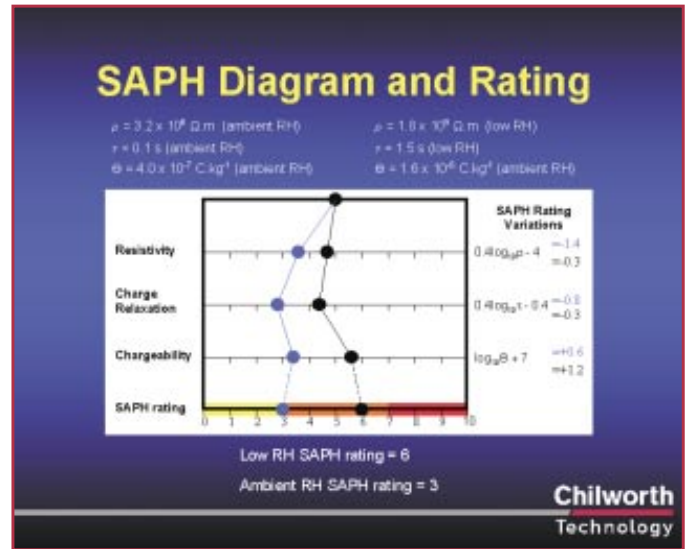


# S A P H

Static Analysis for Problems & Hazards

# P o w d e r

*A complete low cost package of electrostatic measurements providing a foundation for electrostatic hazard assessments and a rating for materials' potential process handling problems.*



## THE PROBLEM

*"When I process powder in my plant it behaves in unexpected ways, clings to surfaces, contaminates machinery, causes static shocks to people and sensitive electronic equipment."* - If this sounds familiar, SAPH will provide a path to a solution.

A powder will exchange charge with anything with which it comes in contact including process plant. The result will always be a tendency for a moving powder to carry away charge of one polarity and leave behind the opposite polarity. Charge on the powder or the plant can create problems during processing and result in any of the symptoms mentioned above. If the material in question has a low ignition energy and the opportunity to mix with air you also have the potential for a dust explosion with devastating consequences.

How quickly will your powder charge? How much charge will it hold? How quickly can it lose that charge? The answer to these three questions will allow diagnosis of your powder handling problems. It also provides foundation data for the assessment of dust explosion hazards.



## THE SAPH SOLUTION

Based on three standard tests, Chargeability, Volume Resistivity and Charge Relaxation Time, we can profile your powder and allocate a SAPH rating giving you a clear indication of the potential for process handling problems.

**Chargeability** is measured in Coulombs per kilogram ( $C \cdot kg^{-1}$ ) and indicates the likely worst-case charge on the powder.

**Volume resistivity** is measured in Ohm-metres ( $\Omega \cdot m$ ) and represents a powder's ability to transfer charge through its bulk.

**Charge relaxation time** is measured in seconds (s) and is a very practical way of showing how quickly a powder can lose charge.

Each of these properties are important in their own right but only by obtaining all three can the whole picture be seen. It is also necessary to consider the importance of humidity in static problems so in our climate controlled test laboratory we measure each of these values under different humidity conditions.

**For further information telephone 023 8076 0722**

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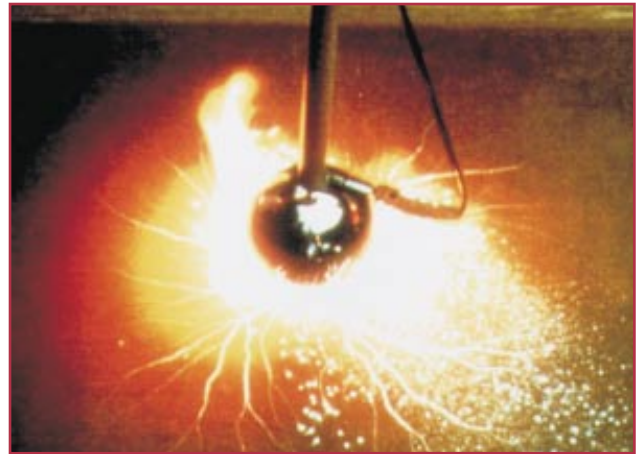
# P o w d e r

## THE BENEFITS

With SAPH data you obtain:-

- A comprehensive electrostatic profile at low cost.
- A rating band for the potential of electrostatic process problems expected during handling.
- Precise profile data to support plant electrostatic audits
- Testing to British/European standards (where applicable).
- Back-up and interpretation from leading experts.

Additionally SAPH data when combined with ignition sensitivity data can be used as part of hazard assessment to determine the level of risk inherent in the processing of your material.



**Chilworth**  
Technology

the experts in process safety

## Testing to GLP Standard



## Consultancy



## Training



## CHILWORTH SERVICES

We also offer a range of testing and consultancy services to the process industry covering:-

- Dust/Gas/Vapour explosivity testing
- Electrostatic Hazards
- Hazardous Area Classification
- Chemical Reaction Hazards
- Chemical Process Optimisation
- Regulatory testing
- ATEX Audits
- Major Hazards (Seveso II / COMAH)
- HAZOP
- Incident Investigation
- Expert Witness
- Training

For further information and a comprehensive list of the testing services available, please contact one of our offices detailed below.

## CONTACT

Process safety experts are on hand at the following sites:-

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