Commercial Products

Database of commercial plastic products

User Manual

“Commercial products plus” module

Described using PolSelec 3.5.6.0 · As of: October 2026

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1 Introduction

The **Commercial products plus** module contains a database of about 18,600 commercial plastic products from many manufacturers. Where available, each product comes with a datasheet of characteristic values, property charts, information on media resistance and a product text.

You can search for products by manufacturer and commercial name, filter by property values, compare the charts of one property across many products, put products side by side and display the distribution of a characteristic value across all products.

> **Note:** The module is included in several Makrolar programs. The figures in this manual were taken in PolSelec; in other programs the module is structured in the same way, only the surrounding program frame (title bar, menus, other tabs) differs.
>
> **Licence:** Details of commercial products are only visible in the full version **"plus"**. Without this licence the detail pane shows a corresponding message.

2 Structure of the module

Open the module using the **"Commercial products plus"** tab on the left edge of the window.

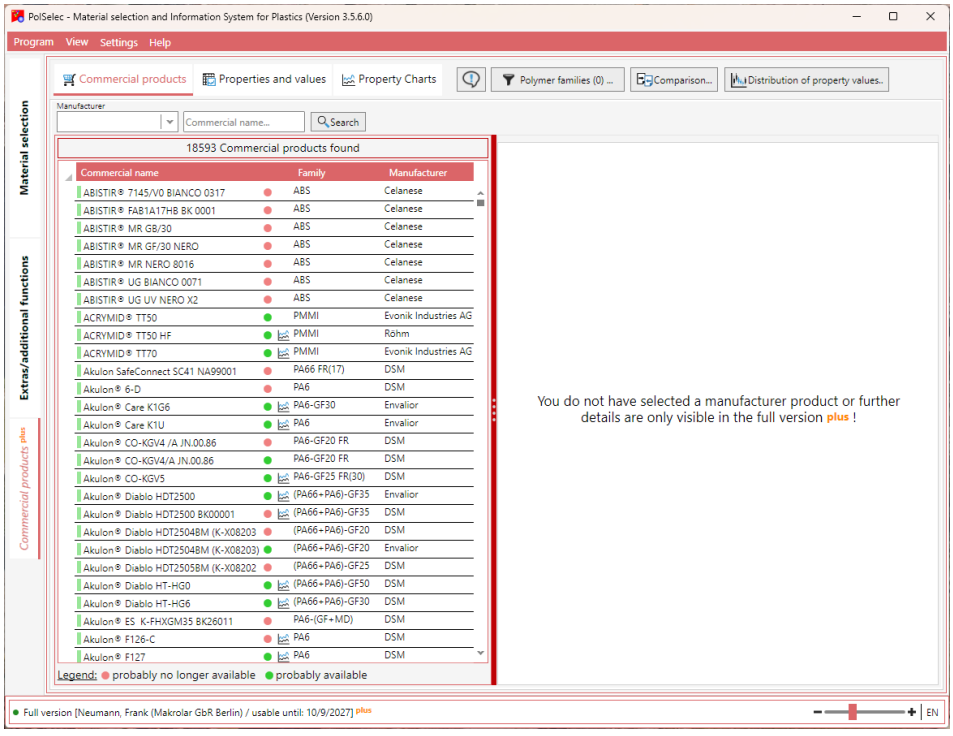


Figure 1: "Commercial products" module after opening

Element	Purpose
"Commercial products" tab	Product search by manufacturer and commercial name, product list and detail pane (chapter 3).
"Properties and values" tab	Search by property values or property names (chapter 4).
"Property Charts" tab	Charts of one property for many products (chapter 5).
"!" button	Help explaining the symbols and burning behaviour classes (section 7.3).

“Polymer families (n) …”	Filter on one or more polymer families; the number shows how many families are selected (chapter 6).
“Comparison…”	Properties of several products side by side (section 7.1).
“Distribution of property values…”	Distribution of a characteristic value across all products (section 7.2).

3 Searching and viewing commercial products

3.1 Product list

In the **“Commercial products”** tab, the list on the left shows all products with **“Commercial name”**, **“Family”** (polymer family, e.g. PA6-GF30) and **“Manufacturer”**. The number of products found is shown above the list.

- **Green dot** – the product is probably available.
- **Red dot** – the product is probably no longer available.
- **Chart symbol** – property charts are stored for the product.

3.2 Searching by manufacturer and commercial name

1. Select a manufacturer in the **“Manufacturer”** list, e.g. **“BASF”** (optional).
2. Enter part of the name in the **“Commercial name…”** field, e.g. **“Ultramid”** (optional).
3. Click **“Search”**. The list now shows only the matching products.

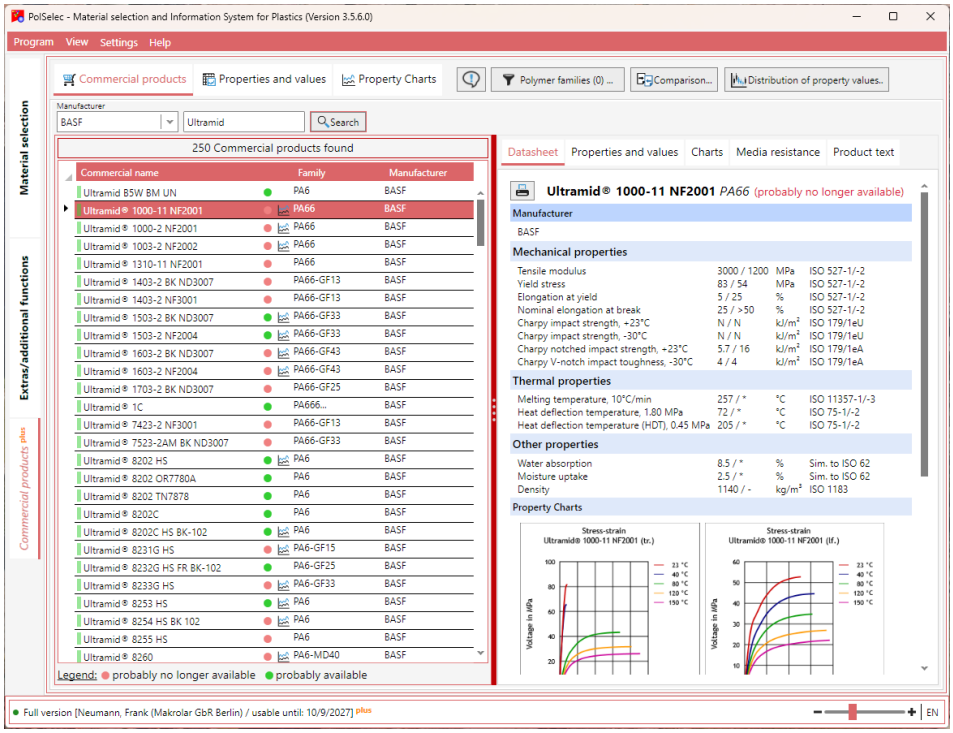


Figure 2: Search for manufacturer “BASF” and commercial name “Ultramid”: 250 products

Tip: Commercial names often contain trademark symbols such as ® or ™ (e.g. **“Ultramid® A3…”**). Search with a short part of the name without these characters, e.g. **“Ultramid”** instead of **“Ultramid A3”**.

To see all products again, clear the manufacturer and commercial name and click **“Search”** again.

3.3 Product details

Click a product. Its details appear on the right in five tabs. If there is not enough room for all tab headers, the tab bar is shifted sideways; a partly visible tab header can still be clicked.

Tab	Content
Datasheet	Compact datasheet with manufacturer, characteristic values by group (e.g. rheological, mechanical, thermal), test standard and – if available – property charts.
Properties and values	The same values as a grouped table; use **“Filter”** to restrict it to one group.
Charts	All property charts of the product, e.g. viscosity vs. shear rate; optionally with a magnifier.
Media resistance	Resistance to media such as alcohols, hydrocarbons or water.
Product text	Manufacturer's description, e.g. reinforcement, approvals, availability.

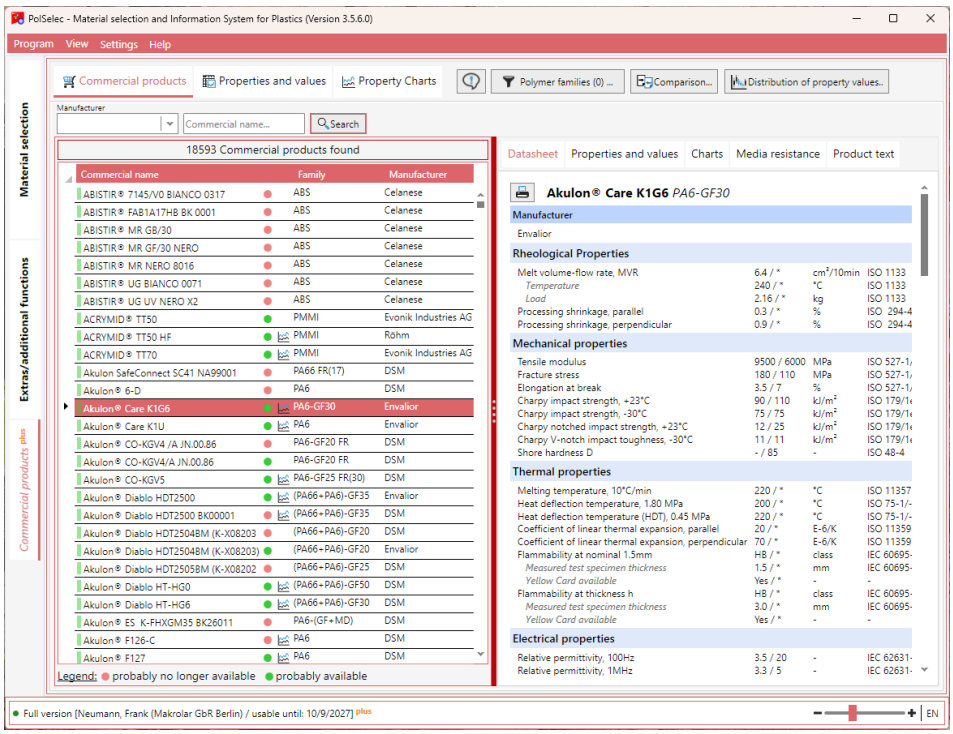


Figure 3: Datasheet of a product

Values are given in the format **dry / conditioned** (column header **“Value(s) [dry/cond]”**). A **“*”** means **“not applicable”**, a **“-”** means **“missing”**. The full explanation of the symbols can be found in the help (section 7.3).

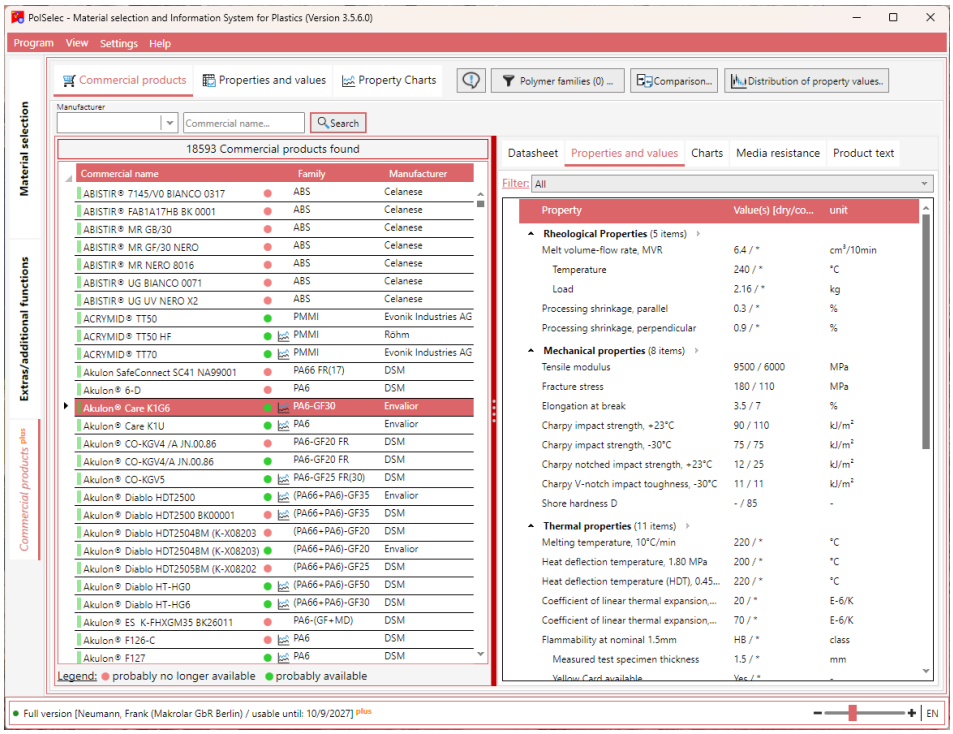


Figure 4: "Properties and values" tab in the detail pane

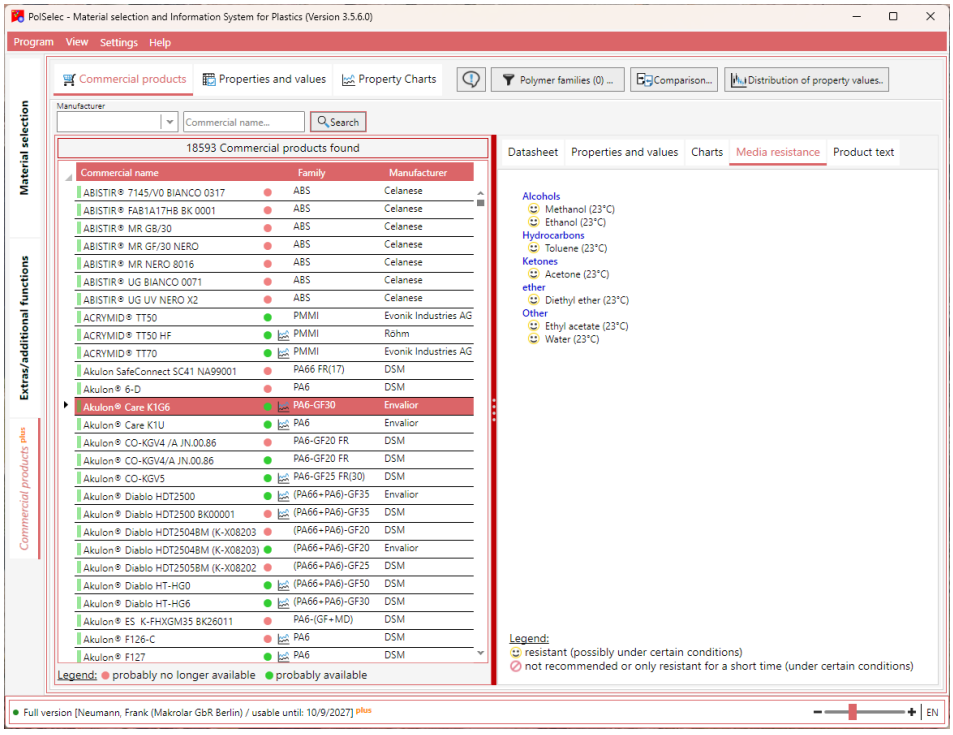


Figure 5: "Media resistance" tab with legend

If a product is probably no longer available, this is shown in red next to the product name in the datasheet.

3.4 Printing a datasheet

In the **"Datasheet"** tab, click the printer icon to the left of the product name. The **"Printing / Print Preview"** window opens. Use the printer icon at the top left to print the datasheet; use the sliders at the top right and bottom right to change the view.

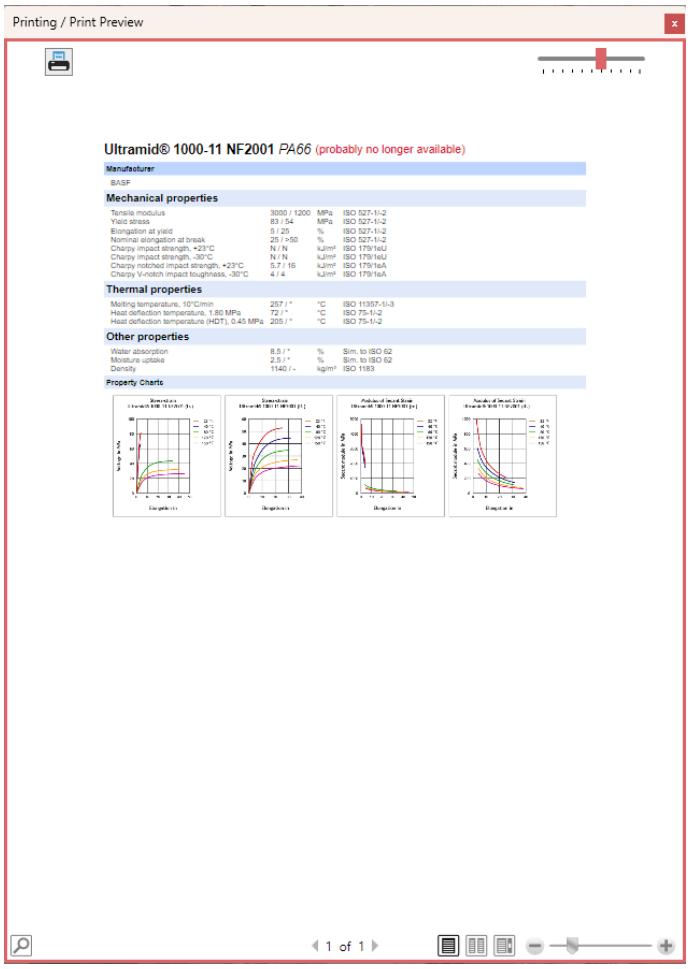


Figure 6: Print preview of a datasheet

4 Searching by properties and values

4.1 Detailed search using property values

Here you can find products whose characteristic values lie within certain ranges.

1. Open the **“Properties and values”** tab › **“Detailed search using property values”**.
2. Select **“dry state (dry)”** or **“condition state (cond)”**.
3. Click **“+ Properties”**. In the **“Choose properties”** dialog, search using the **“Property”** field and **“Search”**, e.g. for **“Tensile modulus”**, and click the **“+”** in front of the desired property. Selected properties appear at the bottom under **“currently selected properties”**. Confirm with **“Apply”**.
4. A filter with a slider appears for each property. Drag the two handles to the desired value range.
5. Click **“Search”**.

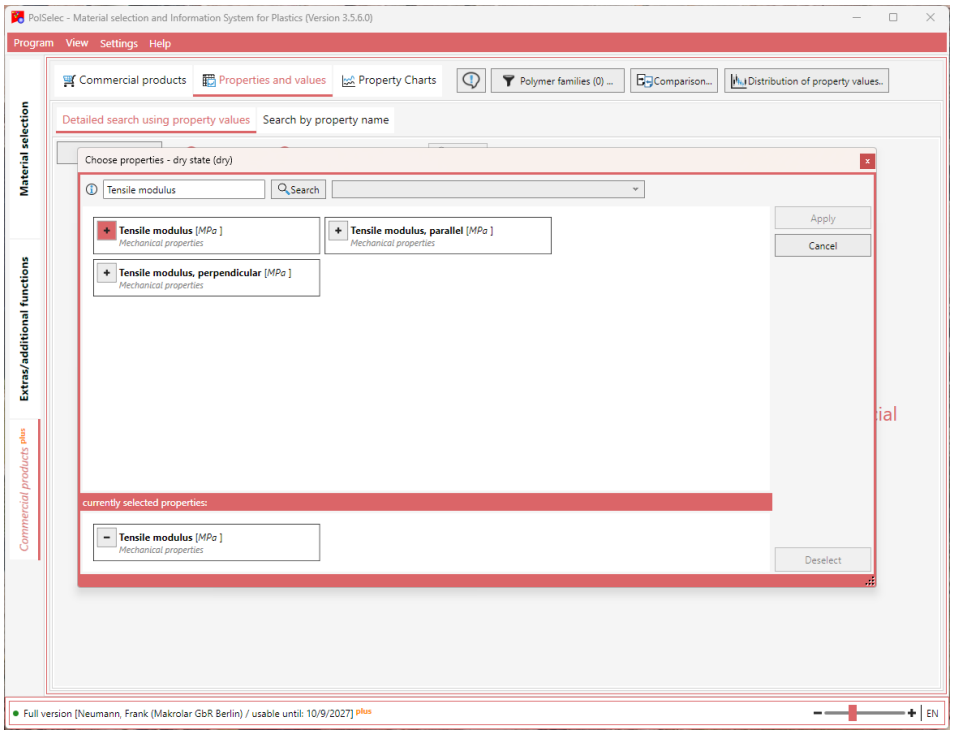


Figure 7: "Choose properties" dialog

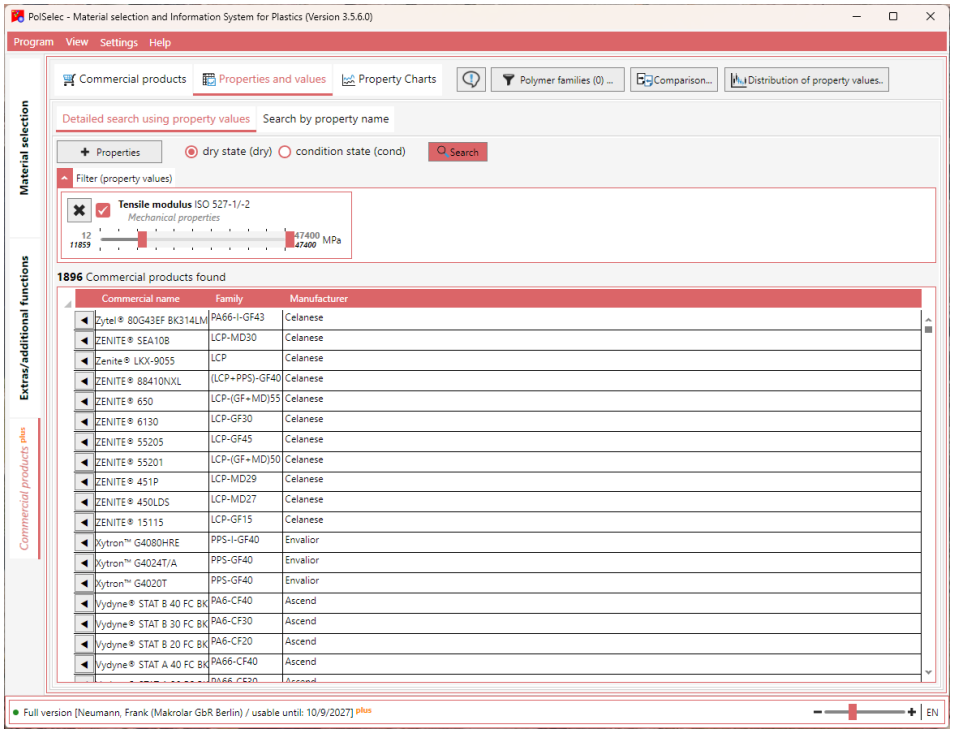


Figure 8: Filter tensile modulus from approx. 11,900 MPa: 1896 products

- Use the **check box** in the filter to switch off a property temporarily without removing it.
- Use the **X** to remove the property from the search.
- Use the **arrow button** in front of a hit to switch to the **"Commercial products"** tab.

4.2 Search by property name

Here you see the values of all products for which a property is stored.

1. Open **"Search by property name"**.

2. Double-click a property in the **“selectable properties”** list on the right or enter it in the **“Property”** field.
3. Click **“Search”**. The table shows value, unit, polymer family, commercial name and manufacturer. Properties whose name contains the search term are also found, e.g. **“Density”** also finds **“Characteristic density (PE only)”**.

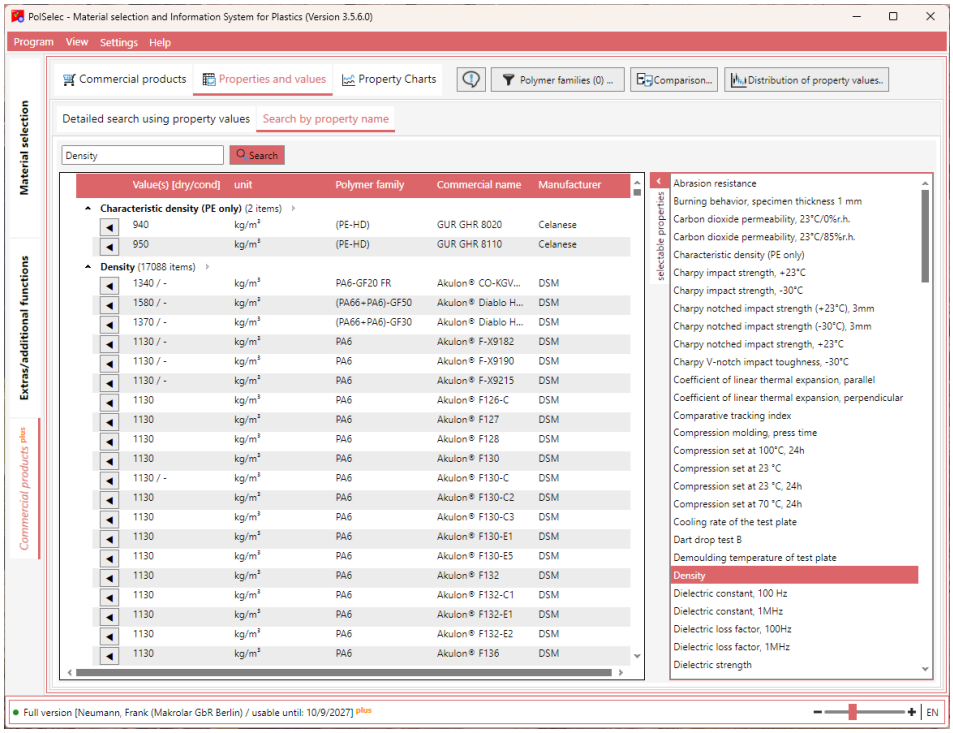


Figure 9: Result for “Density” (17,088 entries)

5 Property charts

In the **“Property Charts”** tab you display one chart topic for many products at once, e.g. **“E-modulus temperature”**, creep modulus vs. time or **“Shear stress–shear rate”**.

1. Select the desired topic in the **“Chart property”** list.
2. It is best to narrow down the products beforehand using **“Polymer families…”** (chapter 6).
3. Click **“Search”**. Each chart is headed by the polymer family and commercial name.



Figure 10: E-modulus temperature charts for the polymer family PA6-GF30

If **“Use magnifier”** is selected, a magnifier enlarges the area under the mouse pointer. The **“Commercial products”** tab on the right edge shows the associated product list.

> **Note:** Without any restriction the result can contain a very large number of charts (e.g. 856). The program then asks whether all of them should be displayed, because this can cause delays and memory problems. Answer **“No”** and narrow down the search using the polymer families.

6 “Polymer families” filter

The **“Polymer families”** filter restricts all searches in the module to certain polymer families – the product search, the property search, the charts and the distribution of property values.

1. Click **“Polymer families (0) …”**.
2. Enter a search term (e.g. **“PA6-GF30”**) and click **“Search”**. Use **“and”**/**“or”** to specify how several search terms are combined.
3. Select the desired families (**“Select all”** selects all families shown) and click **“Apply”**.

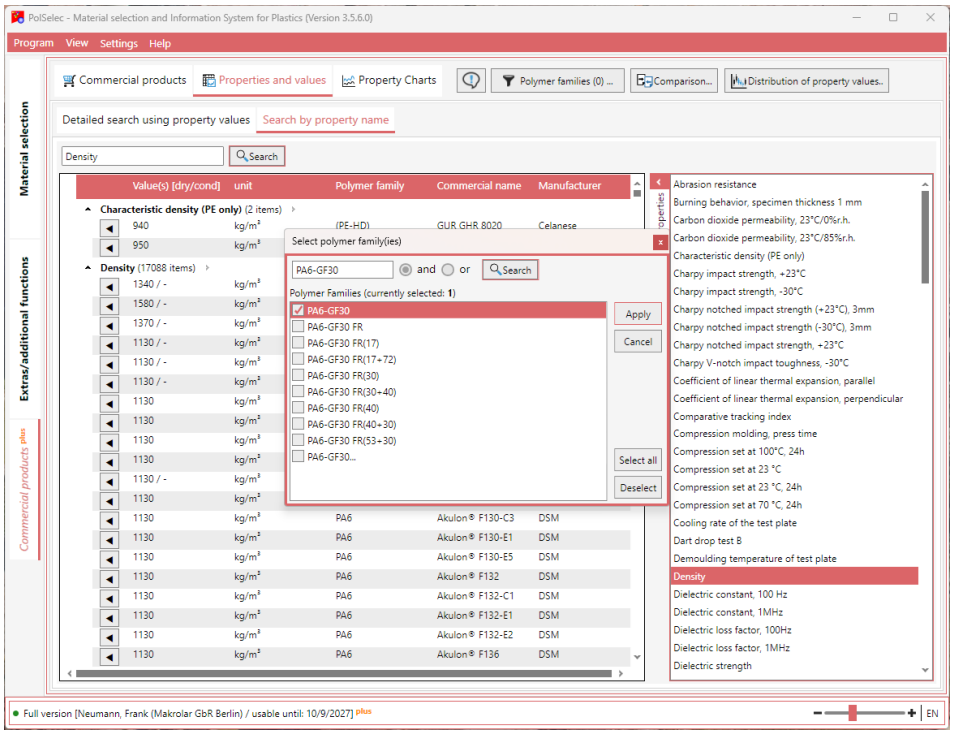


Figure 11: "Select polymer family(ies)" dialog

The button then shows the number of selected families, e.g. **"Polymer families (1) …"**. A new product search only returns products of these families – in the example, **"BASF"** together with PA6-GF30 returns 11 products.

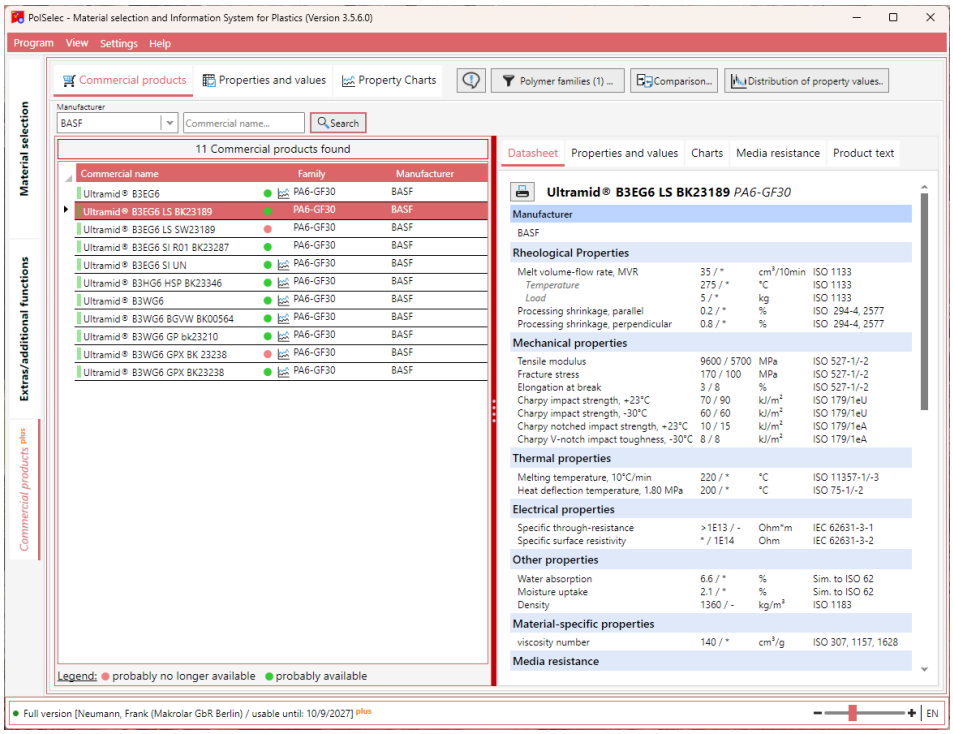


Figure 12: Product search "BASF" with active family filter PA6-GF30

> **Important:** The filter remains active until you remove it. If searches return unexpectedly few or no hits, check the number on the button. To remove the filter, open the dialog, click **"Deselect"** and then **"Apply"**.

7 Further tools

7.1 Comparison

1. Click **“Comparison…”**. The **“Commercial products – Comparison of properties”** window opens.
2. Leave it open and double-click the products you want to compare in the **“Commercial products”** tab. Alternatively, click the **“C”** button that appears in front of each product while the comparison is open.
3. The products appear as columns and the properties as rows. Use **“Property Group(s)”** to restrict the rows; **“Delete”** clears the comparison.

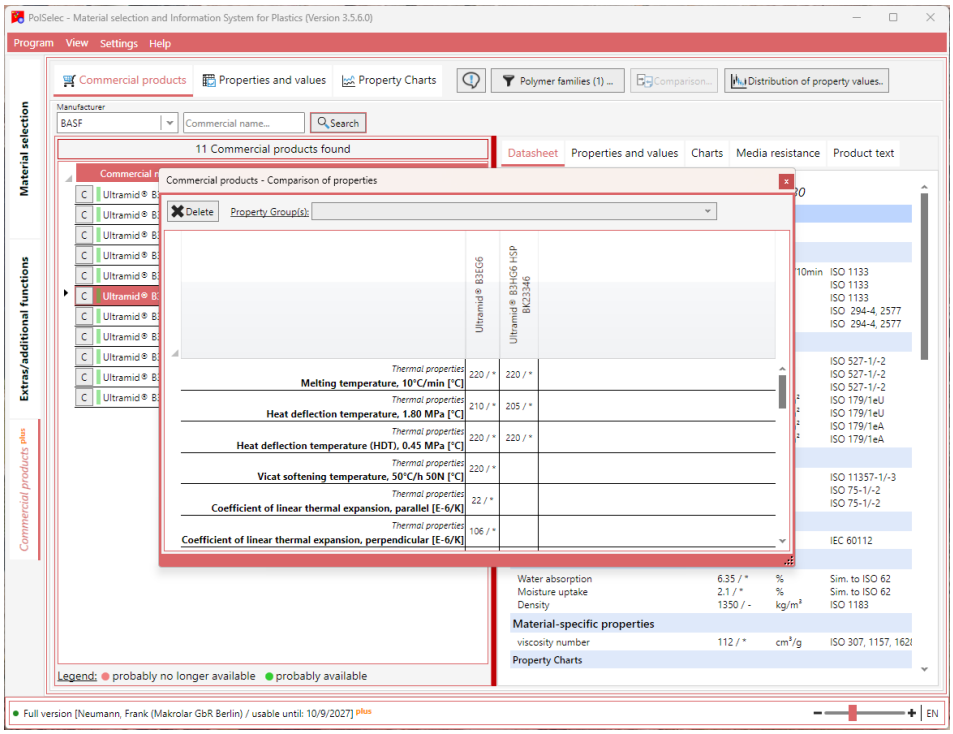


Figure 13: Comparison of two products

> **Tip:** Drag the comparison window by its title bar so that the product list remains visible.

7.2 Distribution of property values

This tool shows how the values of a property are distributed across all (or all filtered) products.

1. Click **“Distribution of property values…”**.
2. Select a property in the **“Property”** list and click **“Search”**.

The chart shows each product as a point, sorted in ascending order of value; light red stands for the dry state, dark red for the conditioned state. A table on the right lists the products with their values. Use the icons at the top left to pan (hand) and zoom in or out (magnifiers).

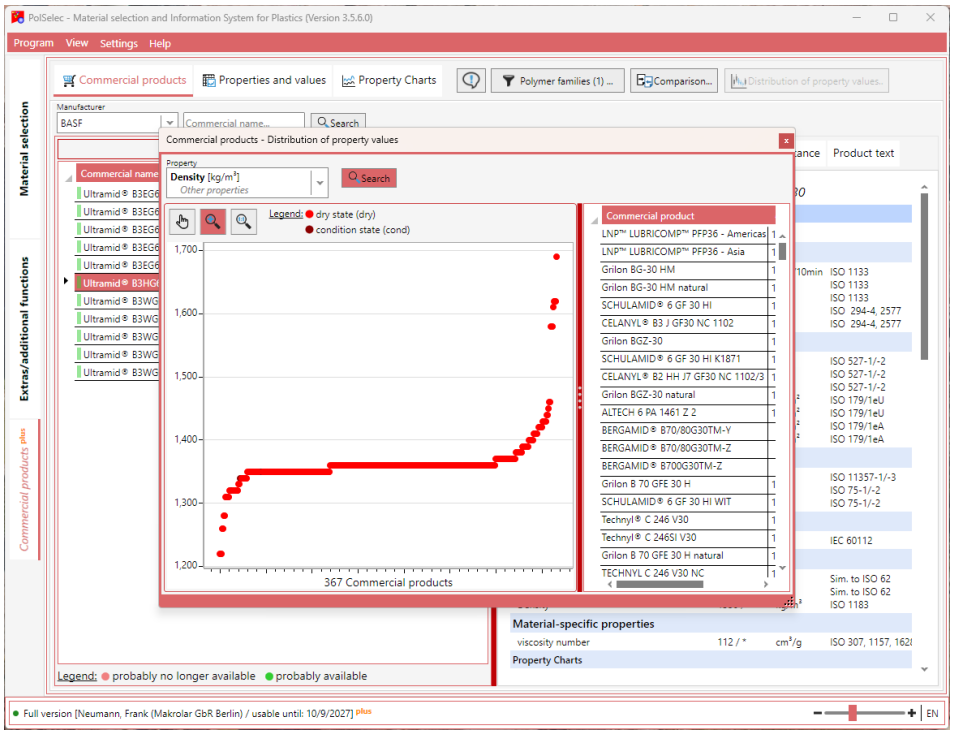


Figure 14: Distribution of density across 367 products of the family PA6-GF30

7.3 Help and symbols

The **“!”** button opens the help. It explains the symbols used in the data and the classes of burning behaviour:

Symbol	Meaning
dry / cond	Dry or humid (conditioned) state of a humidity-sensitive material
+	Applicable or used (non-numerical data field)
-	Missing or not used
*	Not applicable or not relevant (numerical data field)
>	Greater than (value exceeds a specified limit)
N / P / H / C	Non break / partial break / hinge break / complete break

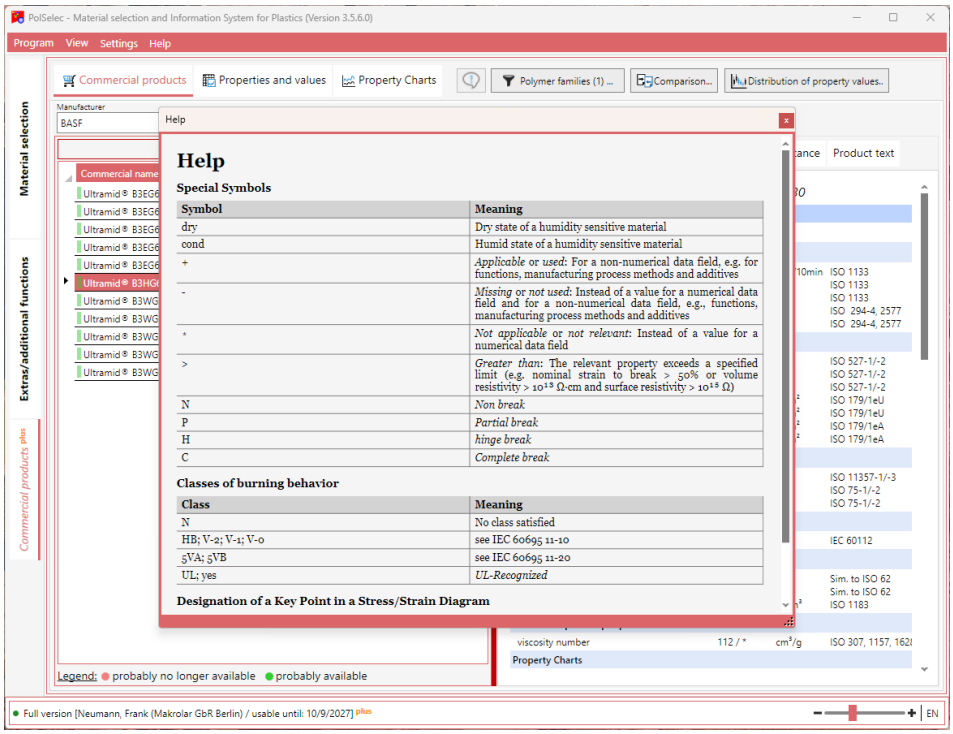


Figure 15: Help with explanation of the symbols

8 Tips and frequently asked questions

Question	Answer
Searching for a commercial name finds nothing.	Search with a short part of the name without ® or ™. Also check whether a manufacturer or a family filter is set.
All searches return noticeably few hits.	The **“Polymer families”** filter is probably active (number on the button > 0). Remove it.
The property charts take a very long time to load.	Narrow down the products using **“Polymer families”** before clicking **“Search”**.
What do **“*”**, **“-”** or **“N”** mean in the values?	See the help (**“!”**) or section 7.3.
The detail pane shows no information.	Select a product in the list. Details are only visible in the full version **“plus”**.