

Designing and Shipping reading passage

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1. Almost two months after the European Union's ban on the use of six ecological unsafe materials went into impact, designers have verified that failure to reach the Restriction of Hazardous Substances (RoHS) directive means lost sales. Palm Inc. recently announced that its Treo 650 smartphone is no longer being shipped to Europe since it doesn't achieve RoHS requirements. And several Apple Computer Inc. products will not be sold in Europe for the same reason.
2. The EU directive, which had taken effect on 1st July, covered lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, and polybrominated diphenyl ethers. Electronics vendors worldwide are working to deduct those elements from almost all fresh pieces developed for the European market, while also undertaking their construction procedures to a lead (Pb)-free environment.
3. But that is only the birthplace. However, several other countries too, including China, Taiwan, and South Korea, and certain U.S. states are creating their own "green" or RoHS-like legislation, which means RoHS compliance must become an integral part of a designer's development process, with RoHS checks at each stair: concept, development, prototype, first constructs, and volume production.
4. Many companies will run the gamut from researching component databases of qualified green components to taking due care to prove compliance and developing processes that allow for the higher-temperature requirements of Pb-free manufacturing. And for designers, those are just the tip of the iceberg. A host of technical and reliability issues remain to be sorted out in Pb-free board processing and soldering.
5. What it comes down to is what Ken Stanvick, senior vice president at Design Chain Associates, calls a lack of 'tribal knowledge' on designing RoHS compliant systems. "We had great tribal knowledge when it came to dealing with leaded systems, but we haven't built up that same amount of knowledge for Pb-free," he said. "Every problem will be blamed on Pb-free until it's been worked out. We need to figure out experiments that replicate more of the environment and different stresses that we're going to see in this new system."
6. Manny Marcano, president, and CEO of EMA Design Automation Inc. (Rochester, N.Y.), cited the impact of parts obsolescence, including the need to redesign older products and the resultant emphasis on component engineering at the expense of conceptual design. A key challenge is identifying RoHS design specifications as early as possible in the design process, he said.
7. But even before they get to that point, designers should understand whether they are creating a fully compliant product or one that's subject to some exemptions, said Robert Chinn, director for consultant firm PRTM (Mountain View, Calif.). "This causes their design parameters," he said. "Previously, they looked at components based on size, performance, electrical parameters, features, and functionality. Now they have to add on a new constraint, revolving around environmental compliance: Is it RoHS 6-compliant or is it RoHS 5-compliant?" (RoHS 6 components eliminate all six of the prohibited substances, while RoHS 5 models, because of

exemptions, still contain lead.)

8. If designers do not take RoHS seriously, any country that can prove a product does not comply can levy fines against the vendor. That can cost market share, Marciano said, since non-compliant companies become noncompetitive. And then, not being prepared can mean belatedly diverting resources to RoHS compliance, causing missed market opportunities.

9. But many industry observers believe smaller and medium-size companies will continue to be complacent about the RoHS transition until some major company is cited for non-compliance. 'When that happens, there will be an earthquake throughout the industry, and it will wake up every design engineer,' said Steve Schultz, director of strategic planning and communications at Avnet Logistics and program manager for the distributor's compliance efforts for RoHS in the Americas.

10. 'The product developer's RoHS concerns center on the fear of lost revenue – from a product ban, a customer who demands a RoHS-compliant product that the company doesn't have, or competition', said Harvey Stone, managing director for consultancy GoodBye Chain Group (Colorado Springs, Colo.). 'With price, quality, and service being relatively equal, a savvy customer is going to choose a RoHS-compliant product,' he said.

11. Meanwhile, designers are looking over their shoulders at several other – and potentially stricter – environmental regulations in the pipeline. These include the EU's Registration, Evaluation, and Authorization of Chemicals legislation, which could restrict the use of thousands of chemicals, and its Energy-using Products (EuP) directive, which will initially target energy-efficiency requirements.

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Questions 1-4:

Look at the following people and the list of statements below. Write the correct letter A-G in boxes 1-4 on your answer sheet.

Match each person with the correct statement.

1. Manny Marciano
2. Harvey Stone
3. Steve Shultz
4. Ken Stanvick

List of Statements:

- A. believes that the ED directive requires no action
- B. claims that old products need to be redesigned
- C. claims that customers will want a RoHS compliant product
- D. states that many products will be RoHS exempt
- E. is involved in planning and communications
- F. predicts that design engineers will like RoHS
- G. claims that more knowledge about Pb-free systems is needed

Questions 5-11

Complete the summary using the list of words A-P below.

Write the correct letter A-P in boxes 5 -11 on your answer sheet.

Requirement	Big	Variety	Idea
Friendly	Basic	Decline	Small
Hostile	Insignificant	Solved	Recognized
Increase	Numerous	Important	Needs

The EU has banned the use of six materials that are 5.____ to the environment. This means that if designers do not meet the Restriction of Hazardous Substances (RoHS) directive, sales will be 6.____. Similar legislation is being put together around the world, which indicates that RoHS compliance needs to become a 7.____ part of a designer's development process. RoHS checks, at every step from concept to mass production, are also a necessity. But 8.____ technical and reliability problems remain to 9.____. Previously, the performance, etc. of components were 10.____ but now a new 11.____ needs to be taken into account: environmental compliance.

Questions 12 -14

Do the following statements agree with the information given in the reading passage? Write:

TRUE if the statement agrees with the information

FALSE if the statement contradicts the information

NOT GIVEN if there is no information on this in passage

12. Countries can impose fines on the sellers of products that do not comply with RoHS.

13. Smaller companies are taking the changeover to RoHS seriously.

14. The energy-using directive will be introduced in the very near future.