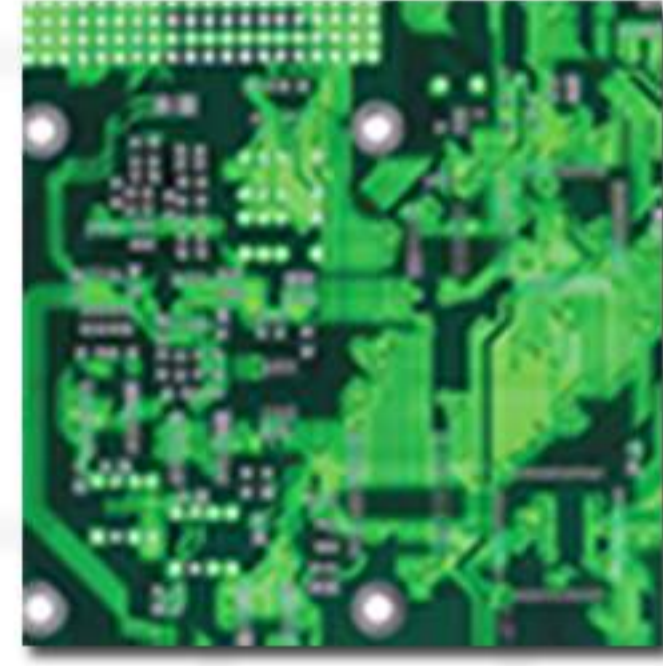
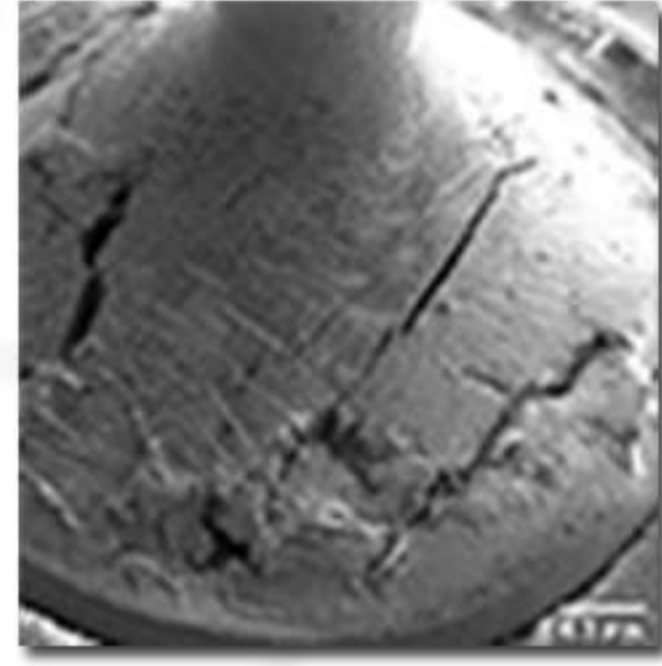


innovation

ITRI Innovation is a materials based consultancy and testing company.



Our expert team of consultants, technologists and state-of-the-art laboratory can help you with all your fire and testing requirements. Our organisation is structured to respond rapidly to projects both large and small.



This report is the most comprehensive and well presented, we have ever received, with components.

John Batey, Astrium



If you have a fire testing requirement, or an issue that you feel we may be able to help resolve, we would be happy to put together a proposal for you.



Below is a checklist of topics you might consider including with your request. The more information you can provide, the more comprehensive a proposal we will be able to provide. You do not have to provide details for all the items listed; they are there for guidance only.

GENERAL

- BACKGROUND TO YOUR REQUIREMENT (WHAT HAS PROMPTED THIS REQUIREMENT?)
- MATERIAL TYPE
- ANTICIPATED ARRIVAL DATE OF SAMPLES
- REQUIRED TURNAROUND TIME
- TEST STANDARDS TO BE ADHERED TO
- TEST PARAMETERS REQUIRED
- SPECIFIC TEST EQUIPMENT REQUIREMENTS
- REPORTING REQUIREMENTS
 - FORMAT FOR REPORT (PDF/EXCEL/WORD/OTHER)
 - REPORT CONTENTS
 - SUMMARY ONLY OR DETAILS PER SAMPLE?
 - INDIVIDUAL TEST RESULTS REQUIRED?
 - WHAT SAMPLE REFERENCES SHOULD WE USE?



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FIRE TESTING

WHICH TEST/S DO YOU REQUIRE?

LIMITED OXYGEN INDEX (LOI)

CONE CALORIMETRY

UL-94

NBS SMOKE BOX

WHAT FORM OF SAMPLE WILL BE USED?
(E.G. SELF-SUPPORTING STICKS OR FLEXIBLE / FABRIC TYPE MATERIALS)

WHAT SAMPLE NAMES DO YOU WANT TO APPEAR IN THE FINAL REPORT?

WHAT DIMENSIONS (CM) ARE THE SPECIMENS?

ARE YOU PROVIDING THE MOULDED SPECIMENS/MATERIAL FOR TESTING?

ARE YOUR SPECIMENS STANDARD SIZES (SEE BELOW)?
IF NOT, WHAT DIMENSIONS (MM) ARE THEY?

HOW MUCH MATERIAL CAN YOU PROVIDE?



UL94

WHICH VERSION OF UL-94:
5V; VERTICAL; HORIZONTAL?

HOW MANY SAMPLES
(NORMALLY 5-10 SPECIMENS REQUIRED PER SAMPLE.)

LIMITED OXYGEN INDEX (LOI)

HOW MANY SAMPLES
(3-5 SPECIMENS NORMALLY REQUIRED PER SAMPLE.)

CONE CALORIMETER

HOW MANY REPLICATES
PER SAMPLE: (NORMALLY 1, 2 OR 3)

WHAT HEAT FLUX DO YOU NEED?
(BETWEEN 25KW – 100KW)

DO YOU WANT IMAGES OF THE RESULTANT CHARRED SAMPLE?

NBS SMOKE BOX

HOW MANY BURNS
PER SAMPLE? (NORMALLY 1, 2 OR 3)

WHICH VERSION(S) OF THE
TEST DO YOU REQUIRE? (ISO 5659-2,
BS 6401,
ASTME662)

WHAT MODE OF TEST DO YOU REQUIRE?

WITH PILOT FLAME

WITHOUT PILOT FLAME

BOTH

SPECIMEN DIMENSIONS AND REQUIREMENTS

Test Method	Length (mm)	Width (mm)	Thickness (mm)	Minimum number of specimens required
Limited Oxygen Index (LOI)	120	7	3	5
NBS Smoke Box	76	76	2-10	6*
Cone Calorimeter	100	100	2-50	3*
UL-94 Vertical Flame Test	127	12.7	0.8-12.7	5

* NBS Smoke Box and Cone Calorimeter standards (BS, ASTM, ISO) recommend triplication; NBS tests to be carried out in both flaming and non-flaming (smouldering) modes = 6 burns.