemicals and direct materials. For the purpose of this document, direct materials refer to any material that will become part of the TI product, or that could contaminate the TI product through abrasion, heat, or any other mechanical or chemical action.

# reference documents

## TI Standard Policy and Procedure (SP&P) 04-04-01: "Environmental, Health and Safety"

## Quality Standard QSS 008-001 Restricted chemicals or direct materials

## TI specification 6494169 TI Restricted Chemicals or direct materials List

## Appendix B: Chemical and direct material Screening Criteria

# Definitions

[TI ESH Standards Glossary of Definitions](https://sps01.itg.ti.com/sites/wwf/esh/standards/Knowledge_Bank/00.01.xlsx)

# Requirements

## Process Requirements

### Chemicals and direct materials shall be screened using the TI Chemical and Material Request Online System (ChemReq System). This system generates the completed Chemical and Material Review Form (CMRF). This form confirms the review was performed and the requestor can proceed to order the product.

#### One exception to using the ChemReq System and screening process

##### Contractor Turn-Key chemicals for one time use projects may be approved through the Work Permit process if they will not be purchased, used, stored, or disposed by TI or its employees. TI is only evaluating these chemicals to ensure they can be used without impact to TI employees and the site. If further review is required or if the chemical does not fully meet these criteria, then it shall be screened in the same manner as all other chemicals at TI.

### Each site shall designate a Chemical and Direct Material Screening Coordinator (CMSC).

### Each site shall designate the appropriate persons for each Environmental, Safety, and Health disciplines to accurately evaluate and approve the chemical.

### All chemicals and direct materials must go through the ESH ChemReq process and be approved before purchase, being received on-site, and/or before use in a changed process.

#### Chemicals include but are not limited to items such as solids, gases and liquid chemical products, lubricants, greases, solders, flux, adhesives, cleaning supplies, etc.

#### Direct Materials include but are not limited to items such as substrates, mold compounds, backgrind tapes, film resists, etc.

#### Chemicals and direct materials requiring a new screen include, but are not limited to:

##### A chemical or direct material that has not previously been used at a specific site.

##### Existing chemical purchased through a new manufacturer (not required for a change in distributor only.)

##### An existing manufacturer that has a change in name (the company becomes a new company.)

##### A currently used chemical that has been reformulated (different ingredients, percentages, etc.) (When a chemical is reformulated it is important to note this on the chemical request.)

#### **Changed** processes include, but are not limited to:

##### A change in the volume of the containers used (e.g. a change from 1 gallon bottles to tote tanks, bulk tanks, etc.)

##### A conversion from one type of use to another (e.g. Special Order or Laboratory Use to a Permanent Part Number.

##### Differences in the manufacturing use which are not described in safety documents used to identify appropriate controls requirements (e.g. S2 Haz-Op What-If analysis, Process Safety Review.)

##### A change in the uses or controls described in a previously approved screening.

### Sites shall determine if the chemical or direct material is Category 1, 2, 3, or 3A as defined by the screening criteria outlined in 3.01A Appendix B.

### If the chemical or direct material is or could be designated as a Category 1 or Category 2, sites shall submit the request to the WWESH Chemical and Material Review Board (CMRB) for review. The information submitted to the CMRB shall include at a minimum:

#### ChemReq as complete as possible, including known requirements and controls.

#### SDS (For direct materials a supplier’s product information sheet, technical data sheet or other documentation of ingredients is acceptable.)

#### Brief explanation of why the chemical or direct material is being elevated for review by the CMRB.

#### Proposed controls.

#### Urgency for review.

### The CMRB shall determine if business leadership approval is required for the review.

#### Category 1 chemicals and direct materials are intended to be highly restricted from use at TI. For category 1 chemicals and direct materials that do not have a documented clear business leadership approval for the specific use, the request will be elevated to the appropriate business leadership for review.

#### If a chemical or direct material is elevated to Business leadership for review the minimum information is a process justification and the results of a Process Safety Review (PSR). Limited exceptions shall be made by the CMRB on a case-by-case basis.

### The CMRB shall document their comments and those of Business leadership in the ChemReq system.

### The CMSC shall ensure completion of the request which includes documentation of the ESH requirements and decisions regarding category.

### The CMSC shall ensure that the completed request is routed through the site's approval process.

### The CMSC shall ensure that the approval and any specific ESH information is communicated to the requestor.

### Sites shall ensure that chemicals and direct materials are used under the approved conditions.

### For a chemical or direct material containing a TI Restricted Chemical or Material (RCM) as defined by TI Specification 6494169, the site CMSC shall communicate the RCM information to the site RCM Team and the requestor, at the time of approval.

###  The site CMSC shall maintain a list of approved chemicals and direct materials that contain RCMs.

### The RCM team shall maintain a list of currently in used chemicals containing RCMs and all necessary information as determined by Quality specifications.

## TI chemical and direct material Category Information

### Process chemicals or chemicals that can contaminate the TI product or direct materials that do not meet the criteria for Category 1 or 2 are classified as Category 3.

### Laboratory use chemicals, facilities use, and non- process related chemicals (e.g.: lubricants, oils, greases, vacuum pump oils, cooling tower chemicals, waste water treatment chemicals, cleaning supplies) that do not contain TI RCMs may be classified as Category 3.

### Category 3 chemicals or direct materials require local site ESH review only, but may be elevated to the CMRB due to regional requirements, customer requirements, horizon issues, or insufficient data based on the professional judgment of the site ESH team.

### General consumer products used in small quantities may meet the requirements of a Category 3A product. If so, they may be used with reduced screening criteria and more flexible purchasing options as outlined in Appendix B.

## Requirement for full ingredient disclosure and exceptions

### All chemicals and direct materials used in TI production processes or that can contaminate the TI product must be confirmed as not containing TI RCMs regardless of classification.

#### Complete ingredient disclosure is the preferred method and ensures that as new chemicals are added to the TI RCM list that we maintain compliance with the list.

#### For direct materials, in very limited instances, a supplier certification that no TI RCMs are in the product will be accepted. This decision will be made by the CMRB.

### Incomplete ingredient information is obtained by WWESH through NDA agreements with the suppliers. Products requiring full ingredient disclosures should be elevated to the CMRB by the CMSC as a category 2 chemical or direct material. Local sites should not attempt to procure ingredient information directly with the supplier.

### The following chemicals do not require full ingredient information regardless of the classification:

#### Laboratory use chemicals that will not touch or contaminate product being sent to customers.

#### Facilities, non-process related chemicals (for example: lubricant oils, greases, vacuum pump oils, cooling tower chemicals, waste water treatment chemicals) that do not have opportunity to contaminate the TI product.

#### Cleaning/Janitorial/Housekeeping chemicals.

#### General consumer products that are being purchased to be used in the method that they were intended by the manufacturer and in a quantity that would be consistent with general consumer use.

#### Turn Key Contractor chemicals.

## Responsibilities

### Requestor

#### Responsible for submitting requests for all chemicals and direct materials before purchasing or receiving the products onsite, or using the product in a new process.

#### Complete the request as accurate as possible.

#### Include the appropriate SDS with the request.

#### Implement all requirements and controls as agreed upon in the ChemReq.

### CMSC

#### Responsible to implement the requirements of this standard at the site level, including the site’s approval process.

#### Ensure the site's chemical and direct material screening process is incorporated as early as possible in the process and product development cycle.

#### Ensure the information in the chemical request is complete and accurate.

#### Ensure an SDS in the country language and an SDS in English (when available) is uploaded to the system and appropriately named.

#### Ensure the SDS and other provided documentation meets country requirements.

#### Ensure that the category of chemical is accurately determined and the associated requirements for the category are met before approval.

#### Ensure category 1 and category 2 chemicals and direct materials are elevated to the CMRB for review.

#### Ensure that chemicals or direct materials are screened and approved in a timely manner. (Generally within 2 days unless there is an issue that requires additional time).

#### Function as the liaison between the site and CMRB and Worldwide Procurement & Logistics (WPL) or the equivalent purchasing authority and the site RCM team.

#### Communicate any new site RCMs to the site RCM team at the time of approval.

#### Be an active member of the site RCM team.

#### Attend annual training for CMSCs.

### Site ESH leadership

#### Ensure adequate resources for the CMSC to perform their job duties.

#### Ensure annual awareness training of affected employees.

### CMRB

#### Review and makes decisions regarding use of chemicals or direct materials submitted to the CMRB.

#### Determine whether use of the chemical or direct material is acceptable under specifically controlled conditions or if it warrants further review by a business leadership team.

#### Provide research assistance on chemicals or direct materials as requested by the CMSC.

#### Function as liaison between the site and the appropriate business leadership team to determine any additional information necessary for the review.

#### Document and communicate all CMRB and Business leadership decisions to the CMSC.

#### Develop procedures to ensure consistency of reviews and standardization of the CMRB review.

#### Partner with WPL to notify affected vendors of chemical and direct material screening requirements.

#### Partner with the appropriate business leadership teams and quality organizations to address customer concerns.

#### Provide training to site CMSCs.

#### Ensure appropriate documentation and communication of Criteria Management.

### Site Quality RCM Team

#### Maintain a list of current RCMs, associated controls and other information as required by WWQuality.

### Business Leadership Team

#### Review and make decisions regarding use for proposed Category 1 and CMRB-elevated Category 2 chemicals or direct materials.

#### Review and approve criteria added to the TI Restricted Chemical and Material List (TI spec 6494069).

### Worldwide Procurement & Logistics (WPL)

#### Ensure that all chemical and direct material orders placed through their organization are approved by the use of this standard prior to placing the order.

#### Partner with CMRB to notify affected vendors of chemical and direct material screening requirements.

## Criteria Management

### If a change occurs that affects the chemical and direct material screening criteria, the CMRB shall develop a documented management plan and communicate it to all appropriate stakeholders. This includes changes to the TI RCM List included in the EDGE (CCDS) 6494169 document.

### Changes to the screening criteria shall be tracked by adding the appropriate revision date and effective date to the appropriate document.

### Areas that may be impacted by the change shall be considered in the development of the plan, including, but not limited to:

#### Changes to screening criteria.

#### Changes to existing designations as either Category 1, 2, 3, or 3A.

#### A need for employee communications and/or training.

#### A need for review of existing safety and health systems or environmental reporting requirements.

#### A need for additional engineering controls, personal protective equipment, compatibility testing, air or biological monitoring, or toxicological testing.

#### Changes to data systems.

#### Changes to existing TI standards / specifications.

## Training for the control of chemicals or direct materials containing RCMs

#### CMSCs shall be trained annually to ensure that the administrative functions are performed correctly within the Chemical Request System and to understand the overall RCM process identified in QSS 008-001.

#### Site ESH shall ensure that affected employee awareness level training is provided annually to all those that use or request chemicals and includes the following:

##### QSS 008 001 TI Restricted Chemicals and Materials (RCM) Program is the primary standard that ESH, External Manufacturing, Purchasing and Quality use to ensure TI product content meets customer and global regulations.

##### All chemicals and direct materials must be screened through this process at each site before the purchase, receipt on-site, or use of any chemical.

##### Aware that many large TI customers require that TI control and comply with product content regulations that may affect TI’s products.

##### That ESH Standard 03.01A must be followed to ensure compliance to these requirements including review against the RCM list EDGE (CCDS) 6494169.

# STANDARD Approval

This standard has been approved by Zane Broadhead, TI Vice President.

# Revision history

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Rev#** | **Date** | **Nature of Revision** | **Author/Editor** | **Approver** |
| A | 7/7/05 | Revision to Appendix B: Modified criteria cover page to be used as a worksheet. Removed table under Category 3. On Category 2, removed Systemic Toxicants. On Category 2, changed the Health Rating criteria to include Skin Designation. On Category 1, removed TMAH and on Category 2, changed TMAH concentration to >/= 3%. On Category 1, removed TI Select Carcinogens and TI Select Toxins which are already covered in other parts of the criteria. Revision to Appendix A:Removed page 3-5 (criteria worksheet) since the criteria cover page was modified to be used as a worksheet. | Christie Lotspeich |  |
| B | 04/07/06 | Major review in conjunction with the 03.01 series of standards. Standardized terminology for chemicals or direct materials, and removed references to P&P Team function. Review form re-named “request form”. SC Banned Chemical and direct material List moved from Appendix to Reference Section since it is not maintained by WWESH. | Christie Lotspeich |  |
| C | 08/06/2008 | Section 1.0 (Purpose) was modified to clarify when chemical use in a changed process triggers the requirement for screening. | Mike Alton/John Willis |  |
| D | 10/12/09 | Revision to Appendix A: Added TI confidential information marking to header on form.  | John Willis |  |
| E | 07/13/2010 | 6.0 Reference Documents: item 3 (TI SC Banned Chemicals or direct materials List) – hyperlink updated. | John Willis |  |
| F | 08/26/2011 | 3.1.b.2 Use of online Chemical Request system added. 6.0 Added reference to QSM-027 (Restricted Chemicals or direct materials). Updated name of Appendix C. | Tim Yeakley |  |
| G | 10/3/12 | Appendix C deleted. The TI RCM list is referenced. Reformat standard. Remove requirement for written program. Updated standard to include screening of all chemicals or direct materials. Update Appendix B to reflect additions to the RCM list and GHS risk codes. | M.Alton | ELC |
| H | 11/21/16 | Minor changes made. Added laboratory use chemicals with RCM need CMRB review | M. Smith | ELC |
| I | 2/26/20 | Organization of the document has been changed to enhance the usability of the document. Scope changed to include all chemicals and direct materials used at all TI sites. Better definition around ‘new chemicals’. The online system will be used for all Chemicals and direct materials. CMSC responsibilities better defined. Requirement for all chemicals containing a TI RCM to be elevated to the CMRB. Flexible purchasing option for general consumer small quantity purchases. Responsibility section expanded to include all those with responsibilities under the standard. Training requirements better defined and an annual requirement added. | M. Smith | ELC |