

Würth Electronics Midcom Inc.
121 Airport Drive · P.O. Box 1330 · Watertown SD
57201-6330, USA
T: +1 (605) 886 4385 · Toll Free: +1 (800) 643 2661
www.we-online.com



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PHTHALATE STATEMENT

Würth Electronics Midcom, Inc. is dedicated to supporting our customers in satisfaction of the many and varied environmental responsibilities that we both face. This statement clarifies the occasional confusion that arises regarding the use and restrictions of substances known as phthalates.

Restrictions for phthalates are expanding due to demonstrated or suspected toxic effects. Initial phthalate restrictions focused on exposure routes that could cause the greatest damage, such as through children's toys, items having frequent skin contact, or phthalates with particularly toxic characteristics. While phthalates that have been carefully studied can have greatly varying hazard characteristics, the risk of simultaneous exposure to multiple phthalates is more difficult to quantify. As a result, initiatives have arisen that go beyond restrictions to dictate complete elimination of phthalates.

In recognition of the strictest compliance initiatives leaning toward phthalate-free, Würth Electronics Midcom, Inc. has researched and clarified the meaning of "phthalate" and "phthalate-free". What is apparent across representative initiatives¹ and regulatory bodies^{2,3,4} is that regulated phthalates are only those intentionally added to function as plasticizers, or that remain unchanged when in mixtures, and are diesters of orthophthalic (benzene-1,2-dicarboxylic) acid with complete disregard for isophthalic (meta-phthalic or benzene-1,3-dicarboxylic) acid and terephthalic (para-phthalic or benzene-1,4-dicarboxylic) acid. "Phthalate-free" therefore means the absence of intentionally added orthophthalate plasticizers or mixtures containing orthophthalates.

A few phthalates have dual use: either as plasticizers or as an intermediate in the manufacture of polymer materials. When used as a plasticizer, they remain as discrete molecules in a mixture with other substances and are also capable of migrating out of those mixtures, contributing to exposure risk. When used as an intermediate, phthalates are reactive and chemically combine, losing their properties; no longer discrete molecules after reaction, only a solid polymer substance exists that cannot migrate. A common phthalate polymer is PET, poly(ethylene terephthalate), used worldwide as food and beverage packaging. Phthalate polymers in textiles are well-known as polyesters.

1. Hewlett-Packard HX-00011-00, "General Specification for the Environment", 12 July 2013, pp. 5, 14-15, 18.

2. United States Environmental Protection Agency, "Phthalates Action Plan", 14 March 2012, p.2.
http://www.epa.gov/oppt/existingchemicals/pubs/actionplans/phthalates_actionplan_revised_2012-03-14.pdf

3. Denmark Ministry of the Environment Environmental Protection Agency, "Phthalate Strategy", 9 April 2013, p. 17.
<http://www.mst.dk/NR/rdonlyres/341716D2-E88B-4327-8CA9-702F441D5A9E/154099/strategiUK.pdf>

4. EC 1907/2006 Annex XVII, List of Restrictions, current to 3 February 2014
<http://echa.europa.eu/addressing-chemicals-of-concern/restrictions/list-of-restrictions/list-of-restrictions-table>

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Typical Würth Electronic Midcom, Inc. phthalate polymers that are not subject to restrictions or that do not affect “phthalate-free” status due to their polymerized state include, but are not limited to:

Item	Name	C.A.S. No.
DAP	poly(diallyl phthalate)	25053-15-0
PBT	poly(butylene terephthalate)	26062-94-2
PET	poly(ethylene terephthalate)	25038-59-9
LCP	poly(p-hydroxybenzoic acid/biphenol/orthophthalic acid/isophthalic acid)	60088-52-0
MHHPA	methylhexahydrophthalic anhydride (polymer intermediate)	19438-60-9

Polymer phthalates are often listed in Würth Electronic Midcom, Inc. material declarations. In some cases the word “phthalate” occurs within a polymer name, or specific phthalates may be listed as a polymer intermediate. Regardless, Würth Electronics Midcom, Inc. materials do not contain intentionally added orthophthalate plasticizers and are in compliance with “phthalate-free” initiatives and other restrictions such as, but not limited to: Bose OP285799, Denmark BEK No. 1113, European Union EC 1907/2006, and Hewlett-Packard HX-00011-00.

John Hauber
 Materials Compliance Engineer

Disclaimer: Knowledge of the substance content herein related to Würth Electronics Midcom’s product(s) is based on information provided by third parties such as suppliers and test laboratories. To our knowledge, the information is believed to be reliable and is provided in good faith, but the accuracy or completeness is not guaranteed and no representations or warranties are made with regards to its completeness or accuracy or otherwise. Würth Electronics Midcom, Inc. will not be liable for inaccurate information or any certification statements deemed, at its sole discretion, to be coerced by reporting requirements or any other demand not arising from regulatory authority. Würth Electronics Midcom makes no warranties of any kind, including, but not limited to, any implied warranty of merchantability or fitness for a particular purpose in regards to this information. Before using Product(s), Buyer must evaluate and determine if they are suitable for Buyer’s applications. Buyer assumes all risks and liability associated with such uses. Except where prohibited by law, Würth Electronic Midcom shall not under any circumstances be liable for indirect, special, incidental, or consequential loss or damages (including, but not limited to, loss of profits, revenue, or business) related to or arising out of this Declaration, including the use, misuse, or inability to use the Product. Unless stated otherwise in writing, the foregoing language cannot be waived, modified, or supplemented in any manner whatsoever.