RoHS / RoHS Recast – PVC Tech Corp Compliance Summary

RoHS & RoHS Recast
Restriction of Hazardous Substances Directive

RoHS (2002/95/EC) is a European Directive restricting the use of specific heavy metals and flame retardants in electrical and electronic equipment. Effective July 2011, this directive was updated to what is now known as RoHS Recast or RoHS 2 (2011/65/EU). RoHS Recast redefined specific terminology, extended the scope of RoHS and includes new CE marking and declaration of conformity requirements.

The RoHS substance restrictions are as follows:

<table>
<thead>
<tr>
<th>Heavy Metals</th>
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<tr>
<td>Lead</td>
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<tr>
<td>Mercury</td>
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<tr>
<td>Cadmium</td>
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<td>Hexavalent Chromium</td>
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<table>
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<tr>
<th>Flame Retardants</th>
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<tr>
<td>PBB</td>
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<tr>
<td>Polybrominated Biphenyls</td>
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<tr>
<td>PBDE</td>
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<td>Polybrominated Diphenyl Ether</td>
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Limits for all Heavy Metals & Flame Retardants EXCEPT Cadmium:

Maximum Permitted Concentration of **0.1% or 1000 ppm** (parts per Million) by weight of Homogenous Material

Limits for Cadmium:

Maximum Permitted Concentration of **0.01% or 100 ppm** (parts per Million) by weight of Homogenous Material.

What is ppm (parts per million)?
Denotes the amount of a given substance in a total amount of 1,000,000 regardless of the units of measure used as long as they are the same. E.g. 1 milligram per kilogram. 1 part in 10^6.

What does “Homogenous material” mean?
Homogenous material refers to any single substance that could NOT (theoretically) be separated mechanically and is “of uniform composition throughout.” Examples aside from plastics would be ceramics, glass, metals, alloys, paper, board, resins and coatings.

RoHS Recast (RoHS 2) changed the following:

- Redefined the term “EEE” (Electrical and Electrical Equipment) from its original RoHS 1 definition.
- Expanded the directive’s scope to now include medical devices, monitoring and control instruments, and EEE products not included under the previous ten (10) categories unless specifically excluded.
- RoHS Recast is also now a CE Marking Directive, where compliance to RoHS and RoHS 2 is required before products could be CE marked. This must also be apparent in the EEE Declaration of Conformity. This would be in addition to any other existing CE marking requirements.
RoHS / RoHS Recast – PVC Tech Corp Compliance Summary

What is an EEE?

RoHS Recast or RoHS 2 updated the definition of EEE (Electrical and Electrical Equipment) as all equipment that has at least one intended function dependent on an electrical current or electromagnetic fields, or that generates or transfers or measures such currents and fields.

Before RoHS 2, the definition of an EEE was limited to equipment whose “primary” function relied on an electrical current. However, the updated definition under RoHS 2 now also includes products where a current is used or required for secondary or non-primary functions.

For example:
Under the original RoHS definition of EEE: A teddy bear that plays a melody when a button is pushed would not have been considered an EEE since its primary function is as a plush or cuddly toy, but under today’s RoHS Recast, it would need to comply as an EEE, even if the electrical portion of the toy’s operation is secondary.

Categories of Products covered by the regulation after RoHS Recast (RoHS 2):

1. Large Household appliances
2. Small Household appliances
3. IT and Communications equipment
4. Consumer Equipment
5. Lighting Equipment
6. Electrical and electronic tools
7. Toys, leisure and sports equipment
8. Medical Devices, including In Vitro medical devices – added under RoHS 2
9. Monitoring and Control Instruments – added under ROHS 2
10. Automatic Dispensers
11. All other electrical and electronic equipment not covered by any of the categories above. – added under RoHS 2

Exemptions under RoHS Recast:

1. Equipment and Products where RoHS and RoHS Recast would not apply (Article 2 Point 4 and Article 4 Points 4 & 5)
2. General Exemptions not listed under Annex III.
3. Exemption specific to Medical Devices and Monitoring and Control Instruments in Annex IV.

But you sell PVC and polymer films, not electronics

Correct. Still our films are a homogenous material and are often incorporated into components of EEE products.

The only way a polymer film could meet RoHS requirements is to restrict the substances noted to the limits specified during manufacturing. There is no way to alter the film’s composition once produced as these substances cannot be extracted.

If you require a RoHS compliant film, it is best to inform your representative at time of inquiry and prior to purchase.
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Is Packaging required to comply under RoHS or RoHS Recast?

No, Packaging is not considered an EEE and is outside the scope of RoHS/RoHS 2.

This is often confused with the EU Packaging Directive (94/62/EC) due to that directive’s restriction on the same four (4) heavy metals. These are not the same restrictions and are not interchangeable.

A key difference to note is that the Packaging Directive imposes a limit on the combined sum of all four heavy metals found in one unit of packaging or packaging component whereas RoHS/RoHS 2 specifies individual limits on each heavy metal and additionally restricts specific flame retardant substances.

It’s also important to note that RoHS recast has proposals pending on the possible restriction of other substances such as phthalates.

Is RoHS and REACH the same thing?

No, they’re not, though both are European directives. REACH restricts chemicals and substances beyond those identified under RoHS, and is far broader in scope. RoHS requirements are specific to homogenous materials used in electronics and electrical parts, while REACH is not use-specific.

Neither regulations pre-empt nor affect the application of the other, and certain RoHS exemptions may also be denied should those have an adverse effect on the protections given under REACH. If an overlap of restrictions on substances should occur, the most stringent requirement such as the lowest maximum concentration would apply.

Is there guidance provided on RoHS for affected US businesses?

The US Commercial Service (CS) is the trade promotion arm of the US Department of Commerce’s International Trade Administration. It provides small and medium sized US businesses assistance in advancing US business interests overseas as well as support in overcoming trade obstacles in the successful exportation of US goods and services.

Guidance is offered specific to US businesses and their roles in the EU marketplace.


PVC Tech Corp and RoHS

We offer a variety of materials compliant to the EU RoHS & RoHS Recast with certifications traceable to our manufacturers. Testing is also available on a per request basis.