



AMETEK Rotron Whitepaper

REACH/RoHS Compliance

What is REACH/RoHS?

REACH (**R**egistration, **E**valuation, **A**uthorization, and **R**estriction of **C**hemicals) and RoHS (**R**estriction of **H**azardous **S**ubstances) are regulations created by the European Union to restrict the use of hazardous materials in products traded within the EU. These lists are regularly updated to present comprehensive lists of substances of concern.

RoHS directly applies to Electronics and Electrical Equipment (EEE) and establishes maximum levels for the following ten chemicals:

- Lead
- Cadmium
- Polybrominated Biphenyls
- Mercury
- Hexavalent Chromium
- Polybrominated Diphenyl Ethers
- Bis(2-Ethylhexyl phthalate)
- Benzyl Butyl Phthalate
- Dibutyl Phthalate
- Diisobutyl Phthalate

REACH is a much broader standard, applying to all parts and products manufactured, sold, or imported within the European Union. REACH covers over 200 substances of concern, including those restricted by RoHS.

REACH/RoHS and Rotron Products

Rotron products may contain a number of REACH/RoHS-restricted materials. These substances are generally chosen during development to maximize reliability and environmental robustness. Opting for REACH/RoHS-compliant substances may present trade-offs in terms of these capabilities. Substances that may be present in Rotron products include:

- Trixylyl phosphate is found in the bearing grease of almost all Rotron fans and blowers. Greases containing trixylyl phosphate generally offer exceptional survivability over the usual operating temperature range of our fans.
- Hexavalent Chromium is often found in the primers and conformal coatings that our products require to conform to MIL and DOD standards.
- Toluene and xylene are regularly used as paint thinner and varnish thinner, respectively. These products are used during the construction of parts and assembly of our products but are not contained in the finished product.
- Kapton and PTFE (Polytetrafluoroethylene) tapes are primarily used as insulators in our stator assemblies as they offer superb heat resistance for high temperature applications.

In addition to the above materials, lead can be found in nearly every fan and blower Rotron currently builds. Lead solders create more reliable contacts and avoid issues such as tin whiskering. While lead-free alternatives are available, they tend to be less workable due to their higher melting points.

How Can Rotron Support Your REACH/RoHS Requirements?

If required, Rotron can manufacture products that are REACH/RoHS compliant. Typically, the use of lead solder is often granted (by exception) to support maximum product reliability and life. Examples of products that have been granted this waiver but are otherwise REACH/RoHS-compliant include:

- 012405000 (Nanos) – REACH compliant
- 012146000 (Aximax 2) – RoHS compliant
- 011320000 (Aximax 2) – RoHS compliant
- 021169000 (Aximax 2) – REACH compliant
- 023539000 (Aximax 2) – REACH compliant
- 011384000 (Propimax 2) – RoHS compliant
- 011846000 (Propimax 2) – REACH compliant
- 012487000 (Propimax 2) – REACH/RoHS compliant
- 012752000 (Propimax 2) – REACH/RoHS compliant
- 011399000 (Trimline) – RoHS compliant

Rotron has the capability to modify our off-the-shelf products to be compliant to REACH/RoHS. If REACH/RoHS compliance is a requirement for your application, please “reach” out so we can discuss your program’s needs: <https://www.rotron.com/contact-us>.