

## NPL Survey of Commonly Reported Component Defects

National Physical Laboratory (NPL) Electronics Interconnect Team is creating a Defect Database as part of their continuing support to the electronics industry. There is a strong belief that many of the component, printed circuit board, assembly, and solder joint failures are often common to many parts of the industry worldwide. Further details on the database and how it will work are covered in the attached document.

To further assist our project and aid a better understanding of industry problems from a supplier's prospective NPL are circulating surveys on components, printed boards, assembly and materials to different groups to establish the most common problems experienced or reported. The results of the survey will be published and sent to all the companies providing feedback to this project. No specific company responding will named in the published survey.

In this component survey a component is defined as an active or passive electronic device, a connector, termination, switch or link cable or harness used on an electronic assembly.

Our company is a (Please tick one only)

Component manufacturer

Component distributor

Please indicate as a percentage which of the following comprise your product range

Passive components  %

Active components  %

Electro-mechanical  %

Please indicate as a percentage your customer sectors

Consumer/Commercial  %

Telecommunications  %

Automotive  %

Military/Aerospace  %

Medical  %

Please indicate in order the most commonly perceived customer process related issues.

(Place in order 1 – 5 with 1 being the most common and 5 being the least common)

Poor termination solderability

Mechanical component damage

Heat related component damage

Termination failure on components

Component electrical failure

Please indicate in order the most common reason for customer returns  
(Place in order 1 – 4 with 1 being the most common and 4 being the least common)

- Incorrect customer part order
- Cannot identify components
- Incorrect component quantity
- Incorrect component packaging

Please indicate the most common questions asked regarding RoHS & Lead-free  
(Place in order 1 – 5 with 1 being the most common and 5 being the least common)

- What are the soldering parameters?
- Is the component RoHS compliant?
- Are the components lead-free soldering compatible?
- What is the plating on the component termination?
- Are RoHS compliant parts compatible with tin/lead?

What information do customers request with their component orders?  
(Place in order 1 – 4 with 1 being the most common and 4 being the least common)

- Copy of RoHS certification/analysis record
- Component or packaging marked with RoHS compliant
- Guidelines on component handling/soldering parameters
- No specific requests made

Please outline any other failures not highlighted that you would like the NPL Team to be aware of

Many thanks for taking the time to complete and return this survey. We will send you a copy of the results of the surveys when they are completed. Providing your details allows us to send you a copy of the survey results. NPL will only use the details provided to forward you a copy of the surveys and the Defect Database when they are complete.

Name: \_\_\_\_\_ Company: \_\_\_\_\_

Address: \_\_\_\_\_

Town/City: \_\_\_\_\_ County/State: \_\_\_\_\_ Post/ZIP Code: \_\_\_\_\_

Country: \_\_\_\_\_ Email: \_\_\_\_\_ @ \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_

You may return your completed survey by email, fax or post.

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