# TEAMCENTER

# Substance Compliance on Active Workspace — Usage

Teamcenter 2412

SIEMENS

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## Check compliance and apply exemptions



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# 1. What is substance compliance?

Substance compliance is the process of checking if the parts used in your company products conform to environmental regulations. Parts that conform to the regulations are said to be environmentally compliant.

These parts could be commercial parts (off-the-shelf market parts or custom-designed parts) or vendor parts (a part that a vendor supplies). A vendor supplies one or more parts and can be a supplier, manufacturer, or distributor.

For details about vendors, vendor parts, and commercial parts, see the *Vendor Management* documentation on Support Center.

### Environmental regulation

An environmental regulation is a directive that restricts the usage of banned or hazardous substances. It can be a legal restriction circulated by a Government authority, a self regulation by an industry, a social regulation, or a market regulation.

The environmental regulation lists the restricted substances, lists the rules that define the scope in which a restricted substance can be used, and specifies the reasons for the restrictions.

For example, the Restriction of Hazardous Substance (RoHS) regulation adopted by the European Union restricts the usage of certain hazardous substances such as lead, cadmium, mercury, and hexavalent chromium in electrical and electronic equipment. As per a rule in the RoHS regulation, the maximum amount of lead that can be used in a homogenous material is 0.1%. If the amount of lead is more than 0.1%, the material is not environmentally compliant.

However, the regulation can have an exemption that allows the usage of the restricted substances in a particular scope.

### Exemption

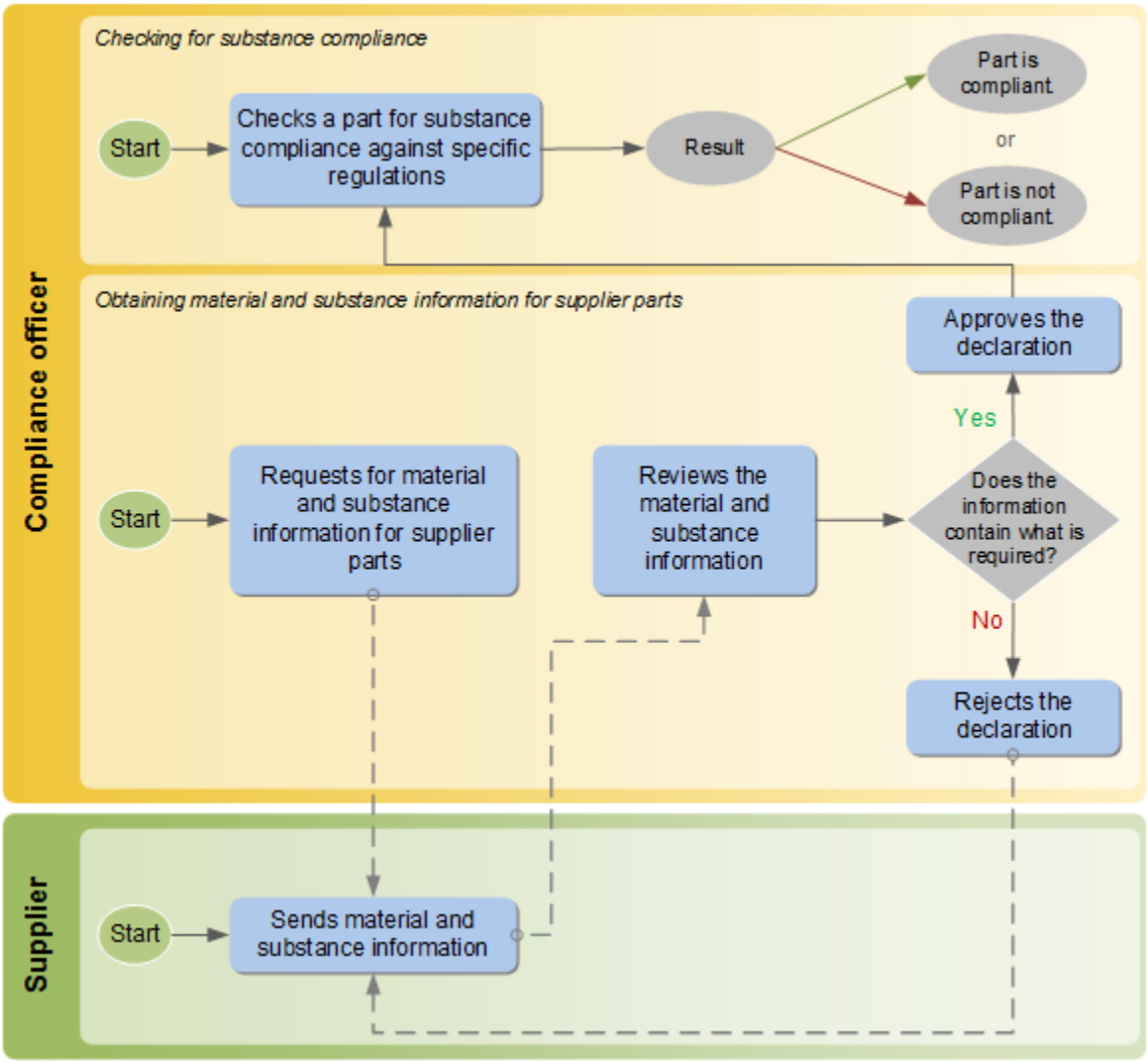
An exemption is an allowance granted to a regulation when the elimination of a restricted substance is impossible or when the only available substitution produces more negative rather than positive benefits to the environment.

An exemption can have expiration dates after which the exemption becomes invalid.

For example, a car has different electrical and electronic parts such as the speakers, antenna, fuel gauge, odometer, and lamps. Lamps are made of mercury, which is a restricted substance as per the RoHS regulation. This would make the car noncompliant. However, one of the rules of RoHS has an exemption that fluorescent lamps can contain amounts of mercury not exceeding 5 mg per burner. This means that if the lamp has less than 5 mg of mercury, the car becomes environmentally compliant.

# 2. The business process to assess products for substance compliance

To assess whether your company product is environmentally compliant, you must check if the parts used in it conform to environmental regulations. If the product contains supplier parts, you must obtain the material and substance information from the supplier. The business process to assess a product for substance compliance is as follows.




Consider that you want to verify if the lamp used in the headlamp assembly of your car complies with the Restriction of Hazardous Substances (RoHS) regulation. The lamp is procured from Autopart Suppliers. To identify the materials and substances used in the lamp, you request Autopart Suppliers to send the material and substance information. This information is sent in a declaration form. There are different types of declarations such as material substance declaration (MSD) and conflict mineral declaration (CMD).

On receiving the declaration from Autopart Suppliers, you check it for completeness. As it contains all the required information, you approve the declaration. Next, you check if the lamp complies with RoHS. You note that the lamp has 1 mg of mercury, which is a restricted substance as per RoHS. However, RoHS has an exemption that allows up to 5 mg of mercury per burner. As the lamp has less than 5 mg of mercury, you mark the lamp as ROHS compliant.

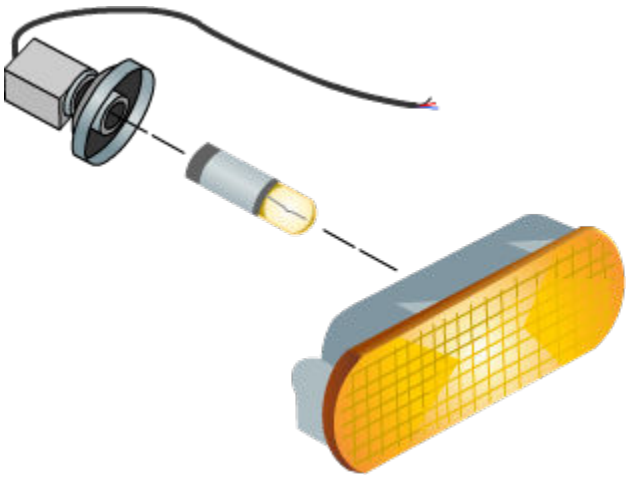
# 3. What are materials and substances?

A part used in a product primarily comprises materials. A material is made up of one or more substances.

A substance is the basic form of matter that cannot be disintegrated further using a mechanical or physical process. Each substance has a unique identifier called the **Chemical Abstracts Service** (CAS) number.

Substance Compliance uses the Teamcenter Integrated Material Management as a material and substance repository. For more information, see the *Integrated Material Management* documentation on Support Center.

Let us understand materials and substances, using an example. Consider a car headlamp made up of the following parts: lamp, reflector, and connector wire.

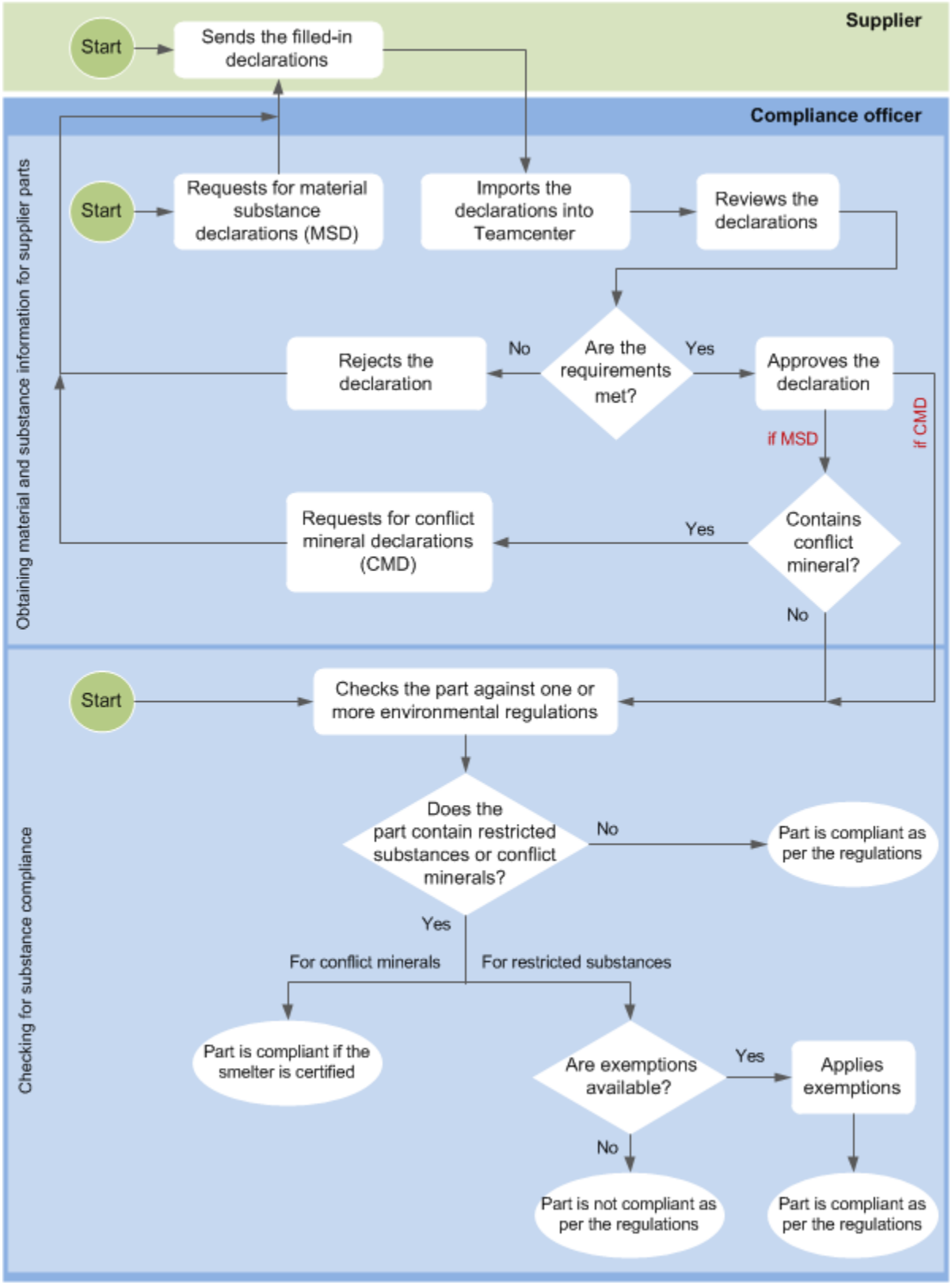


| Part | Material | Substance |
|---|---|---|
| Lamp | Glass bulb | Glass |
| | | Mercury |
| | | Phosphorus |
| | | Silica |
| | Filament | Tungsten core |
| | | Tungsten |
| | Base | Steel |
| | | Iron |
| | | Carbon |
| Reflector | Bisphenol A | Carbon |
| | Phosgene | Carbon |
| | | Chlorine |
| Connector wire | Copper core | Copper |
| | PVC/ Plastic | Sulfur |
| | | Nitrogen |
| | | Carbon |

# 4. Substance Compliance workflow

## Substance Compliance workflow in Teamcenter

The Substance Compliance workflow in Teamcenter is as follows.



# 5. Access the compliance officer workspace

As a compliance officer, you can access and manage your compliance data within a dedicated workspace.

### Procedure

1. Click your profile icon.

2. From the **Workspace** list, select the role **Compliance Officer** and the group that has the **Compliance Officer** role added as per the organization policy.

# 6. View declaration requests

To view requests:

- On the home page, click the **DECLARATION REQUESTS** tile.

On the **Requests** page, you can see the following tab:

| | |
|---|---|
| **Outgoing IPC** | It displays all the open outgoing IPC requests. |

# 7. Obtaining supplier declarations

## Different supplier declarations for managing materials and substances

To verify if a supplier part is environmentally compliant, you require information from the supplier about the materials and substances used in the part. You obtain this information through different types of declarations such as **material substance declaration**, **lab report**, and **conflict mineral declaration**.

The Teamcenter Substance Compliance solution supports the following formats for declarations. Note that your support sets the declaration format for your site.

| Declaration type | Supported formats | Mandatory Parameters |
|---|---|---|
| Material substance declaration | IPC XML | Authorizer<br>SupplyCompany<br>SupplyCompany - ContactInfo<br>SupplierAcceptance (legalDef, legalType can be blank)<br>Product-itemNumber<br>Product-amount, UOM<br>SubstanceID-identity |
| Lab report | IPC XML | Authorizer<br>SupplyCompany<br>SupplyCompany - ContactInfo<br>Manufacturer<br>Laboratory<br>Product-itemNumber |
| Conflict mineral declaration | IPC XML (default format)<br>Microsoft Excel | Authorizer<br>SupplyCompany<br>SupplyCompany - ContactInfo<br>ConflictMetalInfo |

## Material substance declarations

A material substance declaration is a form that lists the materials and substances present in a supplier part. It also specifies the threshold level for each substance and the environmental regulations that establish the threshold levels.

A sample material substance declaration for a lamp used in the headlamp assembly of a car is as follows.

| Part | Sub-parts | Material | Mass (with unit) | Substance | CAS | Mass | Unit of measure |
|---|---|---|---|---|---|---|---|
| Lamp | Glass bulb | Glass | 200.35 g | Mercury | 7439-97-6 | 5 | mg |
| | | | | Phosphor | 7803-51-2 | 3 | mg |
| | | | | Silica | 15468-32-3 | 200 | g |
| | Filament | Tungsten core | 0.3 g | Tungsten | 7440-33-7 | 0.3 | g |
| | Lead-in wire | Nickel core | 0.18 g | Nickel | 7440-02-0 | 0.1 | g |
| | | | | Iron | 7439-89-6 | 0.08 | g |
| | Holder | Aluminum base | 120 g | Aluminum | 7429-90-5 | 120 | g |

## Lab reports

A lab report is a report detailing chemical analysis tests conducted by laboratories on a material and the results or findings of these tests. Lab reports are associated with a material and not a part and contain information about analytes (substances whose chemical constituents are being identified and measured).

The laboratories, such as Emtek, Environmental Monitoring and Technologies, Inc., and SGS conduct different chemical analysis either based on some regulations or as requested by a manufacturer. The laboratories provide the composition reports of homogeneous materials used across the supply chain. Examples of such materials include glass, aluminum, and so on.

Note that lab reports in Teamcenter are not applicable to either food products or beverages' manufacturing or packaging.

A sample analyte entry in a lab report could be as follows.

| Analyte ID | Analyte Name | Sample ID | Laboratory Report Test Method | Laboratory Reporting Limit | Reported Amount Value | Reported Amount UOM |
|---|---|---|---|---|---|---|
| 7631-86-9 | Silicon dioxide | repConc 01 | German AfPS GS 2014:01 PAK Mod | 0.5 | 0.3 | ppm |

### Conflict mineral declarations

The minerals tin, tungsten, tantalum, and gold are often referred to as 3TG metals. When these minerals and their alloys are mined in the Democratic Republic of Congo (DRC) or its adjoining countries, they are termed conflict minerals. You can use the 3TG metals and their alloys in your company product only if they are not mined in these countries. To verify this, you require a conflict mineral declaration for the supplier parts. conflict mineral declaration is a form that lists the conflict minerals, information such as the name, country, and ID of the smelter, name and location of the smelter mine, and the program that certified the smelter as conflict-free (for example, Conflict-Free Sourcing Initiative or CFSI).

A sample conflict mineral declaration for the lamp of a car headlamp assembly is as follows:

| Metal | Smelter name | Smelter mine country | Source of Smelter Identification Number | Smelter Identification Number | Name of the mine (if recycled or scrap sourced, enter recycled or scrap) |
|---|---|---|---|---|---|
| Tungsten | A.L.M.T.Corp. | JAPAN | CFSI | CID00004 | scrap |

## Material declaration standards

The *Association Connecting Electronics Industries* organization creates a family of standards to set up a uniform reporting format for exchanging data between supply chain participants. These standards are called IPC standards and are in the XML format.

Teamcenter Substance Compliance supports the standards **IPC-1752A**, **IPC-1752B**, and **IPC-1753**.

**IPC-1752A Materials Declaration Management Standard (with Amendments 1, 2, and 3)**

The IPC-1752A standard allows companies in the supply chain to share information about the materials in the products by requesting a material substance declaration (MSD) from suppliers.

The IPC-1752A standard is made up of four classes of material declarations.

| Material declaration class | Description |
| --- | --- |
| **Class A** | A supplier provides a product-level declaration using queries and responses defined in query lists. |
| **Class B** | A supplier must provide a higher level of material declaration, stating the amount of different groupings of materials within their product.<br><br>Note:<br>Teamcenter Substance Compliance does not support this class of declaration. |
| **Class C** | A supplier provides a product - level declaration against substance categories. |
| **Class D** | A supplier must provide a full material disclosure (FMD) containing information about all materials and substances used in their product. |

**IPC-1752B Materials Declaration Management Standard**

The IPC-1752B standard for materials declaration aloows the collection of supply chain data in line with the specifications of the SCIP database. Its structure is designed to reflect the submission format (XML) required by the ECHA SCIP database. This permits suppliers to provide information on sub-products providing a unique degree of granularity regarding the materials contained in the products.

The IPC-1752B standard has following data in addition to all the data supported in IPC-1752A:

- Article (Product) categories
- Safe usage information list
- Material categories
- Applications

**IPC-1753**

The IPC-1753 standard allows exchanging information about laboratory analytical test reports between members of a supply chain.

The RoHS 2011/65/EU directive mandates strict compliance checks for products. To achieve this, typically, a manufacturer requests a third-party laboratory to provide analytical results for different

substances that are used in materials that are in turn used in a part or assembly comprising a product.

The IPC-1753 XML provides the ability to electronically read laboratory report results for substances, upload them as electronic records, assess compliance, and exchange the results across the supply chain.

For more details about these IPC standards, see the **IPC portal**.

## Obtaining material and substance information for supplier parts

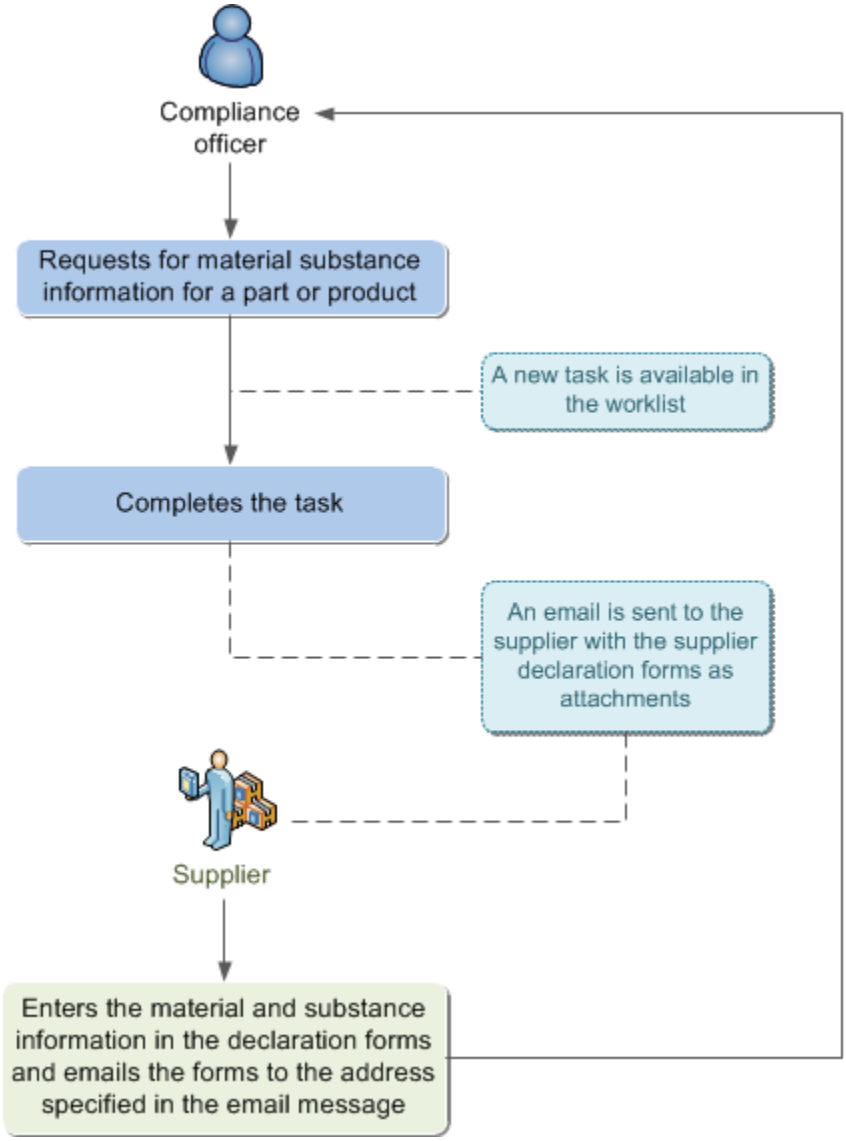
To verify if a part supplied is environmentally compliant, you require information about the materials and substances used in the part. To obtain this information, you request for a material substance declaration (MSD) for the part from the supplier. On receiving the MSD, if you find that the part uses any of the 3TG metals (tin, tantalum, tungsten, and gold) or their alloys, you must request for a conflict mineral declaration (CMD) from the supplier. You require the CMD to verify that the smelter of the 3TG metals is certified, indicating that these metals are not mined in Democratic Republic of Congo or its adjoining countries. You must send this request only after approving the MSD.

You can also send a CMD request directly to the supplier without selecting a part. This is done in cases where a company procures numerous parts from the supplier, and there is a possibility that many of these parts contain 3TG metals. Instead of obtaining the CMD for each part, you can obtain a single CMD from the supplier that lists the 3TG metals and the information about the smelting conditions and the smelters who have mined these metals.

Even if the MSD or CMD of the part is already available, you may need to request for the declaration again under certain circumstances: if they have expired, if the supplier did not respond to the earlier declaration request on time, or if you need an updated declaration.

On requesting for a declaration, an email is sent to the supplier with the declaration forms as attachments.

The supplier enters the material and substance information for the part and sends the declaration form by email to the address specified in the declaration request email message.




If the format of the MSD is Microsoft Excel, a blank Microsoft Excel template is sent to the supplier containing instructions on how to fill the MSD.

For a new request, blank IPC XML forms are sent to the supplier. If you are requesting the MSD for a second or third time, prefilled IPC XML forms are sent to the supplier.

The supplier enters the material and substance information for the different parts and sends the MSD to you via email. Along with the form, the supplier can also send supporting documents (for example, test data and specification documents). In some cases, the supplier may also send the filled declarations pre-emptively, without receiving a declaration request.

# Request supplier declarations

To obtain material and substance information from the supplier, you request a material substance declaration (MSD) or a conflict mineral declaration (CMD) for a vendor part. You can also send a CMD request to a supplier. You cannot request supplier declarations from inactive vendors or for unapproved parts (even if the vendors are active).

Before you request a supplier declaration, ensure that the vendor manager has created the supplier contact you want to send the MSD or CMD request to.

> Note:
>
> You can request supplier declarations only for vendor parts and not their revisions.

To request a supplier declaration:

1. Navigate to and open the vendor part (and not the revision) for which you want to request the supplier declaration.

   > Note:
   >
   > You can select multiple parts to request an MSD or a CMD. However, you can request a CMD only if all the selected parts contain 3TG metals. In any other case, you must select an individual part to request a CMD for that part.

2. Select the **Request Declaration** group and select one of the following:

   - **Request Material and Substance Declaration**.
   - **Request Conflict Mineral Declaration**.

   The supplier receives the declaration forms as attachments in an email.

   > Note:
   >
   > The supplier receives an email only if your support has set the value of the **SUBSCMPL_supplier_mail_functionality_activated** preference to *true*.

   If the declaration is in the IPC XML format, based on the settings configured by your support, the supplier receives either:

   - A blank IPC XML document on the first and subsequent MSD requests.

     OR

- A blank IPC XML document for the first MSD request and the most recently declared IPC XML document for the subsequent requests.

If the format of the MSD is IPC XML 1752-2 v1.1, the supplier receives blank IPC XML files for each part.

All declaration requests sent to suppliers are listed in the **DECLARATIONS** tile > **Requests** tab. Once the supplier sends back a filled–in declaration and the declaration is imported successfully in Teamcenter, the request is removed from the **Requests** tab.

To view a list of requests sent to the suppliers:

1. On the home page, click the **DECLARATIONS** tile.

   On the **Declarations** page, the **Requests** tab lists all the declaration requests.

2. Select the desired part from the queue to view details about the part for which declaration is requested, the supplier, and the due date for the declaration.

## Import supplier declarations

You can import declarations into Teamcenter using various import options.

> Caution:
>
> The Teamcenter client-server architecture restricts the import of a large-sized declaration or a large number of small-sized declarations. Such an import causes the server to take a large amount of time to process all the data, causing the UI to be unresponsive or closing the connection with server. Therefore, Siemens Digital Industries Software recommends ensuring a reasonable load while importing declarations. For larger declarations, you can contact your support to import using an utility.

- A **Manual import of a single file**.
- **Email_polling**

### Manually import supplier declaration

1. On the home page, click the **DECLARATIONS** tile.
2. Click **More commands** ••• > **Import/Export** > **Import Supplier Declaration**.
3. In the **Import Declarations** panel, provide the following information:

   a. Select the **Declaration Type** that you want to import, for example, **Material Substance Declaration**, **Conflict Mineral Declaration**, or **Laboratory Reports**.

b. Browse to and select the saved declaration on your computer.

4. Click **Import**.

   At the end of the import and subsequent validation, a text file listing the *IPC XML* file that is validated and the status is generated. You can view the contents of the relevant log file by double-clicking it or save the log file to view it later.

### Import supplier declarations using email polling

> Note:
>
> The email polling functionality is available only for material substance declarations and conflict mineral declarations, and not for lab reports.

Email polling can be started or scheduled at the command prompt or in a cron job using the **email_polling** utility.

The **email_polling** utility fetches the emails from the email server, downloads the attachments, and moves them to the location specified in the **Email_polling_download_dir** preference for your review.

Based on what your administrator has set the value of the **EMLPOLLING_keep_review_mail_attachments** preference to, either of these actions take place:

- **true** (default): The email polling facility helps to poll for and download attachments from incoming emails from the supplier at the location specified in the **Email_polling_download_dir** preference.

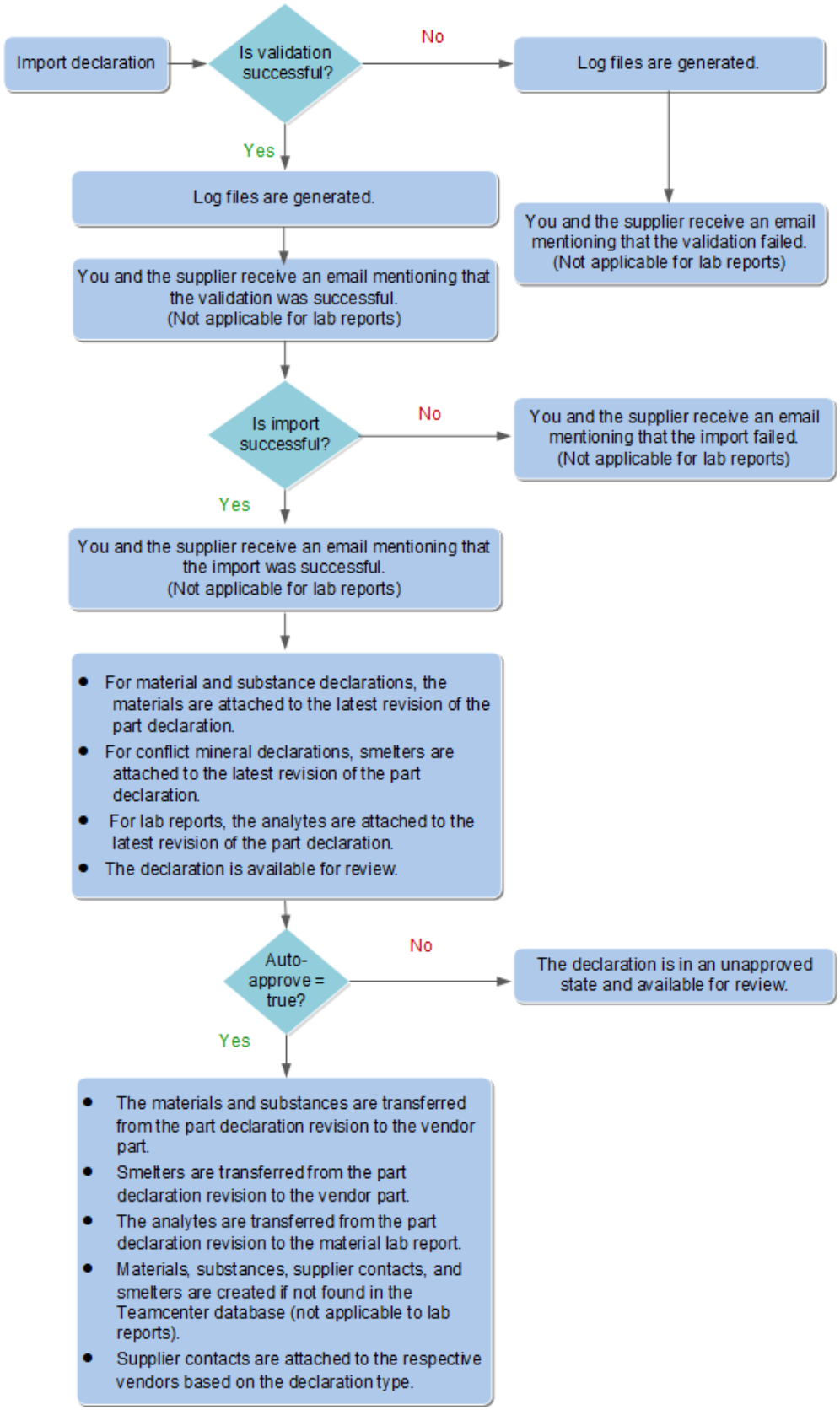
  You can then review the declarations and once satisfied, use any of the **specified options to import** the *IPC XML* declarations in Teamcenter.

  The synchronous import helps with automatically creating Teamcenter objects, such as materials and substances, from the individual declaration files imported in Teamcenter. Additionally, the declaration, and the materials and substances are associated with the appropriate vendor part.

- **false**: The email polling facility helps to poll for and download attachments from incoming emails from the supplier at the location specified by the **Email_polling_download_dir** preference. It further imports the *IPC XML* declarations in Teamcenter.

  You must, however, run the **SUBSCMPL_import_supplier_declarations** command line utility in a *managed* mode (`mode=managed`) to complete the import action and associate the materials and substances with the appropriate vendor part.

## Series of events that occurs when an MSD import succeeds or fails



# Review declarations that failed Teamcenter validation or import

The declarations (sent by your supplier) that fail the validation or import process are displayed in the failure queue.

Some of the reasons why declarations fail the validation or import process are as follows:

- The declaration contains an invalid or missing CAS number.
- The declaration fails schema validation.
- A matching vendor part or vendor provided in the declaration is not available in the Teamcenter database.

As a compliance officer, you review the import failure queue to understand the reason for the failure and take some corrective action accordingly. You then *acknowledge* the failed declaration to remove it from the queue.

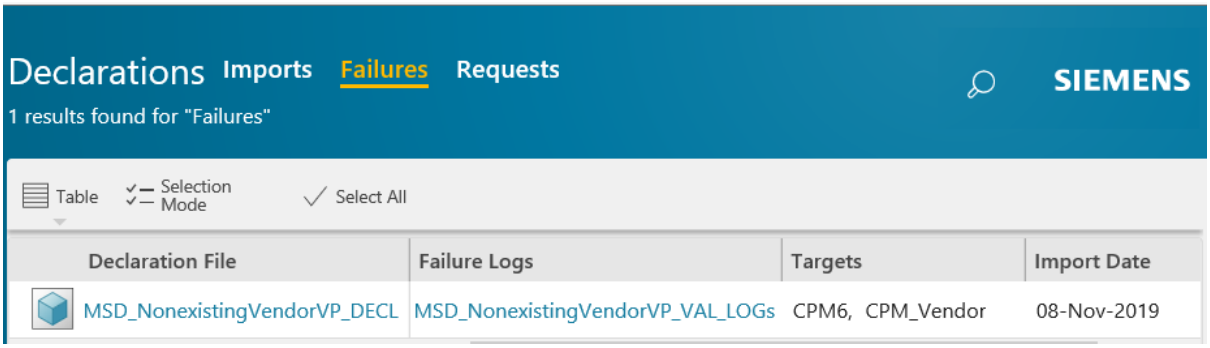
### Review a failed declaration to understand failure reasons

1. On the home page, click the **DECLARATIONS** tile.

   On the **Declarations** page, the **Failures** tab lists all the declarations that failed the import.

2. Select the desired failed declaration from the queue.

3. Choose an appropriate action to view the declaration or its log.




   - Click the declaration hyperlink in the **Declaration File** column to open and view the XML file in a text editor.
   - Click the declaration log hyperlink in the **Failure Logs** column to open and view the failure log for details about the cause of the import failure.

### Remove a declaration from the failure queue

Once you review the failure details and take corrective action for the failure, you can reimport the declaration. Once the declaration is imported successfully, remove the earlier failed declaration from the queue. To do this:

1. On the home page, click the **DECLARATIONS** tile.

   On the **Declarations** page, the **Failures** tab lists all the declarations that failed the import.

2. Select the declaration that you want to remove from the queue.

   You can choose a single or multiple declarations to remove them from the queue.

   Use **Selection Mode** located in the results panel toolbar to select multiple declarations.

3. Click **More commands** > **Manage** > **Acknowledge Failures**.

   The declaration is removed from the failure queue.

# 8. Reviewing log files generated after importing declarations

## Log files generated at the end of a material substance declaration import session

During the import of IPC 1752 XML files and ancillary documents, session log files reporting the summary of the import of all material substance declarations (MSDs) in that session are generated.

Consider that you receive notifications that the import of the MSDs of a lamp, reflector, and lamp cover used in the headlamp assembly of your car failed. You refer to the session log file to view the consolidated information regarding the three parts.

The following is the session log file generated at the end of the lamp, reflector, and lamp cover import session:

```
Import session started at: 201330305_180120;
Time taken for import: 1.30.20;

Supplier Parts
--------------------------------------------------------------------------------
Part ID      Status        Reason                  Disclosure Status  Supplier ID
--------------------------------------------------------------------------------
022404       FAILED        Part contains partial   PARTIAL (98%)      12345
                           disclosure which is
                           not allowed.
022407       FAILED        Material cannot be      FULL               12345
                           created.
022409       FAILED        One or more materials   UNKNOWN            12345
                           for parts have invalid
                           declaration.

Total 0 out of 3 parts processed successfully.

Materials:
--------------------------------------------------------------------------------
--
Material Name   Parent Part  External Id  Status   Subs. Composition Reason
                                            Status
--------------------------------------------------------------------------------
--
Glass bulb      Lamp          ext_001     FOUND    INCOMPLETE (98%)
Filament        Lamp          ext_002     CREATED  COMPLETE
Lead-in wire    Lamp          ext_003     CREATED  COMPLETE
Holder          Lamp          ext_004     FAILED   COMPLETE         Materials cannot
                                                                    be processed
                                                                    as no material
                                                                    mass has been
                                                                    specified.
                                                                    Invalid declaration.
Plastic        Reflector      ext_010       FAILED   COMPLETE       No material was
                                                                    found matching
```

```
                                                                                the given
composition.
                                                                                Material creation is
                                                                                not allowed. Please
                                                                                check the preference
                                                                                SUBSCMPL_msd_create_
                                                                                new_materials.

Substances:
-------------------------------------------------------------------------------------------
----
Substance Name     Parent Material   CAS Number  Status     Reason
-------------------------------------------------------------------------------------------
----
Mercury            Glass bulb        7439-97-6   FOUND
Phosphor           Glass bulb        7803-51-2   CREATED
Glass              Glass bulb        15468-32-3  CREATED
Tungsten           Filament          7440-33-7   FAILED     Substance processing
                                                            failed due to
                                                            unhandled exception.
                                                            Please check the syslog.
Nickel             Lead-in wire      7440-02-0   FOUND
Iron               Lead-in wire      7439-89-6   CREATED
Aluminium          Holder            7429-90-5   FOUND
Polyvinyl chloride
(PVC)              Plastic           9002-86-2   FOUND
Polybrominated
biphenyls          Plastic           59536-65-1  CREATED
Chrome             Plastic           7440-47-3   FAILED     No substance with given CAS
                                                            number found. Substance
                                                            creation is not allowed.
                                                            Please check the preference
                                                            SUBSCMPL_msd_create_new_
                                                            substances.
```

| Name | Status | Description |
|---|---|---|
| Disclosure status | **FULL** | Indicates that the composition of the substances is fully disclosed. |
| | **PARTIAL** | Indicates that the composition of the substances is partially disclosed. In this case, the disclosed percentage is specified. |
| | **UNKNOWN** | Indicates that the materials and substances were either not found or not created. |
| Status of part | **FULL** | Indicates that the composition of the substances is fully disclosed. |
| | **PARTIAL** | Indicates that the composition of the substances is partially disclosed. In this case, the disclosed percentage is specified. |
| | **UNKNOWN** | Indicates that the materials and substances were either not found or not created. |

| Name | Status | Description |
|---|---|---|
| Status of materials and substances | **FOUND** | Indicates that the material or substance exists in the Teamcenter materials library. |
| | **CREATED** | Indicates that the material or substance has been created as it does not exist in the Teamcenter materials library. |
| | **FAILED** | Indicates that the creation of the material or substance failed due to incomplete information. |
| | **UNKNOWN** | Indicates that the substance could not be found. This may happen if substances are not created for various reasons such as substance composition is not specified or the substance composition is greater than the threshold value. |
| Substance composition status | **COMPLETE** | Indicates that the total mass of the substances is equal to the mass of the material. |
| | **INCOMPLETE** | Indicates that the total mass of the substances is not equal to the mass of the material. In this case, the total substance composition in percentage is also displayed. |
| Reason | | In case of failure, the reasons are specified. |

## Log files generated when importing material substance declarations

During the import of IPC 1752 XML files and ancillary documents, individual log files reporting the summary of the import are generated for each material substance declaration (MSD).

If you receive notifications while importing an MSD of a lamp used in the car headlamp assembly, you must analyze the log file of the lamp to find out the reasons for the failure.

The log file of the lamp appears as follows:

```
The material substance declaration import log started for the
part Headlamp.xml.

Log started at time 07-Oct-2013 12:36:54.

Time taken for import: 0hr:0min:1sec.

The processing of the vendor part Lamp has failed due to the following errors:
Part contains partial disclosure which is not allowed. Please check preference
SUBSCMPL_msd_partial_disclosure_limit.
```

```
The part is found to have status of PARTIAL (98%).

Materials:
-------------------------------------------------------------------------------------
Material Name  Parent Part External Id  Status  Subs. Composition Reason
                                                Status
-------------------------------------------------------------------------------------
Glass bulb     Lamp        ext_001      FOUND   INCOMPLETE(98%)
Filament       Lamp        ext_002      CREATED COMPLETE
Lead-in wire   Lamp        ext_003      CREATED COMPLETE
Holder         Lamp        ext_004      FAILED  COMPLETE          Materials cannot
                                                                  be processed
                                                                  as no material mass
                                                                  has been specified.
                                                                  Invalid declaration.

Substances:
-------------------------------------------------------------------------------------
Substance Name   Parent Material  CAS Number  Status   Reason
-------------------------------------------------------------------------------------
Mercury          Glass bulb      7439-97-6   FOUND
Phosphor         Glass bulb      7803-51-2   CREATED
Glass            Glass bulb      15468-32-3  CREATED
Tridymite        Glass bulb      15468-32-3  PASSED
Tungsten         Filament        7440-33-7   FAILED    Substance processing
                                                       failed due to
                                                       unhandled exception.
                                                       Please check the syslog.
Nickel             Lead-in wire       7440-02-0       FOUND
Iron               Lead-in wire       7439-89-6       CREATED
Aluminium          Holder             7429-90-5       FOUND
```

| Name | Status | Description |
|---|---|---|
| Disclosure status | **FULL** | Indicates that the composition of the substances is fully disclosed. |
| | **PARTIAL** | Indicates that the composition of the substances is partially disclosed. In this case, the disclosed percentage is specified. |
| | **UNKNOWN** | Indicates that the materials and substances were either not found or not created. |
| Status of materials and substances | **FOUND** | Indicates that the material or substance exists in the Teamcenter materials library. |
| | **CREATED** | Indicates that the material or substance has been created as it does not exist in the Teamcenter materials library. |
| | **FAILED** | Indicates that the creation of the material or substance failed due to incomplete information. |
| | **UNKNOWN** | Indicates that the substance could not be found. This may happen if the substances are not created for various reasons: |

| Name | Status | Description |
|---|---|---|
| | | substance composition might not be specified or it might be greater than the threshold value. |
| | **PASSED** | Indicates the substance has a valid CAS number. |
| Substance composition status | **COMPLETE** | Indicates that the total mass of the substances is equal to the mass of the material. |
| | **INCOMPLETE** | Indicates that the total mass of the substances is not equal to the mass of the material. In this case, the total substance composition in percentage is also displayed. |
| Reason | | In the case of a failure, the reasons are specified. |

## Log files generated at the end of a conflict mineral declaration import session

During the import of IPC 1755 XML files and ancillary documents, session log files reporting the summary of the import of all conflict mineral declarations (CMDs) in that session are generated.

If you receive notifications while importing a CMD of a lamp used in the car headlamp assembly, you must analyze the log file of the lamp to find out the reasons for the failure.

The log file of the lamp appears as follows:

```
The material substance declaration import log started for the
part Lamp__20131007_122037.xml.

Log started at time 07-Oct-2013 12:36:54.
Time taken for import: 0hr:0min:1sec.
TIE Importer Log File: C:\Processing\IPC_1752Lamp__20131007_122037.xml__importer.log
Failed Objects Log File:
C:\Processing\trans52525b5e00001c4c0000022a.xml_failed_objects.xml

The processing of the vendor part Lamp has failed due to the following errors:
Part contains partial disclosure which is not allowed. Please check preference
SUBSCMPL_msd_partial_disclosure_limit.

The part is found to have status of PARTIAL (98%).

Smelters:
-------------------------------------------------------------------------------------
Smelter Name       Parent Part/Vendor    Smelter Id    Status   Reason
-------------------------------------------------------------------------------------
A.L.M.T.Corp.      Lamp                  CID00004      FOUND


-------------------------------------------------------------------------------------
Question Name      Parent Part/Vendor     Status
-------------------------------------------------------------------------------------
```

```
Is the conflict metal intentionally added to your product?
                    Lamp                    CREATED
Is the conflict metal necessary to the production of your company's products and
contained
in the finished product that your company manufactures or contracts to manufacture
                    Lamp                    CREATED
Does any of the conflict metal originate from the covered countries
                    Lamp                    CREATED
Does 100 percent of the conflict metal (necessary to the functionality or production of
your products) originate from recycled or scrap sources?
                    Lamp                    CREATED
Have you received conflict metals data/information for each metal from all relevant
suppliers of 3TG?
                    Lamp                    CREATED
For each conflict metal, have you indentified all of the smelters your company and its
suppliers use to supply the products included within the declaration scope indicated
above?
                    Lamp                    CREATED
Has all applicable smelter information received by your company been reported in this
declaration?
                    Lamp                     CREATED
Do you have a policy in place that addresses conflict minerals sourcing?
                    Lamp                    FOUND
Are you subject to the SEC Conflict Minerals rule?

                    Lamp                    FOUND
Is your conflict minerals sourcing policy publicly available on your website?

                    Lamp                    FOUND
Do you require your direct suppliers to be DRC conflict-free?

                    Lamp                    FOUND
Do you require your direct suppliers to source from smelters validated by an independent
provate sector audit firm?

                    Lamp                    FOUND
Have you implemented due diligence measures for conflict-free sourcing?

                    Lamp                    FOUND
Do you collect due diligence information from your suppliers which is in conformance
with the IPC-1755 Conflict Minerals Data Exchange standard?

                    Lamp                    FOUND
Do you request smelter names from your suppliers?

                    Lamp                    FOUND
Do you review due diligence information received from your suppliers against your
company's
expectations?

                    Lamp                    FOUND
Does your review process include correction action management?

                    Lamp                    FOUND

-------------------------------------------------------------------------------------
Smelter Mine Name       Parent Smelter    Smelter Mine Country    Status
-------------------------------------------------------------------------------------
Scrap                   A.L.M.T.Corp      CANADA
```

| Name | Status | Description |
|---|---|---|
| Disclosure status | **FULL** | Indicates that the composition of the substances is fully disclosed. |
| | **PARTIAL** | Indicates that the composition of the substances is partially disclosed. In this case, the disclosed percentage is specified. |
| | **UNKNOWN** | Indicates that the materials and substances were either not found or not created. |
| Status of smelters | **FOUND** | Indicates that the smelter entity exists in Teamcenter. |
| | **CREATED** | Indicates that the smelter entity has been created because it did not previously exist in Teamcenter. |
| | **FAILED** | Indicates that the creation of the smelter entity failed due to incomplete information. |
| | **UNKNOWN** | Indicates that the smelter entity could not be found. This may happen if the smelter entities are not created for various reasons: |
| Reason | | In the case of a failure, the reasons are specified. |

# 9. Creating supplier declarations

## Create supplier declarations

In some cases, your supplier is unable to provide you with a material and substance declaration (MSD) for the materials used in a part that they have supplied. In such a case, you must create an abstract declaration yourself.

1. Select and open the vendor part for which you want to create a declaration.

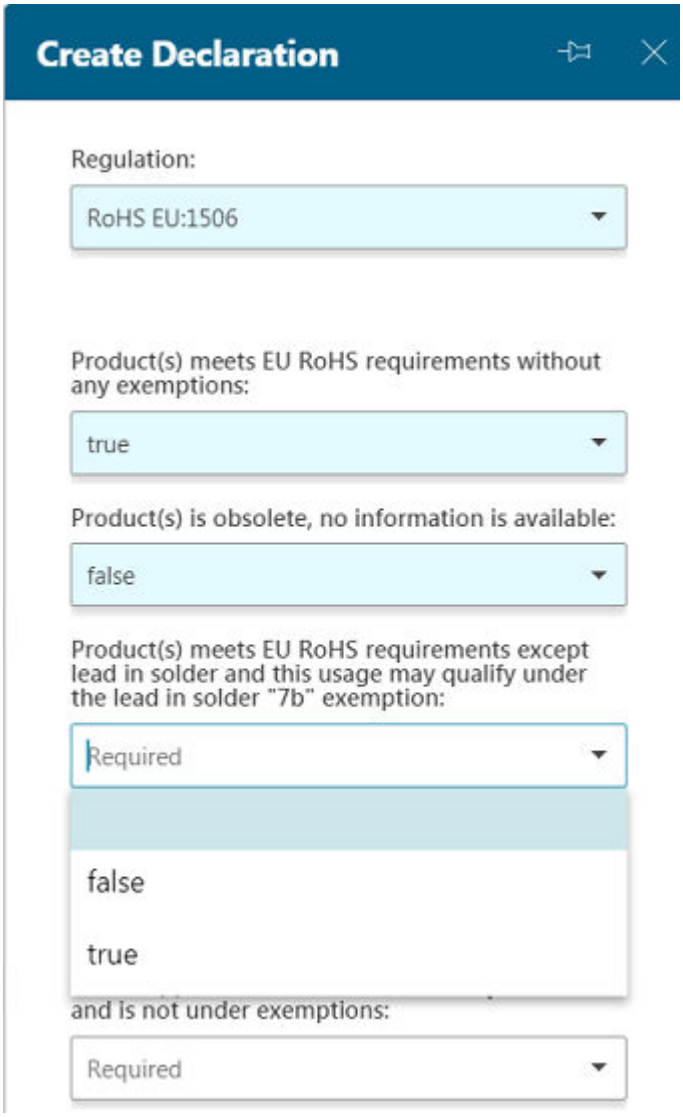
   You can select multiple vendor parts at a time to create declarations for them.

2. Click **More commands** ••• > **Manage** > **Create Declaration**.

3. In the **Create Declaration** panel, select the **Regulation** for which you want to create this declaration.

   If you want to select more than one regulation, you can pin the **Create Declaration** panel.

4. Select the appropriate option for the various criteria in the selected regulation.




5. Upload any supporting documents, such as laboratory reports, if required.

6. Click **Create**.

   Repeat the **create declaration** steps to create declarations for the different regulations that you want.

Once the declaration is created, you receive an alert notification. Click the **Alert** notification on the Global navigation to view the notification list. If you had selected multiple regulations, you receive alert notifications in the order of the selected regulation.

The created declaration is displayed as a list of different queries (corresponding to each criterion for the regulation) in the **Queries** tab.

The supporting documents that you attached are available in the **Attachments** tab > **Files** section.

Note:

Create Declaration" functionality allows user to create declaration for a single regulation at a time. The declaration created in one creation declaration session for the selected regulation(for e.g. RoHS:1506) is carried forward as supplier can send declarations for multiple regulations over the period of time. The abstract declaration(query responses) on the **Vendor Part** are overwritten when the **Create Declaration** command is executed again for the same regulation.

# 10. Reviewing supplier declarations

## Reviewing supplier declarations

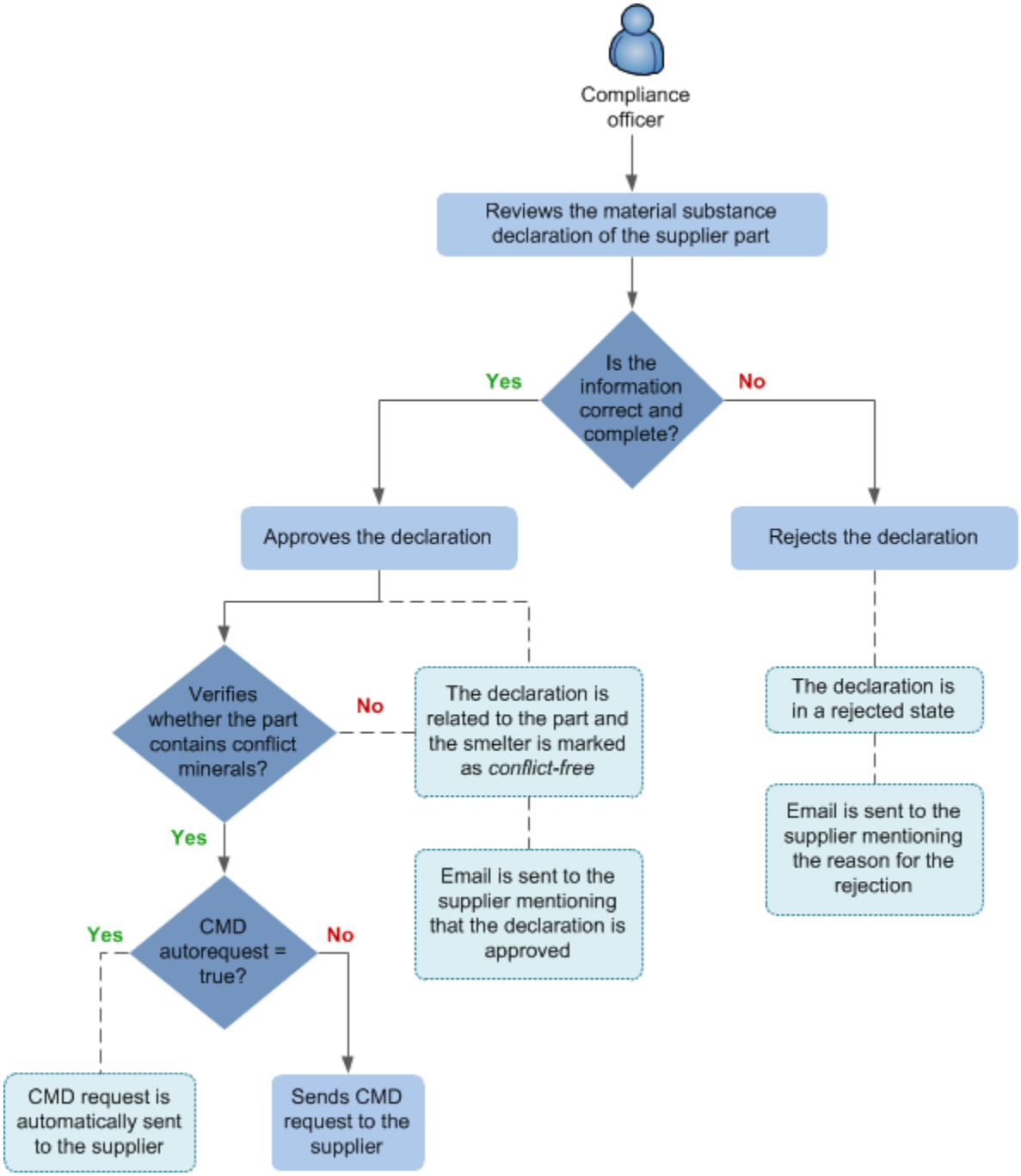
After the declarations such as **material substance declaration**, **conflict mineral declaration**, or **lab reports** are imported, they are available for review in the declaration queue. By default, the imported declarations are in an unapproved state because of which the parts-to-materials or materials-to-analyte (substance) relationship is also in an unapproved state. However, if your support has set the preference for approving the declarations automatically on import, the declaration is automatically in an approved state and will not be available for review.

### Reviewing material substance declarations

While reviewing a material substance declaration, you check whether the information about the materials and substances used in the part is correct and complete. If yes, you approve the material substance declaration. The existing material substance declarations are saved as previous declarations or revisions. The new material substance declaration is attached to the vendor part, and the status of the material substance declaration is set as **Declaration Approved**. The supplier is notified about the approval of the material substance declaration.

If the information about the materials and substances used in the part is not correct or complete, you reject the material substance declaration. On rejecting the material substance declaration, the previously approved material substance declaration is retained and associated with the vendor part, and the supplier is notified about the rejection.

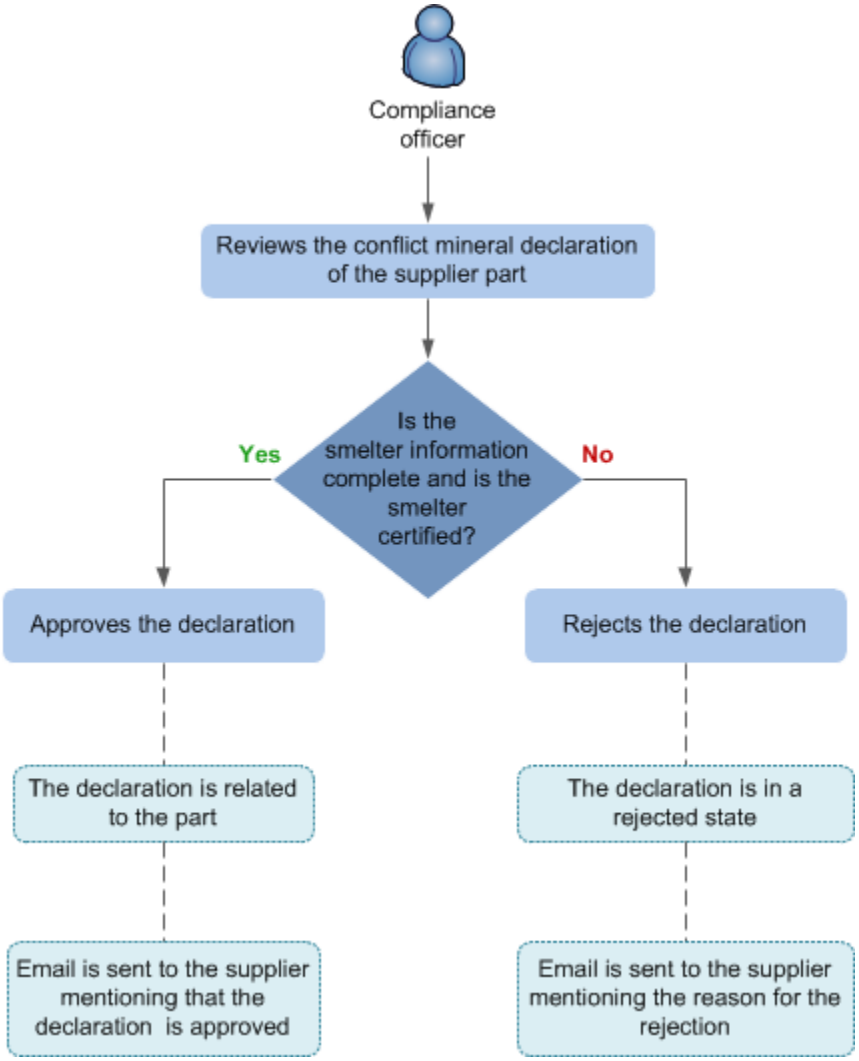
If the part contains tin, tantalum, tungsten, and gold (3TG metals) or their alloys, you request the supplier for a different kind of declaration: a conflict mineral declaration (CMD).




On receiving the conflict mineral declaration from the supplier, you import it.

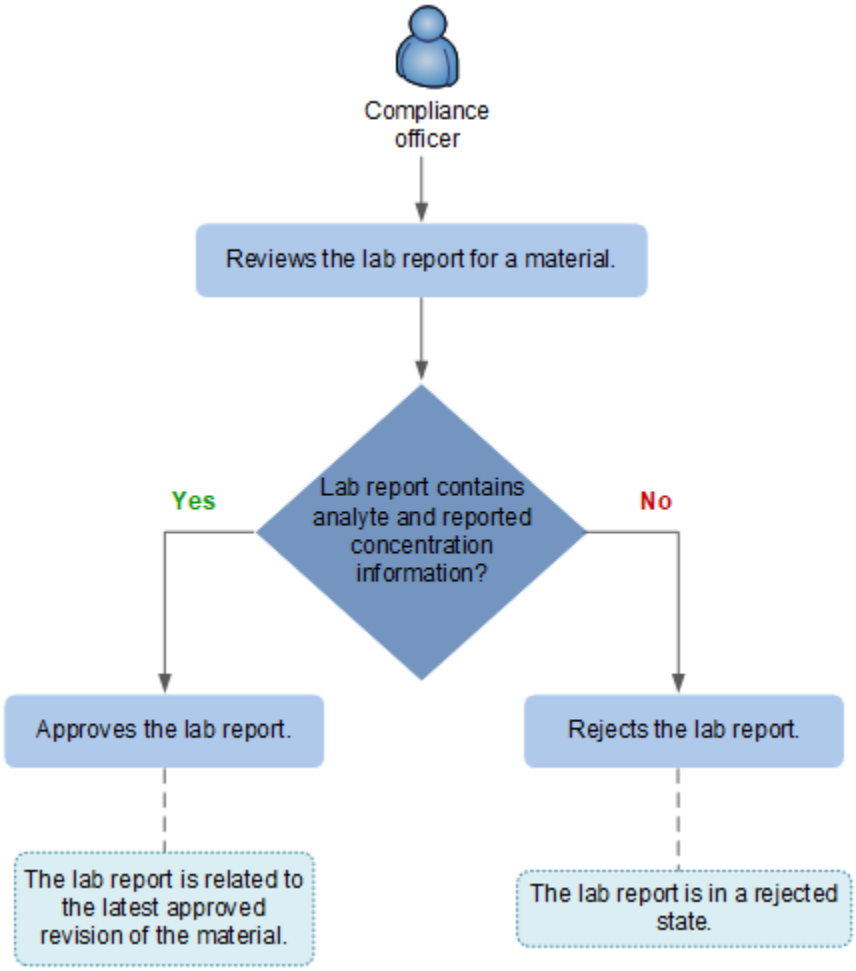
### Reviewing conflict mineral declarations

While reviewing the conflict mineral declaration, you check if the smelter information is complete and whether the smelter is certified. If yes, you approve the conflict mineral declaration. If not, you reject the conflict mineral declaration.




## Reviewing lab reports

While reviewing a lab report, you check if the declaration contains information about the analyte (substance being identified and measured in a chemical analysis) for the particular material and also if the reported concentration is included for the analyte. If yes, you approve the lab report. If not, you reject the lab report.




## Approve or reject declarations

Once the declarations are imported, you review and approve them. Any user belonging to the same group and role (for example, the *compliance officer* role), who has imported the supplier declarations, can review and approve them.

1. On the home page, click the **DECLARATIONS** tile.

   On the **Declarations** page, the **Imports** tab lists declarations for different vendor parts.

2. Select the **Declaration Type** that you want to review and approve, for example, **Material Substance Declaration**, **Conflict Mineral Declaration**, or **Laboratory Reports**.

   > Tip:
   >
   > You can use the **Declaration Filters** to search for a particular declaration based on: the type of declaration, name of the declaration, owner, and so on.

3. Select the desired declaration and click **More commands** ••• > **Manage** > **Approve/Reject Declaration**.

   You can choose a single or multiple declarations and approve or reject them.

   For mass approving multiple declarations:

   a. Use **Selection Mode** located in the results panel toolbar to select the declarations.

   b. Click **More commands** ••• > **Manage** > **Approve/Reject Declaration**.

4. In the **Approve/Reject Declaration** panel, optionally enter your reasons for approval or rejection in **COMMENTS**, and click **Approve** to approve the declaration. If the information about the materials and substances used in the part is not correct or complete, click **Reject**.

Once you approve or reject the declaration, it is removed from **Declarations** for all users belonging to the same user group and role.

# 11. Categorizing parts to filter exemptions and expiry dates

## What is categorization?

You perform a substance compliance check against one or more regulations, such as Restriction of Hazardous Substance (RoHS) to verify if a part used in your company product is environmentally compliant.

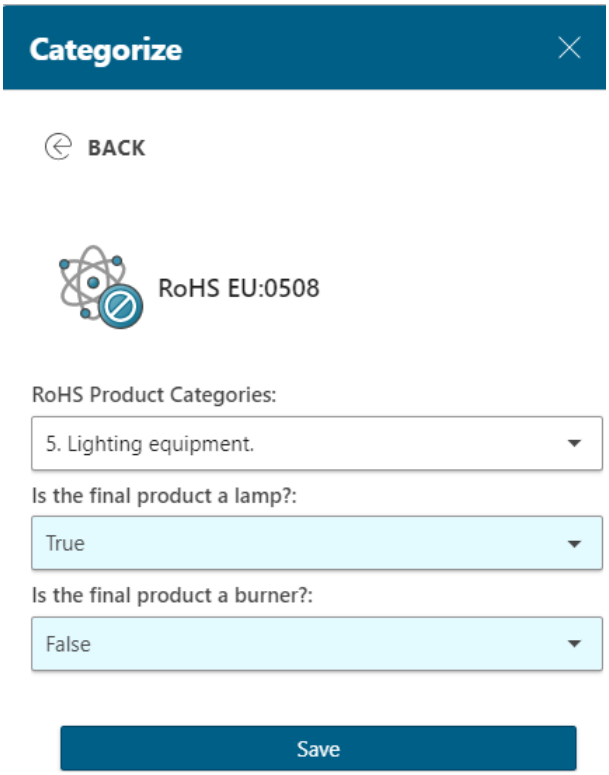
In case of the *RoHS 0508* regulation, some exemptions can have multiple expiration dates depending on the product category or usage. For example, if the product category is *Large household appliances*, such as refrigerators, an exemption could have three expiration dates, but for *Small household appliances*, such as an iron, the same exemption could have a single expiration date.

## Categorize a part

For a particular substance or substance category, to filter out only the applicable exemptions and exemption expiration dates from the list of all available dates, you must first categorize the part or item according to its usage.

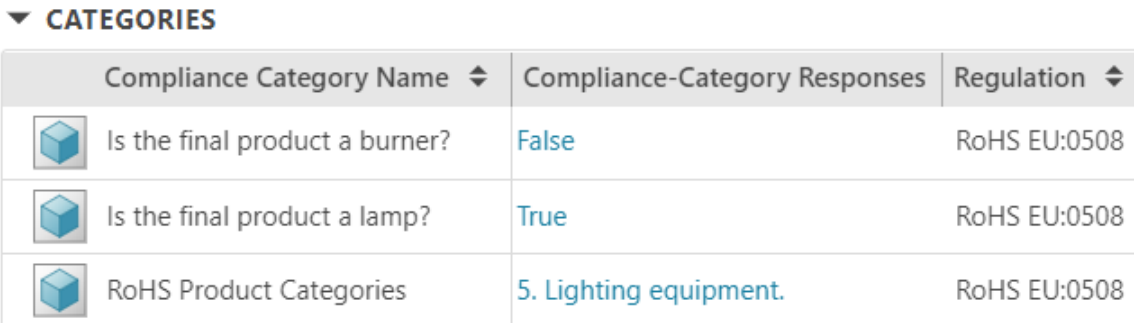
### Categorize a part

1. Navigate to and open the folder containing the part or item that you want to categorize.
2. Select the part and click **Open**.
3. Click **More commands** ••• > **Manage** > **Categorize**.
4. In the **Categorize** panel, select the appropriate regulation.
5. For the selected regulation, select the applicable product category, and answer the other product-related questions.




6. Click **Save**.

   The selected regulation, the category of the part, and other related information are displayed in the **CATEGORIES** section.



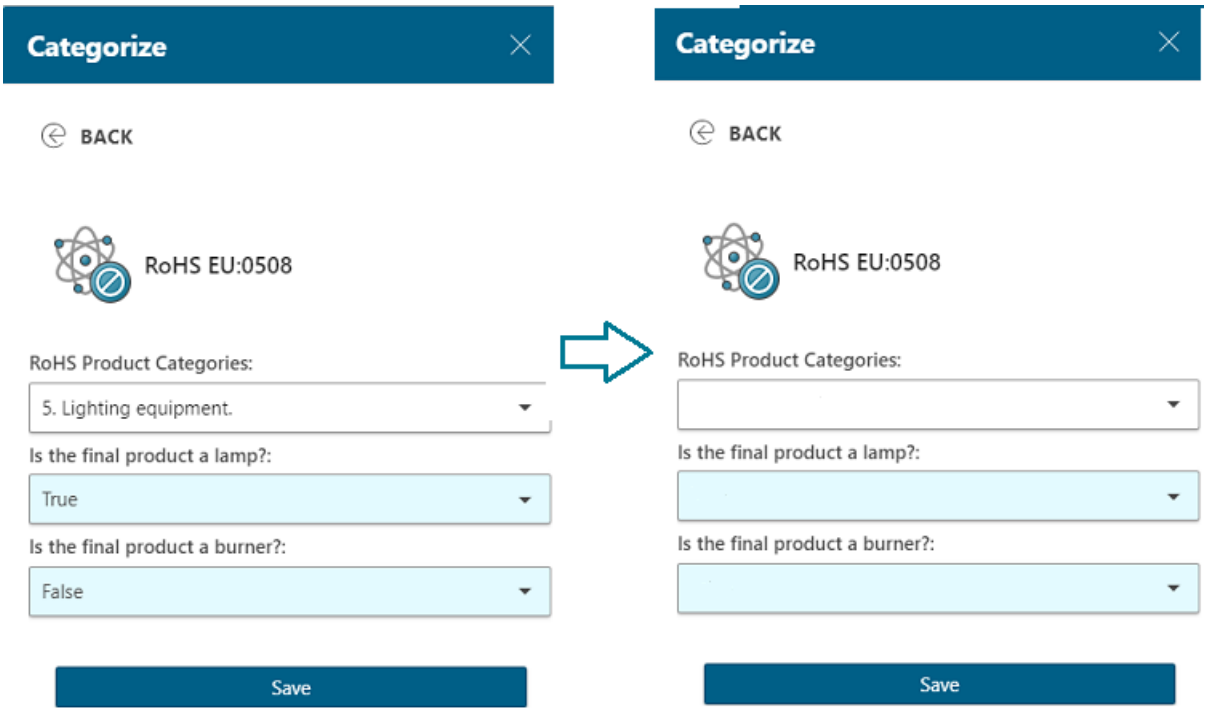

### Recategorize a part

In some cases, you need to recategorize the part. To do this, follow the same steps as specified in the section **categorizing a part**.

### Undo the categorization of a part

In some cases, you may need to remove the categorization for a particular part. To do this:

1. Navigate to and open the folder containing the part or item that you want to categorize.
2. Select the part and click **Open**.
3. Click **More commands** ••• > **Manage** > **Categorize**.
4. In the **Categorize** panel, select the regulation for which you want to remove the categorization.
5. Clear the categories and the related questions that you had selected earlier.




6. Click **Save**.

   The selected regulation, the category of the part, and other related information are removed from the **CATEGORIES** section.

# 12. Check compliance and apply exemptions

## Checking whether a part is compliant

You perform a compliance check against one or more regulations to verify if a part used in your company product is environmentally compliant.

To perform a compliance check on a part, the part must have a non-zero measured mass with an appropriate unit of measure.

> Note:
>
> Your support can set the **cpm.grading.zero.mass.allowed** property to *true* in the *cpm.properties* file to bypass the non-zero measured mass requirement.

It is recommended that the measured mass must be added to the parts using automated material declaration processing where the declaration files are provided by the suppliers of the parts. To automate material declaration processing, Siemens Digital Industries Software recommends **importing supplier declarations** in the form of IPC XML files in Teamcenter.

> Note:
>
> You can also use your specific automation process for populating the mass for parts.

For approved declarations, you can modify attributes, such as the part mass and material information, if required.

For internal parts (design and item revisions), measured mass is the total accumulated mass of the materials that the design or item revision comprises.

> Note:
>
> Compliance Process Manager uses the **cpm.grading.empty.parts.allowed** property available in the *cpm.properties* file to control if an item revision can have no mass specified for the topmost node.

In some cases, you may perform the compliance check again. This is called regrading. Regrading may include instances where:

- The mass of the part has changed.
- Materials are added to or removed from the part.

- Substances are added to or removed from a material.
- An applied exemption has expired.
- The associated supplier declarations or documents have expired.
- The supplier sends a revised declaration.

> Note:
>
> Your support must set the **SUBSCMPL_set_intermediate_parents_regradable** preference to specify whether a part or an assembly can be marked for regrading.

The substance compliance result specifies **the compliance status** of the part.

Consider that you want to check if the lamp used in the headlamp assembly of your car is environmentally compliant. The information related to the lamp is as follows:

| Part | Material | Weight | Unit of Measure | Substance | CAS | Composition (%) |
|---|---|---|---|---|---|---|
| Lamp | Glass bulb | 200.0035 | g | Mercury | 7439-97-6 | 0.1 |
| | | | | Phosphor | 7803-51-2 | 0.9 |
| | | | | Silica | 15468-32-3 | 99 |
| | Filament | 0.3 | g | Tungsten | 7440-33-7 | 100 |
| | Lead-in wire | 0.18 | g | Nickel | 7440-02-0 | 60 |
| | | | | Iron | 7439-89-6 | 40 |
| | Holder | 120 | g | Aluminum | 7429-90-5 | 100 |

You initiate a compliance check for the lamp against conflict minerals and REACH regulations.

The compliance statuses received after the substance compliance check are as follows:

| Regulation | Compliance status |
|---|---|
| Conflict minerals | **PASS** |
| REACH | **Unapproved FAIL** |

The compliance status **PASS** for the conflict mineral regulation indicates that although the lamp has tungsten, a 3TG metal, its smelter is certified. If a smelter is not certified, you receive the compliance status **Unapproved FAIL**. In such cases, you check the reasons for the smelter not being certified and change the compliance status accordingly.

The compliance status received for REACH is **Unapproved FAIL** because as per this regulation, nickel is a restricted substance. However, REACH considers the usage of a substance in such cases. As per REACH, nickel can be used if it is not in direct or prolonged contact with the skin. As the nickel used in the lamp is not in direct contact with the skin, you change the compliance status to **Approved PASS**.

## The different compliance statuses

Your support can configure the labels and icons of the substance compliance status based on the business requirements of your company.

By default, the following statuses are received after a substance compliance check.

| Status icon | Label | Description |
|---|---|---|
|  | **PASS** | Indicates that a part or product is environmentally compliant as it does not contain any restricted substances.<br>This status may also indicate that a part contains:<br>• A restricted substance that is within the threshold of the regulation it has been checked against.<br>• A conflict mineral but the smelter is certified. |
|  | **FAIL** | Indicates that a part or BOM is not environmentally compliant as it contains a substance that exceeds the threshold of the regulation it has been checked against and there are no exemptions available. |
|  | **Error Zero Mass Provided** | For a part, it indicates that the part has no materials defined or has unknown substances.<br>In this case, you must apply **Exemptions** manually and change the compliance status. |
|  | **Unapproved FAIL** | Indicates that the part contains a substance that exceeds the threshold of the regulation it has been checked against. However, there are some exemptions available that can make the part or BOM environmentally compliant.<br>This status may also indicate that the part contains a conflict mineral whose smelter is not certified. |

| Status icon | Label | Description |
|---|---|---|
| | | You must then apply **Exemptions** manually and change the compliance status.<br><br>In the compliance results obtained by checking parts and materials against certain REACH regulations, the compliance status *Unapproved Fail* is replaced with *Declarable*. |
|  | **Approved PASS** | Indicates that you issued a **PASS** status based on some exemptions, usage, or manufacturing process. |
|  | **INVALID** | Indicates that one or more of the following is true for the part:<br><br>• The assembly has changed.<br><br>• The material or substance information has changed.<br><br>• The mass values of the materials have changed.<br><br>• The exemptions applied have expired.<br><br>The substance compliance status of the BOM in which the part is used is not changed to **INVALID** automatically. You must perform the substance compliance check in order to invalidate the BOM. |
|  | **Declarable** | Indicates that one or more substances or substance categories exceed the threshold of the regulation against which it has been checked. If the value exceeds this threshold, the substance is not restricted, but its usage must be declared. |
|  | **Supplier PASS** | Indicates that the supplier has specified in the IPC 1752 A Class A declaration that the product is compliant. |
|  | **Supplier Fail** | Indicates that the supplier has specified in the IPC 1752 A Class A declaration that the product is not compliant. |
|  | **SUPPLIER_UNKNOWN** | Indicates that the supplier has specified *true* as a **response** to one of the following questions in the IPC 1752 A Class A declaration: |

| Status icon | Label | Description |
|---|---|---|
| | | • `Product(s) is obsolete, no information is available`<br>• `Product(s) is unknown, no information is available` |
| | **No Data** | Indicates that the part does not contain any substance information. |

## Initiate a substance compliance check

1. Navigate to and open the appropriate vendor part (and not its revision) for which you want to initiate the compliance check.

2. Click **More commands** ••• > **Manage** > **Compliance Check**.

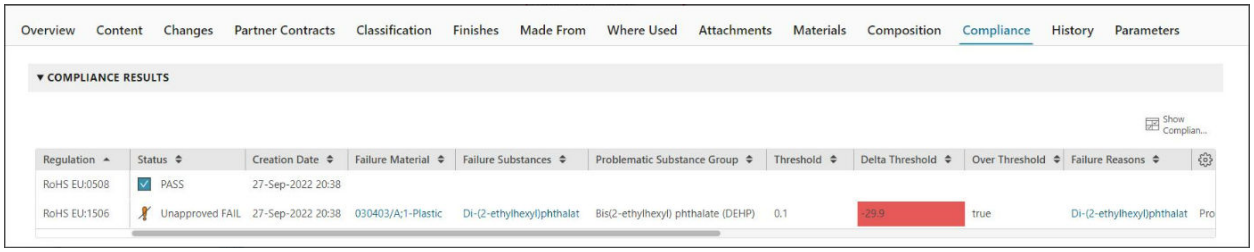
   The **Check Compliance** panel displays a list of all available regulations.


3. Select the desired regulations from the **REGULATIONS** list. Click **Check**.

   A request to perform a substance compliance check is sent to Compliance Process Manager. Depending upon the configuration done, you may receive the compliance check completion notification.Open the notification to check the result status.

   You can view the substance compliance results by either going to:

   - The **Overview** tab and then the **LATEST COMPLIANCE RESULTS** section.




The above threashold values are shown in red color, while the below below threashold values are shown in green color

- The **Compliance** tab and then the **Compliance** section.

## What are exemptions?

An exemption is an allowance granted to a regulation when the elimination of a restricted substance is impossible or when the only available substitution produces more negative rather than positive benefits to the environment. Both, regulations and exemptions, are provided by Compliance Process Manager (CPM), a third-party application that Teamcenter Substance Compliance uses for performing the substance compliance check.

Exemptions are related to specific substances or substance groups, for example, *lead* (substance) or *lead compounds* (substance groups). Exemptions are applied for substances with an **Unapproved FAIL** status.

You can apply a single or multiple exemptions for a substance against a particular regulation. Additionally, an exemption can have expiration dates after which the exemption becomes invalid.

In case of the *RoHS 0508* regulation, some exemptions can have multiple expiration dates depending on the product category or usage. For example, if the product category is *Large household appliances*, such as refrigerators, an exemption could have three expiration dates, but for *Small household appliances*, such as an iron, the same exemption could have a single expiration date.

When a part is checked for compliance, CPM checks whether any exemptions pre-exist, whether they are still valid, and whether the exemption dates are valid or expired.

## Apply exemptions to a part

You can apply exemptions to a part with an **Unapproved FAIL** status either from the **Compliance** tab or from the **DECLARATIONS** tile on the home page.

### Apply exemptions from the Compliance tab

1. Navigate to and open the folder containing the part for which you want to apply an exemption.

2. Select the part and click **Open**.

3. Perform a substance compliance check on the part.

4. Click the **Compliance** tab.

   If the part comprises subproducts, perform the following steps to view the **Compliance** tab:

   a. Go to the **Overview** tab > **MATERIAL DECLARATION BOM ITEM** section.

   b. Select the top node of the part comprising subproducts and open it.

   The **Compliance** section lists all the regulations that you checked the part against and the status of the compliance check. The substance that caused the failure is listed under **Failure Reasons**. Click the substance to see its properties and the list of materials the substance belongs to. The details of the failure results returned by the Compliance Process Manager are listed under **Failure Comments**.

5. Select the row containing the **REGULATION** against which you want to apply the exemption.

   The list of the **APPLICABLE EXEMPTIONS** and the **APPLIED EXEMPTIONS** is displayed.

6. Select the exemption you want to apply and click the **Add** button.

   You can also filter the **APPLICABLE EXEMPTIONS** table to select the **Substance/Substance Category** that caused the compliance failure.

   > Note:
   >
   > In case multiple substances or substance categories caused a compliance failure, you must apply exemptions for each of these substances or substance categories.

   (Optional) If you have categorized the part, based on the category you selected, you get a filtered list of applicable exemptions for the substance causing the failure instead of all available exemption expiration dates.

7. If selected exemptions have multiple expiration dates then a panel is shown to select the appropriate expiration date. You can also choose multiple expiration dates if required.

   . If you have categorized the part, based on the category you selected, you get a filtered list of applicable exemption expiration dates.

   The **APPLIED EXEMPTIONS** table is updated with selected exemptions and the **Compliance** section displays the changed status, the applied exemption (as a hyperlink), and based on what you chose earlier, the single date or multiple dates on which the exemption expires.

### Update exemptions

- Select or deselect an expiration date for an applied exemption:

  1. In the **APPLIED EXEMPTIONS** section, select the exemption for which you want to select or deselect expiration dates.

  2. Click the **Set Expiration Dates** command, and select or deselect an expiration date.

- Remove an existing exemption for a regulation:

  1. In the **APPLIED EXEMPTIONS** section, select the required exemption.

  2. Click the **Remove** button.

### Apply exemptions using the DECLARATIONS tile

1. On the home page, click the **DECLARATIONS** tile.

   Ensure that you have imported the declaration for the required part and **performed a substance compliance check** for it.

2. On the **Declarations** page, the **Imports** tab lists all the declarations. Select the declaration for which you want apply exemptions.

3. The list of the **APPLICABLE EXEMPTIONS** and the **APPLIED EXEMPTIONS** is displayed.

4. Follow the steps starting from step 6 as specified in the section **Apply exemptions from the Compliance tab**.

## Override an existing status

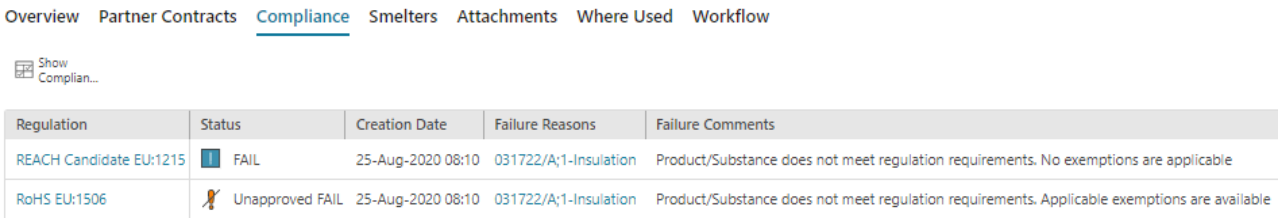
In some cases, such as if a change is expected in a certain regulation, or the substance composition causing the failure is very close to the threshold, you might want to override an existing compliance status.

> Note:
>
> You can override only the latest compliance status for a particular regulation. The list of regulations against which a part is tested for compliance is available in the history table in the **Compliance** tab of the part.

1. Navigate to and open the vendor part (and not its revision) for which you want to override the compliance status.

2. Click the **Compliance** tab.

A list of all regulations that the part is checked against is displayed.




3. Click the row containing the desired **Regulation** and click **More commands** ••• > **Edit** > **Compliance Override**.

4. In the **Override Compliance Status** panel:

   a. Select the new **Status** with which you want to override the existing one.

   b. Select the appropriate **Reason** to override the existing status.

   c. (Optionally) Enter **Notes** to provide more details for overriding the status.

   d. Click **Override**.

   For the selected regulation, the **Compliance** section displays the changed status.

> Note:
>
> The overridden result is retained irrespective of multiple compliance checks for the same declaration for which the override is done, and is replaced only when a compliance check is performed for a new declaration.


## Auto grade a part or assembly

Based on your organization's policies, you can also auto grade parts and assemblies. To do this, your support must set up the autograding (compliance check) utilities.

The following list have some compliance result properties used during autograding of parts:

| | |
|---|---|
| **Is Active** | For a part on its respective compliance result, if this property value is **False**, it implies that there is a impact due to recent substance or material change, and the parts are not graded post that change. |
| **Lookup candidates** | **Lookup candidates** are those parts, for which the compliance results display the **Lookup Candidate**, **Is Active**, and **Is Latest** property values as **True**. |
| **Regradable Candidates** | The **Regradable Candidates** are the parts which need grading (compliance check) because of the corresponding lookup candidate change. |
| **Autograding Candidate** | The **Autograding Candidates** are the parts against which compliance check needs to be performed. |

# 13. Viewing material, substance, and compliance information

## View material, substance, or analyte information

You can view the material and substance information for an item revision, a vendor part, or an assembly either in the **Composition tab** or in the **declaration** of the item revision, vendor part, or assembly. In case of materials containing analytes (substances that are identified and measured in a chemical analysis), you can view the analyte information in the **Lab Reports tab** of the material.

### View information in the Composition tab of the part

1. Navigate to and open the item revision, vendor part, or assembly for which you want to view the material and substance information.

2. Click the **Composition** tab to view the details of all materials and substances related to the item revision, vendor part, or assembly.

   > Note:
   >
   > The **Composition** tab is visible only if you have approved the declaration for the particular item.

   Consider an example of an IPC XML declaration containing a wheel assembly. You can view the composition of the assembly as either one of the following:

   **Bill of Materials**

   To view all the materials used in the various subassemblies and parts in the wheel assembly, select the root **Wheel Assembly** and the **Bill of Materials** option.


View:

Bill of Materials  Bill of Substances

| Material | Mass (Grams) | Cumulative % | Substance | CAS | Mass (Grams) | % of Material | Parts |
|---|---|---|---|---|---|---|---|
| 026920/A:1-Rubber | 200 | 20 | | | | | 036900/A:1-Radial Cord Body |
| | | | Di-(2-ethylhexyl)p... | 117-81-7 | 60 | 30 | |
| | | | Polyvinylchloride | 9002-86-2 | 140 | 70 | |
| 031172/A:1-Copper | 400 | 40 | | | | | 036899/A:1-Beads |
| | | | Copper | 7440-50-8 | 400 | 100 | |
| 033710/A:1-Aluminum alloy | 200 | 20 | | | | | 036898/A:1-Cap |
| | | | Silicon | 7440-21-3 | 1 | 0.5 | |
| | | | Aluminium (metal) | 7429-90-5 | 196 | 98 | |
| | | | Magnesium (metal) | 7439-95-4 | 2 | 1 | |
| | | | Iron | 7439-89-6 | 1 | 0.5 | |
| 033558/A:1-Steel | 200 | 20 | | | | | 036901/A:1-Core |
| | | | Carbon | 7440-44-0 | 1 | 0.5 | |
| | | | Manganese | 7439-96-5 | 2 | 1 | |
| | | | Iron | 7439-89-6 | 197 | 98.5 | |

Here, **Mass (Grams)** is the total mass of a material used in one or more parts (as applicable), and **Cumulative %** is the total percentage of that material in all the subassemblies and parts in the assembly.

To view the composition of a specific subassembly, open the subassembly, and expand each subproduct to view its composition. The root assembly shows the composition of the entire assembly.

You can freeze or adjust the columns to view the details.

In cases where a material is used in multiple parts and not all of these are visible in the **Bill of Materials** table, you can find the details about these parts in the **Information** panel. To view this information, select the appropriate material row in the table, and click **Information**ⓘ.

### Bill of Substances

To view all the substances used in the various subassemblies and parts in the wheel assembly, select the root **Wheel Assembly** and the **Bill of Substances** option.


View:

○ Bill of Materials ◉ Bill of Substances

| Substance | CAS | Mass (Grams) | Cumulative % | Materials | Parts |
|---|---|---|---|---|---|
| Aluminium (metal) | 7429-90-5 | 196 | 19.6 | 033710/A;1-Aluminum alloy | 036898/A;1-Cap |
| Carbon | 7440-44-0 | 1 | 0.1 | 033558/A;1-Steel | 036901/A;1-Core |
| Copper | 7440-50-8 | 400 | 40 | 031172/A;1-Copper | 036899/A;1-Beads |
| Di-(2-ethylhexyl)phthalat | 117-81-7 | 60 | 6 | 026920/A;1-Rubber | 036900/A;1-Radial Cord Body |
| Iron | 7439-89-6 | 198 | 19.8 | 033558/A;1-Steel, 033710/A;1-Aluminum alloy | 036901/A;1-Core, 036898/A;1-Cap |
| Magnesium (metal) | 7439-95-4 | 2 | 0.2 | 033710/A;1-Aluminum alloy | 036898/A;1-Cap |
| Manganese | 7439-96-5 | 2 | 0.2 | 033558/A;1-Steel | 036901/A;1-Core |
| Polyvinylchloride | 9002-86-2 | 140 | 14 | 026920/A;1-Rubber | 036900/A;1-Radial Cord Body |
| Silicon | 7440-21-3 | 1 | 0.1 | 033710/A;1-Aluminum alloy | 036898/A;1-Cap |

Here, **Mass (Grams)** is the total mass of a substance used in one or more materials, and **Cumulative %** is the total percentage of that substance in all the materials in the different parts in the assembly.

You can sort, filter, or freeze columns to view the details.

Note:

When multiple vendor parts are related to an item revision, only one of these vendor parts is used for calculating the composition based on the following criteria:

- If only one vendor part is marked as *preferred*, then this part is used for composition calculation.
- If multiple vendor parts are marked as *preferred*, then only one of these preferred vendor parts is used for composition calculation.
- If none of the vendor parts are marked as *preferred*, then one of them is used for composition calculation.

## View material information using a declaration

1. On the home page, click the **DECLARATIONS** tile.

   On the **Declarations** page, the **Imports** tab lists all the declarations that you have imported.

2. Select the **Declaration Type** that you want to view, for example, **Material Substance Declaration**, **Conflict Mineral Declaration**, or **Laboratory Reports**.

3. For the declaration type **Material Substance Declaration**, click the **Composition** tab.

   If a vendor part contains subproducts, the **Composition** tab displays the rolled up material and substance information.

   a. (Optional) To view the IPC XML document for the selected declaration, open the declaration in the **Attachments** tab > **DECLARATIONS** section.

   b. Click the **Attachments** tab.

   c. In the **Files** section, select the IPC file to download (☁) and view the details.

4. For the declaration type **Conflict Mineral Declaration**, click the **Smelters** tab to view the 3TG metals and the certified smelters.

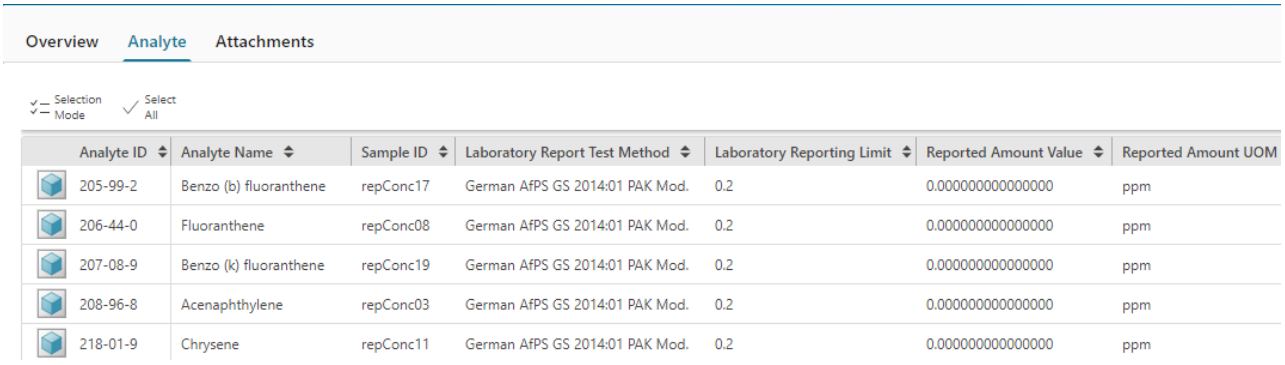
5. For the declaration type **Laboratory Reports**, click the **Analyte** tab.

   The details, including the ID (similar to a CAS number), the reporting limit and amount, and the test method used, are listed for each analyte in the lab report.

### View analyte information in the Lab Reports tab of the material

1. Navigate to and open the material for which you want to view the analyte information.
2. Click the **Lab Reports** tab to view the details of all analytes related to the material.
3. Select and open the lab report located in the **Laboratory Report ID** column.
4. Click the **Analyte** tab.

   The details, including the ID (similar to a CAS number), the reporting limit and amount, and the test method used, are listed for each analyte in the lab report.




| Analyte ID | Analyte Name | Sample ID | Laboratory Report Test Method | Laboratory Reporting Limit | Reported Amount Value | Reported Amount UOM |
|---|---|---|---|---|---|---|
| 205-99-2 | Benzo (b) fluoranthene | repConc17 | German AfPS GS 2014:01 PAK Mod. | 0.2 | 0.000000000000000 | ppm |
| 206-44-0 | Fluoranthene | repConc08 | German AfPS GS 2014:01 PAK Mod. | 0.2 | 0.000000000000000 | ppm |
| 207-08-9 | Benzo (k) fluoranthene | repConc19 | German AfPS GS 2014:01 PAK Mod. | 0.2 | 0.000000000000000 | ppm |
| 208-96-8 | Acenaphthylene | repConc03 | German AfPS GS 2014:01 PAK Mod. | 0.2 | 0.000000000000000 | ppm |
| 218-01-9 | Chrysene | repConc11 | German AfPS GS 2014:01 PAK Mod. | 0.2 | 0.000000000000000 | ppm |

> Note:
>
> In this example, the **Reported Amount Value** value *0.0000000000000000* for an analyte could indicate that the particular analyte could be either *Not Applicable* or *Not Detected*.

## View declaration information

To verify if a supplier part is environmentally compliant, you obtain information about the materials and substances used in the part from the supplier. You can view these declarations and their details after you import them in Teamcenter.

In some cases, you require information about analytes (substances whose chemical constituents are being identified and measured). Laboratories conduct different chemical analysis on a material and provide a lab report detailing their findings. You can view these lab reports and their details after you import the lab reports in Teamcenter.

### View unprocessed declarations

Unprocessed supplier declarations are declarations received from the suppliers that have not yet been approved or rejected. You can import these declarations manually.

On the home page, click the **DECLARATIONS** tile. On the **Declarations** page, the **Imports** tab lists all declarations that you have imported.

You can choose a single or multiple declarations and approve or reject them. If required, you can review the supporting documents attached with the part information, such as lab reports, before approving or rejecting the declaration. You can also select a declaration and apply exemptions to it.

### View declarations details

1. On the home page, click the **DECLARATIONS** tile.

2. On the **Declarations** page, in the **Imports** tab, select the **Declaration Type** that you want to view, for example, **Material Substance Declaration**, **Conflict Mineral Declaration**, or **Laboratory Reports**.

3. Select the declaration for which you want to view the details.

   Based on the type of declaration you selected earlier and the type of IPC XML imported, you can view the following information specified by the declaration. Click the respective tab to view the details.

| Tab | Purpose |
|---|---|
| **Compliance** | Specifies the regulations, compliance status, and applied exemptions (if any) if the part has been checked for compliance against specific regulations. |
| **Composition** | Displays the material and substance composition of an item revision, assembly, or part as either a **Bill of Materials** or a **Bill of Substances**. |
| **Material Declaration BOM Item** | Displays the top node of an assembly if the imported IPC XML document is for an assembly comprising subproducts. |
| **Substance Categories** | Lists the substance categories in the declaration along with regulations, threshold values, and so on. |
| **Queries** | Lists the regulations and the answers to queries indicating any substances of concern that are used in the part and that are above the threshold value. |
| **Smelters** | Lists the smelters and refiners that have provided the 3TG metals used in the part. |
| **Attachments** | Contains the declaration revision. You must open the declaration revision to be able to download it and to view its contents. |

| Tab | Purpose |
| --- | --- |
| **Overview** | Provides details about the lab report, such as the materials tested, the testing laboratory, and so on. |
| **Analyte** | Lists the analyte ID, reported concentration, and other details for each analyte in the lab report. |

Example:

If you selected **Material Substance Declaration** as the **Declaration Type** and imported an IPC 1752 Class A XML declaration for an assembly containing subproducts, you see the following tabs:

- **Composition**
- **Supplier Part Hierarchy**
- **Attachments**

## View compliance and regulation information

You can view the substance compliance information such as a regulation the part is checked against, its compliance status, the applied exemptions, exemption expiration dates, and failure reasons.

1. Navigate to and open the folder in which the vendor part for which you want to view the compliance information is located.
2. Select the desired vendor part and click **Open**.
3. Click the **Compliance** tab.

   A list of all regulations that the part is checked against is displayed.

   Alternately, click the **Overview** tab and view the compliance information in the **Latest Compliance Results** section.
4. Open the desired **Regulation** to view the property details and the rules that are applied.

Note:

You can also view the history of compliance statuses for a part, including older compliance results.

To do so:

1. **Open** the part whose compliance history you want to view.

2. Click the **Compliance** tab.

3. Click **Compliance History toggle** to display the previous compliance results for the part. The results are sorted based on regulations and the date on which the part was checked against the particular regulation.

> Tip:
>
> To view only the latest compliance results, click **Compliance History toggle** again.