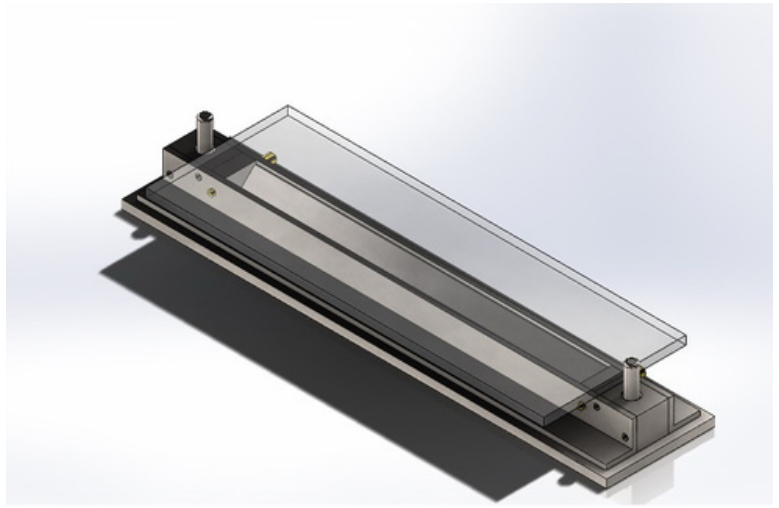


# CTL016 - Flammability of Solids – Burning Rate Apparatus Data Sheet



## Physical Properties - A Test Series (Fire Train test)

Permits testing to the following test standards using the Fire Train/mould equipment and accessories:

- Flammability of solids (Test A10),
- Oxidising solids (Test A17)
- UN transport of Dangerous Goods Test N1 (for discovering whether the product under test is to be classified into Division 4.1 and if so to determine which packing group the product falls into under UN regulations).

The test serves to characterise the hazards (if any) arising from materials subjected to given stimuli. The Fire Train test, for readily combustible solids, checks the ability of a substance to propagate combustion by igniting it and determining the burning time across a given length of that material. As well as acting as a regulatory test, the Fire Train test result has uses in process safety in the assessment of fire risk with powders and in helping to predict the consequences of dust fires and explosions. If testing to test A17 then please purchase optional powder cone (see options).



Test Apparatus: Powder 250 mm long train flame transiting length of the sample.  
The Fire Train mould prepares sample pile in a V-line for the burning rate test

## Benefits

- Designed to permit testing EU and UN standards
- 316 Stainless steel construction means that corrosive samples do not harm the Fire Train mould and its longevity is increased.
- Compact size

## Functional specification and deliverables

- Fire Train forming mould with 316 stainless steel 90° 'V' groove former, support cradle, base plate and brass holding pins
- Test Plate - Impervious, non-combustible, and low thermal conductivity quartz test plate.
- An ignition source is required but is not supplied. A small portable handheld butane or propane cylinder with a nozzle diameter of greater than 5mm is all that is required.
- Calibrated metric rule for measuring Fire Train distances. High grade non-rusting steel rule marked in millimetres
- Stop-clock - laboratory stop-clock for timing combustion and linear burning intervals.

## Optional extras

- Additional II9950 Fire Train moulds, quartz test plates, sundries
- A small conical sample chamber (not shown here) for forming a powder pile (3.5 cm dia x 2.5 cm height) is available at additional cost in order to enable preliminary oxidiser screening of samples (Test A17 only) \*

\*Preliminary screening of samples is a requirement of test A17 and is performed in the interest of safety to establish whether the solid sample has oxidising properties. If it does, then no further testing is required. However, if it does not have oxidising properties then the full Fire Train test is then carried out.

# DEKRA Organisational & Process Safety

## Contact

DEKRA Organisational and Process Safety are a behavioural change and process safety consultancy company. Working in collaboration with our clients, our approach is to assess the process safety and influence the safety culture with the aim of making a difference.

In terms of behavioural change, we deliver the skills, methods, and motivation to change leadership attitudes, behaviours, and decision-making among employees. Supporting our clients in creating a culture of care and measurable sustainable improvement of safety outcomes is our goal. The breadth and depth of expertise in process safety makes us globally recognised specialists and trusted advisors. We help our clients understand and evaluate their risks, and we work together to develop pragmatic solutions. Our value-adding and practical approach integrate specialist process safety management, engineering, and testing. We seek to educate and grow client competence in order to provide sustainable performance improvement. Partnering with our clients, we combine technical expertise with a passion for life preservation, harm reduction and asset protection.

We are a service unit of DEKRA SE, a global leader in safety since 1925 with over 48,000 employees in 60 countries and five continents. As a part of the world's leading expert organisation DEKRA, we are the global partner for a safe world.

We have offices throughout North America, Europe, and Asia.

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