



A QUESTION OF DATA: THE RIGHT TESTING PACKAGE

**Technical
Bulletin**

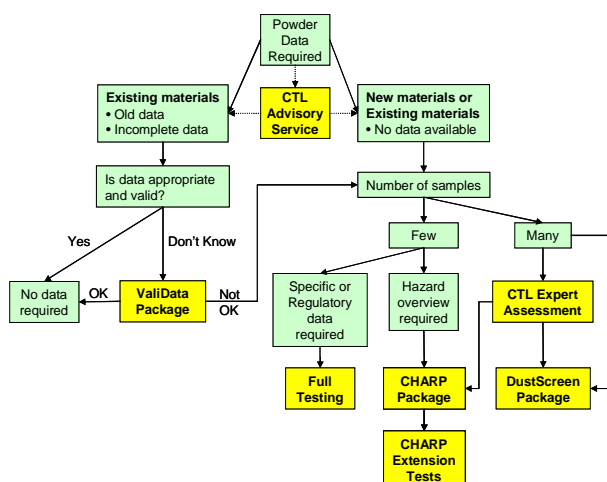
Clients come to us at Chilworth Technology for a whole range of testing needs including data for regulatory purposes (NONS, CHIP, MSDS), transportation classification and process safety (ATEX / DSEAR). They may have one or one hundred powders to test, but in all cases they are looking for an expert assessment of their needs and a cost effective and reliable solution to their data requirements. With over 150+ tests available, many different international standards and new test packages being introduced to our range, how does a client select the right package? This bulletin provides a flowchart and technical guidance for choosing the right package combination for your company.

WHAT DATA DO YOU NEED?

The ATEX 137 EU Directive, implemented as the Dangerous Substances and Explosive Atmospheres Regulations, (DSEAR 2002) in the UK, has placed legislative demands on companies handling flammable materials (gases, vapours or dusts) to identify and minimise the risk of fire and explosion by conducting a risk assessment. To do this satisfactorily requires safety data on the specific materials being handled or processed. Whilst information on gases and vapours is generally readily available, dust explosion data is rarely available and, when it is, it is often of questionable applicability to your specific material or processes.

Chilworth Technology recognises the difficulties faced by many companies in obtaining reliable and dependable data and offer a comprehensive range of testing solutions tailored to any processing or handling eventuality. Selection of the testing route is easily made using the flow-chart outlined below.

SELECTION FLOW CHART



Selection Flow Chart for Chilworth Technology Testing Packages

Each of the packages is aimed at a specific situation, be it process safety or regulatory, with the aim to ensure that the

necessary data is obtained in a cost effective manner; avoiding testing of unnecessary parameters or materials.

CTL ADVISORY SERVICE

For companies who need to address dust explosion hazards for the first time or are unfamiliar with the wide range of tests available, the CTL Advisory Service offers expert guidance on the approach they should take. This service is FREE to all our clients and can help tailor a test programme to your specific needs. In certain circumstances, we can also arrange for one of our technical team to visit your site to discuss your needs and offer this complimentary service. It also forms the foundation for identifying which test packages are suitable for your data needs.

NEW! VALIDATA PACKAGE

In situations where dust explosion data already exists, it is important to ensure that it is valid and relevant to the processing situation. Some of the conditions in which you might challenge the validity of your data are where:

- Old data exists – has the test method changed? Was the original method valid?
- The data source is unknown or dubious.
- Data has been extracted solely from literature.
- Significant variations in particle nature have occurred due to changes in processing methods or supplier. This will include composition, impurity profile, moisture content, particle size and/or particle shape / morphology.

The data validation package aims to critically review your existing data and identify whether it remains valid. Statements of validity can be prepared or, where applicable, re-testing can be undertaken at significantly reduced cost.

CTL EXPERT MATERIAL ASSESSMENT

When many powders you processed, the potential for testing costs to spiral creates a real concern. Our Process

Safety Specialists can undertake a material audit to assist you in selecting specific powders from your range for analysis. This will consider your specific processing conditions and identify only those tests needed to support your basis of safety. Our specialists will assess:

- Your full powder portfolio – to identify non-flammable materials, generic groups where selective testing can be applied and materials where adequate data exists.
- Your specific processing conditions – to identify which tests are required to satisfy the needs of your operational basis of safety.

This assessment goes much further than the Advisory Service as it provides you with consultancy expertise to derive a “manageable” list of materials and tests that are essential for the basis of safety employed. The emphasis is placed on identifying and eliminating products and tests which are not required. This can appreciably reduce the scope (and hence cost) of a testing program and can prove an investment for companies with large powder portfolios.

CHILWORTH HAZARD AND RISK PROFILE (CHARP™)

In situations where an overview of a wide range of material properties is required, the award-winning Chilworth Hazard and Risk Profile (CHARP) package is a highly cost-effective mechanism for screening. Whilst not providing absolute results as achieved with a full test protocol, the package does provide screening for seven key areas of hazard. This package is ideally suited to situations where several materials require a hazard overview as it has the potential for identifying worst-case materials.

NEW! DUSTSCREEN

Where many materials are processed in a common plant and the safety system needs to be based on the properties of the worst case, DustScreen is the ideal solution. The parameters required for the agreed basis of safety are identified and a screening series of tests are performed, increasing in sensitivity to identify the worst-case result. Only those powders that fail at the first screening level undergo further testing keeping costs to a minimum whilst providing cost effective data on high risk materials.

FULL TESTING PACKAGE

Where only a few materials are under consideration or multiple materials are used but are handled in different areas of plant with corresponding different basis of safety, full testing is needed. This also applies to materials which are being tested for Material Safety Data Sheets (MSDS) or for other regulatory purposes. Chilworth Technology offers a comprehensive range of tests using international standards embracing all areas of dust explosion, electrostatic and thermal stability hazards.

To obtain Product Datasheets on CHARP, DustScreen, the ValiData package or our comprehensive range of dust explosion and thermal stability tests please complete the faxback form below or call on +44 (0)23 8076 0722 and ask to talk to one of our Process Safety Specialists.

faxback

Please faxback to Marketing on +44 (0)23 8076 7866

Dr/Mr/Mrs/Ms/Miss:..... Job Title:.....

Company Name:.....

Address:

..... Postcode:..... Country:.....

Telephone: Fax:.....

Email:

My particular interests are:-

- | | |
|---|--|
| ValiData Package..... <input type="checkbox"/> | CTL Expert Material Assessment..... <input type="checkbox"/> |
| DustScreen Powder Assessment..... <input type="checkbox"/> | CHARP Powder Assessment..... <input type="checkbox"/> |
| Full Powder Testing Packages..... <input type="checkbox"/> | Hazardous Area Classification..... <input type="checkbox"/> |
| IEC61508/11 and SIL Determination..... <input type="checkbox"/> | ATEX / DSEAR Audits..... <input type="checkbox"/> |
| Incident Investigation / Expert Witness..... <input type="checkbox"/> | Training..... <input type="checkbox"/> |

I would a FREE and confidential telephone conversation with a consultant about a process safety matter.....

I would like a FREE visit from a consultant next time one is in my area.....

For further information phone Systems at Chilworth Technology on +44 (0)23 8076 0722