# RISE Fire DataBase help document

## Introduction

This database is a free to use tool provided by RISE Fire Technology. The concept is to store publicly available data from fire tests in a way that allows easy access. An internet-based user interface allows anyone to use it without software installation.

## Register for use

To access the database, a user must register with name, address and email. After submission an email will be sent containing username and password for access. All user information submitted will be handled confidentially. Note that you cannot reply to the password email, for contact information see Contact. Click here log on to the database.

## Search for data

To search for data click the Search link to arrive at the Search page. The search is made by filling out one or several search fields. The fields in the simple search mode are general and common for all test methods but in the advanced search mode the fields are specific depending on the test. A description of the fields is given in Table 1.

There is a logical AND between all search strings which means that the more fields you enter the more you narrow the search result.

## Simple search mode

The simple search mode is common for all data sets and test methods.

Table 1: Simple search mode options.

| Search field | Description | Examples |
|---|---|---|
| Material 1 | Short description of the material tested. For composite products this is mostly the "main" material. For cables this keyword should describe the sheath. | FR particle board<br>Mineral wool faced<br>PUR rigid<br>PVC wall carpet |
| Material 2 | If several materials, composites, substrates. For cables this keyword should describe the insulation. | Plasterboard<br>Mineral wool<br>Calcium silicate board |
| Product | Generic product name, i.e. sandwich panel, cable. Can also product codes from research projects, i.e. Mxx in the SBI project. | Cable, water pipe<br>Sandwich panel<br>Acoustic tile |
| Object | Object tested in non-standard tests, mostly full-scale. | Sofa<br>Trailer<br>Cable ladder |
| Scenario | Short description of scenario in non-standard tests, mostly full-scale. | Fipec horizontal cable reference scenario<br>Furnished room 20 m$^2$ |
| Method | Standardised fire test when relevant. | ISO 5660<br>EN 13823 |
| Reference | Reference to the data source, i.e. a research project. | EUREFIC<br>SBI project<br>CBUF |
| Comment | Any comments, can also contain further description and information about the data or the test. | |

## Advanced search mode

The advanced search mode adds the possibility to make searches using scalar data. The scalars are specific for each test method and the keywords described in  Table 1 can still be used in the search. Scalar data can be derived parameters or physical data of the material or product. Note that you must select a method (see Table 1) to access the advanced mode. The scalar parameters are self-explanatory but a few examples are given below.

For scalar values it is possible to use the Boolean operators < (less than) and > (larger than) to define groupings of test data.

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**Example searches**

Example 1: Assume you want to find ISO 5660 Cone Calorimeter data for plywood that has an ignition time of more than 60 s at 25 kW/m$^2$. A search in the advanced search mode should then look like in Figure 1.

**Search**

| | |
|---|---|
| Material 1 | plywood |
| Material 2 | |
| Material 3 | |
| Material 4 | |
| Product | |
| Object | |
| Scenario | |
| Method | ISO 5660 |
| Reference | |
| Comment | |
| Flux (kW/m2) | 25 |
| tig (s) | >60 |
| qmax (kw/m2) | |
| qtotal (MJ/m2) | |
| q180 (kw/m2) | |
| q300 (kw/m2) | |
| Sample mass (g) | |
| Mass loss (g) | |
| DHc (MJ/kg) | |
| Peak smoke production (m2/m2s) | |
| Total smoke produced (m2/m2) | |
| Specific extinction area (a... | |
| MARHE (kW/m2) | |
| Area exposed (m2) | |
| Observations | |
| Test date (YYYY-MM-DD) | |
| Test identifier | |
| Product thickness (mm) | |
| Thickness1 (mm) | |
| Thickness2 (mm) | |
| Thickness3 (mm) | |
| Thickness4 (mm) | |
| Product density (kg/m3) | |
| Density1 (kg/m3) | |
| Density2 (kg/m3) | |
| Density3 (kg/m3) | |
| Density4 (kg/m3) | |
| Product area weight (kg/m2) | |
| Area weight1 (kg/m2) | |
| Area weight2 (kg/m2) | |
| Area weight3 (kg/m2) | |
| Area weight4 (kg/m2) | |
| | Search |
| | Hide advanced search |

Figure 1: Example of a search in the advanced mode.

Example 2: Assume you want to see data of PVC cables tested in the SBI. A search in the simple mode can look like in Figure 2 below. The search can be further specified e.g. by entering an insulation like XLPE in the Material 2 field.

**Search**

| | |
|---|---|
| Material 1 | pvc |
| Material 2 | |
| Material 3 | |
| Material 4 | |
| Product | cable |
| Object | |
| Scenario | |
| Method | EN 13823 SBI ▾ |
| Reference | |
| Comment | |

Search
Show advanced search

Figure 2: Example of a search in the simple mode.

## Display and export search results

When a successful search has been made there will appear a list of the resulting hits at the bottom of the page, like in Figure 3. For each result there are four actions possible according to the links to the right in the results table, show, export to text or XML and draw.

**Search**

| | |
|---|---|
| Material 1 | plywood |
| Material 2 | |
| Material 3 | |
| Material 4 | |
| Product | |
| Object | |
| Scenario | |
| Method | ISO 5660 ▾ |
| Reference | |
| Comment | |

Search
Show advanced search

| ImportID | Material1 | Material2 | Material3 | Material4 | Product | Object | Scenario | Method | Reference | Show | XML | Text | Graph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 94 | Plywood | | | | | | | ISO 5660 | EUREFIC | Show | Export | Export | Draw |
| 95 | Plywood | | | | | | | ISO 5660 | EUREFIC | Show | Export | Export | Draw |
| 96 | Plywood | | | | | | | ISO 5660 | EUREFIC | Show | Export | Export | Draw |
| 97 | Plywood | | | | | | | ISO 5660 | EUREFIC | Show | Export | Export | Draw |
| 98 | Plywood | | | | | | | ISO 5660 | EUREFIC | Show | Export | Export | Draw |
| 99 | Plywood | | | | | | | ISO 5660 | EUREFIC | Show | Export | Export | Draw |
| 100 | Plywood | | | | | | | ISO 5660 | EUREFIC | Show | Export | Export | Draw |

Figure 3: Example of search result.

## Show

Clicking Show will display the complete data set with scalars and vector values, see Figure 4. Empty scalar fields or scalar fields containing NA means that this value was not available at the import stage, or that it is not relevant. See also Draw section below.

**Show Details**
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| Keyword | Value |
|---|---|
| Material1 | Plywood |
| Material2 | |
| Material3 | |
| Material4 | |
| Product | |
| Object | |
| Scenario | |
| Method | ISO 5660 |
| Reference | EUREFIC |
| Comment | CS000001_EUREFIC2 |
| Owner | |
| IsPublic | 1 |
| ImportDate | 2003-07-24 14:53:40 |

| Scalar | Value |
|---|---|
| Flux (kW/m2) | 25 |
| tig (s) | 143 |
| qmax (kw/m2) | 263 |
| qtotal (MJ/m2) | 72.5 |
| q180 (kw/m2) | 146 |
| q300 (kw/m2) | 132 |
| Mass loss (g) | 61.6 |
| DHc (MJ/kg) | 11.8 |
| Peak smoke production (m2/m2s) | NA |
| Total smoke produced (m2/m2) | NA |
| Specific extinction area (avg) (m2/kg) | 44 |
| Area (m2) | 0.01 |
| Thickness (mm) | 12 |
| Density (kg/m3) | 600 |

| Time (s) | HRR (kW/m2) | MLR (g/s) | SEA (m2/kg) |
|---|---|---|---|
| 1.26 | 0.0129 | 0.0098 | 57.8165 |
| 3.24 | -0.0604 | 0.0081 | 54.3075 |
| 5.238 | -1.3474 | 0.0126 | 43.6433 |
| 7.818 | -0.6578 | 0.0111 | 39.9159 |
| 9.822 | -0.0759 | 0.0169 | 33.0694 |

Figure 4: Example of a search result displayed (limited view, vector data continues).

## Export

The export function can be used to export a data file into two different formats, Text or XML. The Text option will produce an ASCII text file with semi-colon separation that can be opened in any text editor or graph program. The XML (Extensible Markup Language) option exports a file in the XML format, which can be opened in most modern softwares, like Microsoft Office 2003 and later. When clicking Export a file dialog will appear prompting a location for the file. Click Save and choose a location. Close the window afterwards.
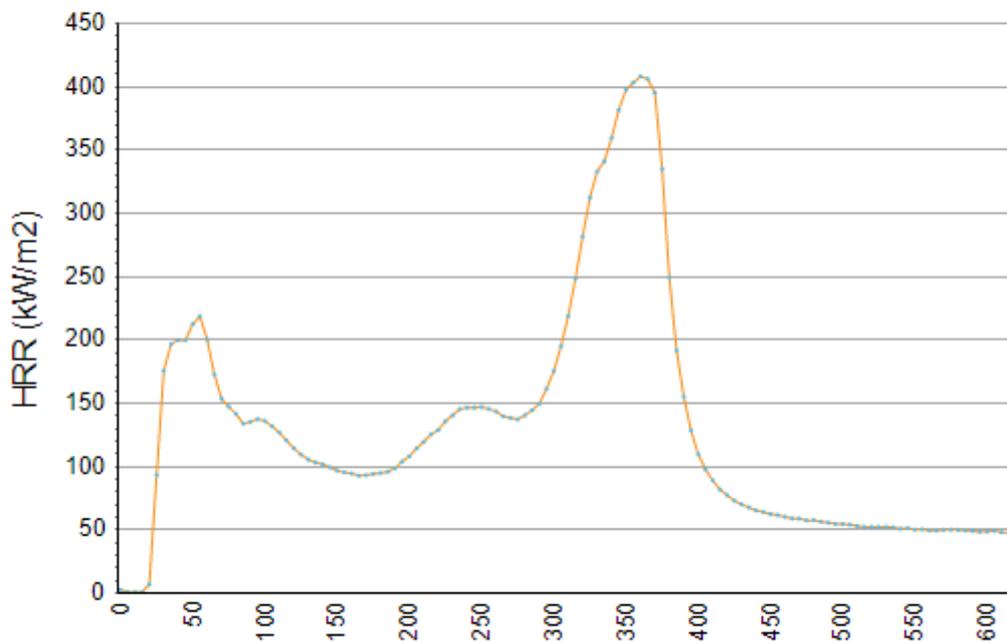
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**Draw**

The Draw function opens a new window allowing you to display the vector data as graphs in a convenient and quick way. An example graph is shown in Figure 5. Below the graph is a drop-down list where you can choose what variable to plot, in the example case there are two smoke parameters available, SPR and SEA.

To print or save the graph simply right-click on the graph and choose Print. Close the graph window to go back to the search page.

## Show Graph



HRR (kW/m2)

Figure 5: Example plot of a Cone Calorimeter result.

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## Contribute to the Fire DataBase

The database is so far free to use for anyone and contains mostly published data. If you have data from a fire test that you would like to share with the fire community we would be very grateful if you could provide us with the data and help expand the database. However, we do not guarantee that the data will be imported into the database. It is also possible to sponsor specific projects for data import, see below. Any well-defined data is of interest as long as it is in ASCII format and is described as shown below.

Data requirements for each individual test:

- Keywords as described in Search. This is essential.

- Scalars defining the material, i.e. thickness and density.

- Any derived scalars depending on what kind of test it concerns, i.e. Peak HRR, Total HRR, see also Search.

- ASCII text file with the data in columns, one of which must be the test time in seconds. Each column should have a header and there may be more columns in the file than what is imported. State which columns you would like to register in the data base, i.e. HRR and SPR. The separator used in the ASCII files can be semi-colon, comma, space, tab or other.

- Reference to the source of the data.

If some of the data is missing these fields will simply be empty in the database.

## Sponsor the Fire DataBase

If you have used the data base and it has been of help you are very welcome to sponsor the development. It is also possible to sponsor a specific project, e.g. if you are interested in importing and publishing data from a specific material or product. Contact RISE if this is of interest.

## Contact

For further info, queries or comments please contact:

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