GLOSSARY: Chemical Test Reports Portal

--> This document is a guide for selecting the correct Material type and applicable sub-type(s) for the item you supply to Texas Instruments (TI).
--> The terminology used in TI systems may not exactly match the common name you use for an item. Likely alternative names are provided to help confirm the correct choice(s).
--> The list of Sub types for items constructed of multiple homogeneous materials may include more choices than your product uses. Reports are required only for Sub types that are applicable to your product.

--->> **NOTE**: With the exception of Leadframe, each complex item that is constructed from homogeneous Sub types offers 3 options for loading the required reports:
1. Upload reports for each of the applicable Sub types individually. Reports for each Sub type are loaded in separate upload operations.
2. Upload a single merged or concatenated .pdf type file containing all applicable test reports in one operation after selecting the "Assembled xxxx" Sub type.
3. If testing was performed on the item as a single homogeneous unit you can upload that file using the "Assembled xxxx" Sub type.
Warning: Reports using this option may be rejected if TI does not agree the item fits the definition of homogeneous.

Material type	Material sub types / parts	Other common names	Description and guidance for selection
Adhesives			Generic term for adhesive materials not specifically defined otherwise (not "Mount compound or Die attach").
Antenna	Assembled Antenna Antenna Element Electrode Encapsulant Plating 1 Plating 2 Substrate		Component or assembly that functions as an antenna. See notes at the top of this table for additional guidance.
Base			Section of IC package prior to assembly, typically in metal or ceramic.
Capacitor	Assembled Capacitor Dielectric Material Plating 1 Plating 2 Terminal Material 1 Terminal Material 2	Chip Capacitor, Chip Cap, Cap	Standalone capacitor device, all mounting types. See notes at the top of this table for additional guidance.
Ceramic Body			Body of ceramic packages, often attached to a base or substrate and then covered by a lid.
Clip			Metal component often used in stacked semiconductor devices.
Coating		Film, Polyimide, Overcoat, Overmold	Liquid, paste or film material used as a protective coating. Your product may map to Encapsulant instead.
Connector	Assembled Connector Body Material Contact Material 1 Contact Material 2 Housing Plating 1 Plating 2	Socket, plug, interface	Component in an assembly that functions as an electrical interface to other items. See notes at the top of this table for additional guidance.
Crystal/Oscillator	Assembled Crystal / Oscillator Crystal Chip Package Lid Adhesive Terminal Material Plating	Oscillator, Clock Generator	Device typically used to generate high frequency signals. See notes at the top of this table for additional guidance.
Dam			Structure in specialized flows that guides or blocks molded materials.
Diplexer	Assembled diplexer Body material Electrode material Terminal material Plating		Electronic device that merges signals. See notes at the top of this table for additional guidance.
Discrete Semiconductor	Assembled discrete device Semiconductor die Leadframe Leadframe plating Mount compound - solder Mount compound - epoxy Bond wire 1 Bond wire 2 Mold compound Clip		Typically defined as devices functioning as a single transistor or diode. See notes at the top of this table for additional guidance.
Encapsulant			Liquid, paste or film material used as a protective coating. Your product may map to Coating instead.
Filter	Assembled filter Ceramic Core Electrode material 1 Electrode material 2 Plating 1 Plating 2		Electronic device that blocks selected signal frequencies. See notes at the top of this table for additional guidance.
Glass		Tube, Glass Tube, Glass Cover, Glass Lid	A complete or partial enclosure used in electronics assemblies.
Header	Assembled Header Braze Base Metal Pins Substrate		Usually a bottom section of an IC package upon which a body and/or lid are attached to complete the package assembly. See notes at the top of this table for additional guidance.

Material type	Material sub types / parts	Other common names	Description and guidance for selection
Heat spreader			Integral component for thermal dissipation in an IC package.
Heatsink			Thermal dissipation component externally attached to a completed IC.
IC	Assembled IC Semiconductor die Leadframe Leadframe plating Mount compound - solder Mount compound - epoxy Bond wire 1 Bond wire 2 Mold compound Solder bump Underfill Lid Heat spreader Lid attach material Pad plating Backside coating Clip		Semiconductor IC product that is fully assembled for board mounting. See notes at the top of this table for additional guidance.
Inductor	Assembled Inductor Clip Wire base metal Wire insulating layer Resin / Potting Compound Core Marking Ink Solder Paste 1 Solder Paste 1 Adhesive 1 Adhesive 2 Base / Substrate Terminal Material 1 Terminal Material 2 Cap / Lid Spacer Tube / Bobbin		Standalone inductor device. See notes at the top of this table for additional guidance.
Ink			Liquid ink primarily used for marking on assembled products.
Leadframe	Pre-Plated Option: Base Metal only Pre-Plated Option: Plating only Unplated Option: Bare Leadframe Unplated Option: Post Plating		Metal frame for mounting bare die and connecting with wire bonds. Refer Appendix A: "Leadframe - more info" for more details on the unique requirements of this Material type.
Lid	Base metal + plating Unplated base metal Plating 1 Plating 2 Seal ring Seal glass		Cover of an assembled IC that may or may not be thermally bonded. NOTE: Plated lids used on ceramic package types typically treat the base metal and plating as separate homogeneous items and separate test reports are needed in this case. Pre-plated lids for other package types are typically treated as a single homogeneous unit and are tested as such.
Magnet		Magnetic Core, Ferrite Core, Ferrite Rod	Standalone magnet or magnetic device.
Mold compound			Plastic encapsulant material, typically Epoxy based and used in cavity molding operations.
Mount compound / Die attach	Metallic (Solder Paste) Non-Metallic (Epoxy / Adhesive)	Epoxy, Adhesive, Solder paste, Conductive (or non-conductive) Epoxy	A general group of materials used to attach semiconductor die or other components to substrates, leadframes, etc. Solder paste is considered to be a mount compound in this context. Choose either metallic on non-metallic as the applicable sub-part for your product. Metal filled (conductive) epoxy materials are not considered metallic in this context because they are part non-metallic.
Opto Electronics	Assembled Opto Component Semiconductor die Mount Compound Solder Mount Compound Epoxy Substrate Lead Frame Lead Frame Plating Mold Compound Bond Wire 1 Bond Wire 2 Coupling Gel Potting Resin	Opto couplers, etc.	Components that include an optical interface. See notes at the top of this table for additional guidance.
Other Mechanical Parts			General term for parts not otherwise defined. Typically non-electronic components.
PCB	Assembled PCB Laminate Material 1 Laminate Material 2 Routing Metal Plating 1 Plating 2 Solder Mask - Surface 1 Solder Mask - Surface 2	Board, PWB	Printed Circuit Board used to interconnect electronic components. Can also be a multi-layer component that integrates other components internally (SIP). Note: Your product may be mapped to Material type substrate instead. See notes at the top of this table for additional guidance.

Material type	Material sub types / parts	Other common names	Description and guidance for selection
Pin			Standalone connector pin attached to a product during assembly.
Plating			
Resistor	Assembled resistor Inner electrode 1 Inner electrode 2 Inner electrode 3 Inner protective coating Plating 1 Plating 2 Plating 3 Resistive element material 1 Resistive element material 2 Resistive element material 3 Base / Substrate material 1 Base / Substrate material 2 Outer electrode 1 Outer electrode 2 Outer electrode 3 Overcoat / Encapsulant	Chip resistor	Standalone resistor device. See notes at the top of this table for additional guidance.
Semiconductor device			Bare semiconductor die, prior to wire bonding or bumping.
Shield			Metallic structure, typically found in radio capable products.
Socket	Assembled Socket Contact material Plating 1 Plating 2 Plating 3 Body material		Structure for receiving / inserting an electronic component. See notes at the top of this table for additional guidance.
Solder ball		BGA, BGA ball	Sphere of solder material attached to components for PCB mounting.
Spacer		Separator, Tab	Any of several items used as a support or separator in assembled products.
Substrate	Assembled Ceramic Substrate Assembled Organic Substrate PCB Material 1 PCB Material 2 Plating Routing Metal Solder Mask	Laminate	Specialized item used for mounting and interconnecting electronic items. See notes at the top of this table and the "Substrate - more info" tab for additional guidance. Note: Your product may be mapped to Material type PCB instead.
Switch/Relay	Assembled Switch or Relay Semiconductor die Lead Frame Lead Frame Plating Mount Compound Solder Mount Compound Epoxy Bond Wire 1 Bond Wire 2 Mold Compound		Components performing switching functions. See notes at the top of this table for additional guidance.
Thermistor	Assembled Thermistor Inner electrode 1 Inner electrode 2 Plating 1 Plating 2 Plating 3 Resistive element material 1 Resistive element material 2 Resistive element material 3 Outer electrode 1 Outer electrode 2 Overcoat / Encapsulant		Electronic resistor device that is highly sensitive to temperature change. See notes at the top of this table for additional guidance.
Transformer	Assembled Transformer Core Base Terminal 1 Material Terminal 2 Material Tape 1 Material Tape 2 Material Mount Compound Solder Mount Compound Epoxy Protective Coating Marking Ink Tube / Bobbin Wire Base Metal Wire Insulation		Transformer devices. See notes at the top of this table for additional guidance.
Underfill			Specialized material used to fill gaps under mounted components.
Wire	Bond Wire - Plated or Unplated Magnet Wire - Base Metal Magnet Wire - Insulation	Bond wire, magnet wire	One of a number of variants of metal wire used for connections. All uninsulated wire is considered to be bond wire. Wire comprised of a base metal and an insulating layer is called Magnet Wire regardless of the application.

TI Information - Selective Disclosure

Appendix A: Leadframe - more info

Material type	Material sub types / parts	Other common names	Description and guidance for selection
Leadframe	Pre-Plated Option: Base Metal only Pre-Plated Option: Plating only Unplated Option: Bare Leadframe		Metal frame for mounting bare die and connecting with wire bonds.

TI follows the convention of interpreting leadframe base material and the external surface plating material as separate homogenous items.

Pre-plated leadframes are defined as leadframes that are delivered with the external contact areas already plated with the final surface finish. Unplated leadframes are delivered without the final external finish applied. Note that spot plating of bonding areas that will not be external to the finished product is considered part of the base metal sub-type. Leadframes with bare external surfaces and internal spot plating are still Unplated.

The primary reason for both Pre-Plated and Unplated options is the supplier responsibility is the same for both sub-types in the Pre-Plated case, but the responsible supplier for the Unplated bare leadframe and the final post-plated finish are often not the same.

As a result, separate test reports for the Base Metal and the Plating sub-types must be provided. To help ensure both sub-types are addressed there is no option for loading a merged or concatenated file containing both reports. Loading the same merged file twice as the report for the Base Metal and Plating sub-types is an allowed alternative, as long as that merged file is comprised of separate base metal and plating reports.

The procedure for loading reports for unplated leadframes and then for the plating finish applied during assembly is the same as for pre-plated leadframes with the exception of using the sub-type Unplated Leadframe rather than Base Metal.

Appendix B: Substrate - more info

Material type	Material sub types / parts	Other common names	Description and guidance for selection
Substrate	Assembled Ceramic Substrate Assembled Organic Substrate PCB Material 1 PCB Material 2 Plating Routing Metal Solder Mask	Laminate	Specialized item used for mounting and interconnecting electronic items.

--->> **Reminder**: Complex items like substrates that are constructed from multiple homogeneous Sub types offer 3 options for loading the required reports.

TI material content reporting treats assembled substrates as homogeneous items. Customer and market-specific exceptions are handled on a case-by-case basis. TI also recognizes that limitations of testing capabilities or even the desire to proactively address the exception cases can lead to testing of the individual materials used in the manufacture of substrates rather than testing of the finished product itself. As a result the default is that TI accepts both types of responses for substrates. This leads to these options for valid responses:

1. Upload reports for each of the applicable Sub types individually. Reports for each Sub type are loaded in separate upload operations.
   - Note that the list of sub-types is generic in nature. Your product may not include all sub-types. Reports are only required for the sub-types used in your product.
2. Upload a single merged or concatenated .pdf type file containing individual reports for all applicable after selecting the "Assembled xxxx" Sub type.
3. Upload a single report using the "Assembled xxxx" Sub type if testing was performed on the item as a homogeneous unit. Exceptions will be handled on a case-by-case basis.