

Makrolar - Commercial Products Database

Inhaltsverzeichnis

General.....	3
Introduction.....	4
Views and functions	4
Select polymer families.....	5
Tab commercial products.....	6
Properties and values tab	6
Detailed search using property values	7
Select properties.....	8
Search by property name	9
Properties charts tab	11
Direct comparison of property values	12
Property value distribution	12

General

Our software products provide results that are often based on decisions regarding specific properties, processing or application conditions of plastics. In general, each of our software products has a specific database to perform the functions of the software.

The "**Commercial Products**" software module is **optional** and also contains a database with the most important plastics commercial product data of the plastics manufacturers.

This commercial product data can be used, among other things, within our software products to specify your inputs/decisions.

The software module "**Commercial Products**" supports the following **functions**:

- Search for commercial products by name, polymer family, manufacturer.
- Search for property values
- Display of all stored properties per commercial product
- Filtering by property groups (such as mechanical properties, thermal properties, ...)
- display of property diagrams per commercial product
- direct comparison of several commercial products
- graphical representation of the value distribution of certain properties
- search/display property values (with filter for polymer family)
- search/display property diagrams (with filter for diagram property and polymer family)
- ...

The database contains approximately **17,000 commercial products** from more than **30 molding compounds manufacturers**. Over **200,000 values** of the most important properties as well as approx. **40,000 property diagrams** are included in the database.

This information is based on the currently published data of the plastics manufacturers.

Unfortunately, we cannot assume any responsibility for the correctness and completeness of this data. You can also find the data in a similar form on the Internet (e.g. <https://www.campusplastics.com>).

Molding compounds from the following manufacturers, among others, are currently included:

- DSM
- ALBIS
- Covestro
- Hexion
- PolyOne
- Celanese
- DuPont
- Evonik Industries AG
- LANXESS
- Versalis
- BASF PU
- Kuraray
- EMS-GRIVORY
- RadiciPlastics
- ARKEMA
- INEOS Styrolution
- Mitsubishi EP
- Schulman
- Solvay Engineering Plastics
- BASF
- Mitsui Europe
- SABIC
- RadiciGroup
- LyondellBasell

Introduction

In the respective software, there is usually a corresponding tab **1** or a corresponding view in which the trading product data is displayed. Further functions such as searching, filtering, sorting, comparing, evaluating, etc. can then be used/retrieved via these views.

PolCycleTime - cooling and cycle time calculation as well as price and demand calculations (version 4.2.1.0)

Program View Settings Help

Commercial products Properties and values Property Charts

show only commercial products of the TRIAL version

868 Commercial products found

Commercial name	Family	Manufacturer
ABISTIR® MR NERO 8016	ABS	Celanese
Akulon® F136	PA6	DSM
Akulon® Fuel Lock FL40-HPX2 BK0000	PA6-I	DSM
Akulon® K222-D	PA6	DSM
Akulon® K224-G6	PA6-GF30	DSM
Akulon® K224-LG6U	PA6-GF33	DSM
Akulon® K224-PG8	PA6-I-GF40	DSM
Akulon® S223-G6	PA66-GF30	DSM
Akulon® S223-G7	PA66-GF35	DSM
Akulon® SafeConnect SC22	PA66-GF25 FR(17)	DSM
Akulon® Ultraflow K-FG9	PA6-GF45	DSM
ALCOM ABS 530/29 SV1217-04MCO	ABS	ALBIS
ALCOM ABS+SANA1000/100SV2067-06MCF	(ABS+SAN)	ALBIS
ALCOM CFX ABS 1000 UV 17058 SV1049-17MC	ABS	MOCOM
ALCOM DET PA66 FC 8010 14061	PA66-MED(x)10	ALBIS
ALCOM LB2 PC 1000 17152 UV IM WT2083-07	PC	MOCOM
ALCOM LB2 PC 1000 17157 FR IM WT	PC FR	MOCOM
ALCOM LD PC 1000 17052 WT1168-16	PC	ALBIS
ALCOM LD2 PC 1000 UV 15015CC1026-15	PC-X	ALBIS
ALCOM LD2 PC 1000 UV 16059 CC1059-16	PC	MOCOM
ALCOM LD2 PC 1000UV 15061 CC1104-15	PC	MOCOM
ALCOM LD2 PC 1000UV14068GY1159-14	PC-X	ALBIS
ALCOM LDDC PMMA 1000UV18123 BK	PMMA	MOCOM
ALCOM LDDC PMMA 1000UV18123BK1016	PMMA	ALBIS
ALCOM LDX PC 1000 UV 15064 CC1125-15	PC	MOCOM
ALCOM LG PC 1000 UV 14094 CC1323-08	PC	ALBIS
ALCOM PA6 900/1 MO1	PA6	ALBIS
ALCOM PA66 910/1 GF30 TF15 UV	(PA66+PTFE)-GF30	ALBIS

Legend: ● probably no longer available ● probably available

Utilization: Full version [Neumann, Frank (Makrolar GbR Berlin)]

EN

Akulon® S223-G7 PA66-GF35

Manufacturer: DSM

Mechanical properties

Property	Value	Unit	ISO
Tensile module	11500 / 7550	MPa	ISO 527-1/-2
breaking stress	210 / 140	MPa	ISO 527-1/-2
elongation at break	3.5 / 5.8	%	ISO 527-1/-2
Charpy impact resistance, +23°C	90 / 95	kJ/m²	ISO 179/1eU
Charpy impact resistance, -30°C	75 / 74	kJ/m²	ISO 179/1eU
Charpy notch toughness, +23°C	12.8 / 18	kJ/m²	ISO 179/1eA
Charpy notch toughness, -30°C	10 / 11	kJ/m²	ISO 179/1eA

Thermal properties

Property	Value	Unit	ISO
melting temperature, 10°C/min	260 / *	°C	ISO 11357-1/-
Dimensional stability temperature, 1.80 MPa	250 / *	°C	ISO 75-1/-2
Dimensional stability temperature, 0.45 MPa	260 / *	°C	ISO 75-1/-2
coefficient of linear expansion, parallel	20 / *	E-6/K	ISO 11359-1/-
coefficient of linear expansion, perpendicular	60 / *	E-6/K	ISO 11359-1/-

Other properties

Property	Value	Unit	ISO
water absorption	5.5 / *	%	Ähnlich ISO 6;
moisture uptake	1.5 / *	%	Ähnlich ISO 6;
Density	1410 / -	kg/m³	ISO 1183

Property Charts

Dynamic shear modulus temperature
Akulon® S223-G7 (tr.)

Shear modulus in MPa

1E4
1E3
1E2

Here in the picture at the example of our software [PolCycleTime](#) (Cooling and cycle time calculation ...) the view is in a corresponding register "Commercial products" **1**.

In the following, the views/functions and the operation are described in detail.

Views and functions

The main view (Commercial products database) is divided into three main tabs.

- [Commercial products](#)
- [Properties and values](#)
- [Properties charts](#)

Furthermore, you can use **three additional functions** here, which can be called up via the shown buttons [[Polymer families](#)] **1**, [[Comparison](#)] **2** and [[Distribution of property values](#)] **3**. For each of these functions, new overlapping windows are opened.

PoiCycleTime - cooling and cycle time calculation as well as price and demand calculations (version 4.2.1.0)

Program View Settings Help

Commercial products Properties and values Property Charts

1 Polymer families (0) ... 2 Comparison... 3 Distribution of property values...

☒ show only commercial products of the TRIAL version

Manufacturer Commercial name... Search

868 Commercial products found

Commercial name	Family	Manufacturer
ABISTIR® MR NERO 8016	ABS	Celanese
Akulon® F136	PA6	DSM
Akulon® Fuel Lock FL40-HPX2 BK0000	PA6-I	DSM
Akulon® K222-D	PA6	DSM
Akulon® K224-G6	PA6-GF30	DSM
Akulon® K224-LG6U	PA6-GF33	DSM
Akulon® K224-PG8	PA6-I-GF40	DSM
Akulon® S223-G6	PA66-GF30	DSM
Akulon® S223-G7	PA66-GF35	DSM
Akulon® SafeConnect SC22	PA66-GF25 FR(17)	DSM
Akulon® Ultraflow K-FG9	PA6-GF45	DSM
ALCOM ABS 530/29 SV1217-04MCO	ABS	ALBIS
ALCOM ABS+SANA1000/100SV2067-06MCF	(ABS+SAN)	ALBIS
ALCOM CFX ABS 1000 UV 17058 SV1049-17MC	ABS	MOCOM
ALCOM DET PA66 FC 8010 14061	PA66-MED(x)10	ALBIS
ALCOM LB2 PC 1000 17152 UV IM WT2083-07	PC	MOCOM
ALCOM LB2 PC 1000 17157 FR IM WT	PC FR	MOCOM
ALCOM LD PC 1000 17052 WT1168-16	PC	ALBIS
ALCOM LD2 PC 1000 UV 15015CC1026-15	PC-X	ALBIS
ALCOM LD2 PC 1000 UV 16059 CC1059-16	PC	MOCOM
ALCOM LD2 PC 1000UV 15061 CC1104-15	PC	MOCOM
ALCOM LD2 PC 1000UV14068GY1159-14	PC-X	ALBIS
ALCOM LDDC PMMA 1000UV18123 BK	PMMA	MOCOM
ALCOM LDDC PMMA 1000UV18123BK1016	PMMA	ALBIS
ALCOM LDX PC 1000 UV 15064 CC1125-15	PC	MOCOM
ALCOM LG PC 1000 UV 14094 CC1323-08	PC	ALBIS
ALCOM PA6 900/1 MO1	PA6	ALBIS
ALCOM PA66 910/1 GF30 TF15 UV	(PA66+PTFE)-GF30	ALBIS

Legend: ● probably no longer available ● probably available

Utilization: Full version [Neumann, Frank (Makrolar GbR Berlin)]

EN

Commercial products plus

Cooling and cycle time calculation

Price and demand calculations

Logging

Datasheet Properties and values Charts Media resistance Product text

Akulon® S223-G7 PA66-GF35

Manufacturer: DSM

Mechanical properties

Tensile module	11500 / 7550	MPa	ISO 527-1/-2
breaking stress	210 / 140	MPa	ISO 527-1/-2
elongation at break	3.5 / 5.8	%	ISO 527-1/-2
Charpy impact resistance, +23°C	90 / 95	kJ/m²	ISO 179/1eU
Charpy impact resistance, -30°C	75 / 74	kJ/m²	ISO 179/1eU
Charpy notch toughness, +23°C	12.8 / 18	kJ/m²	ISO 179/1eA
Charpy notch toughness, -30°C	10 / 11	kJ/m²	ISO 179/1eA

Thermal properties

melting temperature, 10°C/min	260 / *	°C	ISO 11357-1/-
Dimensional stability temperature, 1.80 MPa	250 / *	°C	ISO 75-1/-2
Dimensional stability temperature, 0.45 MPa	260 / *	°C	ISO 75-1/-2
coefficient of linear expansion, parallel	20 / *	E-6/K	ISO 11359-1/-
coefficient of linear expansion, perpendicular	60 / *	E-6/K	ISO 11359-1/-

Other properties

water absorption	5.5 / *	%	Ähnlich ISO 6;
moisture uptake	1.5 / *	%	Ähnlich ISO 6;
Density	1410 / -	kg/m³	ISO 1183

Property Charts

Dynamic shear modulus temperature
Akulon® S223-G7 (fr.)

Select polymer families

Polymer families can be selected as the parent filter. For all further functions and filters, these polymer families are then included in the search/selection.

Click on the corresponding button **1** to open the following selection window.

Select polymer family(ies)

POM GF **1** and or Search

Polymer Families (currently selected: 5)

- ☐ (POM+PTFE)-(GF+GX)30
- ☐ (POM+PTFE)-GF10
- ☒ (POM+PTFE)-GF15
- ☒ (POM+PTFE)-GF20
- ☒ (POM+PTFE)-GF25
- ☒ (POM+PTFE)-GF30
- ☒ POM-(GF+GB)
- ☐ POM-(GF+GB)10
- ☐ POM-(GF+GX)30
- ☐ POM-GF
- ☐ POM-GF10
- ☐ POM-GF15

Apply Cancel

Select all Deselect

In this window you can search for polymer families and then apply them.

You can enter any text in the text box **1**. You can additionally specify whether all text parts (and) or at least one part (or) is/are included in the polymer family designation.

Then click the [Search] button to filter the list accordingly.

Select the required entries and click on [Apply] to apply the polymer families for the further functions. The window is closed.

Tab commercial products

In this view **1** all commercial products of the database are listed. The list (left) can be sorted by the displayed columns by simply clicking in the column header.

PolCycleTime - cooling and cycle time calculation as well as price and demand calculations (version 4.2.1.0)

Program View Settings Help

Commercial products Properties and values Property Charts Polymer families (6) ... Comparison... Distribution of property values...

show only commercial products of the TRIAL version

Manufacturer: Commercial name: Search

868 Commercial products found

Commercial name	Family	Manufacturer
ABISTIR® MR NERO 8016	ABS	Celanese
Akulon® F136	PA6	DSM
Akulon® Fuel Lock FL40-HPX2 BK0000	PA6-I	DSM
Akulon® K222-D	PA6	DSM
Akulon® K224-G6	PA6-GF30	DSM
Akulon® K224-LG6U	PA6-GF33	DSM
Akulon® K224-PG8	PA6-I-GF40	DSM
Akulon® S223-G6	PA66-GF30	DSM
Akulon® S223-G7	PA66-GF35	DSM
Akulon® SafeConnect SC22	PA66-GF25 FR(17)	DSM
Akulon® Ultraflow K-FG9	PA6-GF45	DSM
ALCOM ABS 530/29 SV1217-04MCO	ABS	ALBIS
ALCOM ABS+SANA1000/100SV2067-06MCF	(ABS+SAN)	ALBIS
ALCOM CFX ABS 1000 UV 17058 SV1049-17MC	ABS	MOCOM
ALCOM DET PA66 FC 8010 14061	PA66-MED(x)10	ALBIS
ALCOM LB2 PC 1000 17152 UV IM WT2083-07	PC	MOCOM
ALCOM LB2 PC 1000 17157 FR IM WT	PC FR	MOCOM
ALCOM LD PC 1000 17052 WT1168-16	PC	ALBIS
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ALCOM LD2 PC 1000UV14068GY1159-14	PC-X	ALBIS
ALCOM LDDC PMMA 1000UV18123 BK	PMMA	MOCOM
ALCOM LDDC PMMA 1000UV18123BK1016	PMMA	ALBIS
ALCOM LDX PC 1000 UV 15064 CC1125-15	PC	MOCOM
ALCOM LG PC 1000 UV 14094 CC1323-08	PC	ALBIS
ALCOM PA6 900/1 MO1	PA6	ALBIS
ALCOM PA66 910/1 GF30 TF15 UV	(PA66+PTFE)-GF30	ALBIS

Legend: ● probably no longer available ● probably available

Utilization: Full version [Neumann, Frank (Makrolar GbR Berlin)]

EN

Akulon® S223-G7 PA66-GF35

Manufacturer: DSM

Mechanical properties

Property	Value	Unit	ISO
Tensile module	11500 / 7550	MPa	ISO 527-1/-2
breaking stress	210 / 140	MPa	ISO 527-1/-2
elongation at break	3.5 / 5.8	%	ISO 527-1/-2
Charpy impact resistance, +23°C	90 / 95	kJ/m²	ISO 179/1eU
Charpy impact resistance, -30°C	75 / 74	kJ/m²	ISO 179/1eU
Charpy notch toughness, +23°C	12.8 / 18	kJ/m²	ISO 179/1eA
Charpy notch toughness, -30°C	10 / 11	kJ/m²	ISO 179/1eA

Thermal properties

Property	Value	Unit	ISO
melting temperature, 10°C/min	260 / *	°C	ISO 11357-1/-
Dimensional stability temperature, 1.80 MPa	250 / *	°C	ISO 75-1/-2
Dimensional stability temperature, 0.45 MPa	260 / *	°C	ISO 75-1/-2
coefficient of linear expansion, parallel	20 / *	E-6/K	ISO 11359-1/-
coefficient of linear expansion, perpendicular	60 / *	E-6/K	ISO 11359-1/-

Other properties

Property	Value	Unit	ISO
water absorption	5.5 / *	%	Ähnlich ISO 6;
moisture uptake	1.5 / *	%	Ähnlich ISO 6;
Density	1410 / -	kg/m³	ISO 1183

Property Charts

Dynamic shear modulus temperature
Akulon® S223-G7 (tr.)

Shear modulus in MPa

1E4
1E3
1E2

Above the list can be additionally searched/filtered by *manufacturer* **3**, *polymer family* **2** and *trade name* **3**.

To the right of the list, the details of the selected list entry are displayed **5**. Here the data are grouped completely as a data sheet or divided into individual tabs.

The data sheet can also be printed out (not available in the TRIAL version).

Properties and values tab

This view is again divided into two tabs.

- [Detailed search for property values](#)
- [Search by property name](#)

PoiCycleTime - cooling and cycle time calculation as well as price and demand calculations (version 4.2.1.0)

Program View Settings Help

Commercial products Properties and values Property Charts Polymer families (9) ... Comparison... Distribution of property values...

1 Detailed search using property values **2** Search by property name

☒ Properties
 ☒ dry state (dry)
 ☐ condition state (cond)
 Search

Filter (property values)

Property	Value (from)	Value (to)	unit	possible value range	Info
☒ Breaking stress, perpendicular ISO 527-4/-5 <i>Mechanical properties</i>	17.4	750	MPa	17.4...750	
☒ Breaking stress, vertical ISO 527-4/-5 <i>Mechanical properties</i>	310	2900	MPa	310...2900	
☒ elongation at break TPE ISO 527-1/-2 <i>Mechanical properties</i>	7	300	%	7...300	
☒ elongation at break ISO 527-1/-2	0.3	50	%	0.3...50	
☒ elongation at break, perpendicular ISO 527-4/-5 <i>Mechanical properties</i>	0.35	2.7	%	0.35...2.7	

13 Commercial products found

Commercial name	Family	Manufacturer
LNPTM LUBRICOMP™ KFL23LH	(POM+PTFE)-GF15	SABIC
LNPTM LUBRICOMP™ KFL25	(POM+PTFE)-GF25	SABIC
LNPTM LUBRICOMP™ KFL32R	(POM+PTFE)-GF10	SABIC
LNPTM LUBRICOMP™ KFL36 - Americas	(POM+PTFE)-GF30	SABIC
LNPTM LUBRICOMP™ KFL36 - Asia	(POM+PTFE)-GF30	SABIC
LNPTM LUBRICOMP™ KFL36 - Europe	(POM+PTFE)-GF30	SABIC
LNPTM LUBRICOMP™ KFP032	(POM+PTFE)-GF10	SABIC
LNPTM THERMOCOMP™ KF224XXP	POM-(GF+GX)30	SABIC
LNPTM LUBRICOMP™ Compound KFL23LH - Americas	(POM+PTFE)-GF15	SABIC
LNPTM LUBRICOMP™ Compound KFL25	(POM+PTFE)-GF25	SABIC
LNPTM LUBRICOMP™ Compound KFL32R	(POM+PTFE)-GF10	SABIC
LNPTM LUBRICOMP™ Compound KFL36	(POM+PTFE)-GF30	SABIC
LNPTM LUBRICOMP™ Compound KFP032 - Americas	(POM+PTFE)-GF10	SABIC

Utilization: Full version [Neumann, Frank (Makrolar GbR Berlin)]

Detailed search using property values

In this view, materials can be searched for based on the stored values. If multiple properties are used, then the result list will contain all materials that match all criteria.

PolCycleTime - cooling and cycle time calculation as well as price and demand calculations (version 4.2.2.2)

Program View Settings Help

Commercial products Properties and values Property Charts

Detailed search using property values Search by property name

+ Properties 1 dry state (dry) 2 condition state (cond) Search

Filter (property values)

Dimensional stability temperature, 8.00 MPa ISO 75-1/-2 3 glass transition temperature, 10°C/min ISO 11357-1/-2 4

23 Commercial products found

Commercial name	Family	Manufacturer
CELANEX 3200-2FC	PBT-GF15	Celanese
FORTRON 0203	PPS	Celanese
FORTRON 0205	PPS	Celanese
FORTRON 0214	PPS	Celanese
FORTRON 0309	PPS	Celanese
FORTRON 0320	PPS	Celanese
FORTRON 1140L7	PPS-GF40	Celanese
FORTRON MT9140L4	PPS-GF40	Celanese
FORTRON MT9140L6	PPS-GF40	Celanese
FORTRON MT9320C0	PPS	Celanese
Grilamid TRVX-50X9 black 9230	PAMACM12-GF50	EMS-GRIVORY
Grilamid TRVX-50X9 nat	PAMACM12-GF50	EMS-GRIVORY
Rynite® 545 NC010	PET-GF45	DuPont
Zytel® 70G35EF NC010	PA66-GF35	DuPont
Crastin® SC193 NC010	(PBT+SAN)-GF30	DuPont
FORTRON® 0203	PPS	Celanese
FORTRON® 0205	PPS	Celanese
FORTRON® 0214	PPS	Celanese
FORTRON® 0309	PPS	Celanese
FORTRON® 0320	PPS	Celanese
FORTRON® MT9140L4	PPS	Celanese
FORTRON® MT9140L6	PPS	Celanese
IMPET® 2700 GV1/20FC	PET	Celanese

Utilization: Full version [Makrolar-Developer] plus

First you have to [add the properties](#) 1 you are interested in. Afterwards, these are displayed above the result list with designation, unit, standard, group and possible value range.

You can delete properties from the list again 4. Or you can leave the property in the list and deactivate it for selection 3.

To limit the range of values for a search, use the sliders 5. When the property is newly added, the sliders are preset to the min/max values.

In the database, values for the dry and condition state are stored respectively. This state can also be selected as a filter 2. In this case, the values from the database are updated. I.e., new values may result for the possible value ranges 5.

The [Search] button is only active if valid values for "from/to" have been entered for at least one property and the property has been marked as active 3.

If you click on the button 6 in the result list, the view (for the selected material) changes to the [Commercial products tab](#) and shows the details for the material.

Select properties

In this view you can search and apply properties for a selection.

Choose properties - dry state (dry) 3

Property 1 Search Mechanical properties;Thermal properties 2

+ abrasion resistance [mm ³] Mechanical properties	+ Bending modulus parallel [MPa] Mechanical properties
+ Bending modulus, perpendicular [MPa] Mechanical properties	+ Bending strength, parallel [MPa] Mechanical properties
+ Bending strength, perpendicular [MPa] Mechanical properties	+ breaking stress [MPa] Mechanical properties
+ breaking stress TPE [MPa] Mechanical properties	+ Breaking stress, perpendicular [MPa] Mechanical properties
+ Breaking stress, vertical [MPa] Mechanical properties	+ Burning behaviour, sample thickness 1 mm [mm/min] Thermal properties
+ Charpy impact resistance, +23°C [kJ/m ²] Mechanical properties	+ Charpy impact resistance, -30°C [kJ/m ²] Mechanical properties

aktuell ausgewählte Eigenschaften:

- glass transition temperature, 10°C/min [°C] Thermal properties	- Bending strength, parallel [MPa] Mechanical properties
---	---

Apply
Cancel
Deselect

In this view, only those properties are displayed for which there are corresponding numerical values in the database. The content of the list also depends on which state (dry, cond.) was previously selected 3.

You can search specifically for selectable properties using the filters (property 1 and group 2).

To select one or more properties, click on the button with the *plus* symbol 4. The entry is transferred to the lower list.

If you want to remove a selected property, click on the button with the *minus* symbol 5 in the lower list.

If you are finished with the selection, then you click the button [Apply]. The window is closed and the data are taken over.

Search by property name

In this view, the values of certain properties are displayed in a grouped list view.

PolCycleTime - cooling and cycle time calculation as well as price and demand calculations (version 4.2.1.0)

Program View Settings Help

Commercial products Properties and values Property Charts

Polymer families (0) ... Comparison... Distribution of property values...

Detailed search using property values Search by property name

breaking 1 Search Not all commercial products are included in the DEMO version

Value(s) [dry/cond]	unit	Polymer family	Commercial name	Manufact
breaking stress (339 items) >				
4 breaking stress TPE (17 items) >				
Breaking stress, perpendicular (2 items) >				
470	MPa	PPS-GF61	Tepex® dynalite 1...	LANXESS
35	MPa	PA12-CF45	VESTAPE® PA12-C...	Evonik Ope
Breaking stress, vertical (3 items) >				
470	MPa	PPS-GF61	Tepex® dynalite 1...	LANXESS
1700 / -	MPa	PA410-CF60	UDea™ EcoPaXX®...	DSM
1750	MPa	PA12-CF45	VESTAPE® PA12-C...	Evonik Ope

selectable properties

- compression moulding, cooling speed
- compression moulding, demoulding temperature
- compression moulding, pressing time
- strain
- Temperatur
- abrasion resistance
- Bending modulus parallel
- Bending modulus, perpendicular
- Bending strength, parallel
- Bending strength, perpendicular
- blur
- breaking stress
- breaking stress TPE
- Breaking stress, perpendicular
- Breaking stress, vertical
- Burning behaviour, sample thickness 1 mm
- carbon dioxide permeability, 23°C/0%r.h.
- carbon dioxide permeability, 23°C/85%r.h.
- Characteristic density, PE only
- Charpy impact resistance, +23°C
- Charpy impact resistance, -30°C
- Charpy notch toughness (+23°C), 3mm
- Charpy notch toughness (-30°C), 3mm
- Charpy notch toughness, +23°C
- Charpy notch toughness, -30°C
- coefficient of linear expansion, parallel
- coefficient of linear expansion, perpendicular
- comparable figure of creep path creation
- compression moulding, curing time

Help for the property values

Utilization: Full version [Neumann, Frank (Makrolar GbR Berlin)]

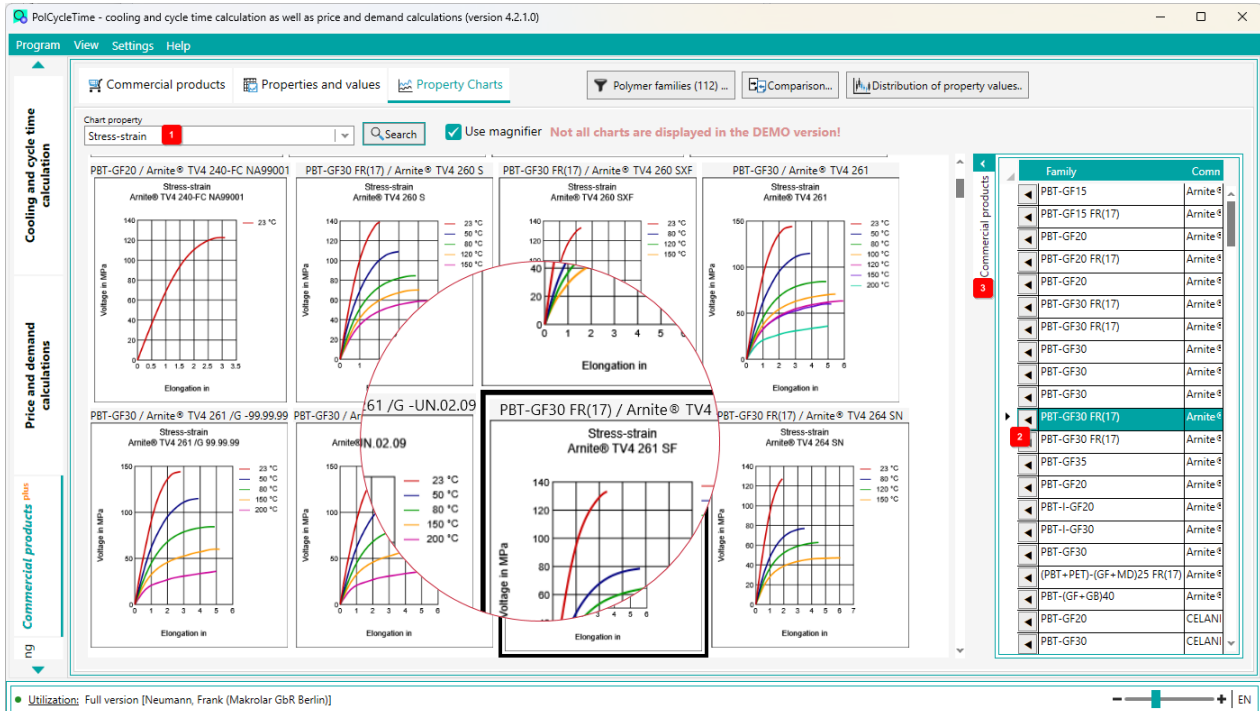
On the right 2 is a list of possible properties. Either select an entry from this list with a double click or enter the property in the upper left input field 1. It is also possible to enter only a part of the name. Then all property names are searched which have the text in them.

Click on [Search] to display the corresponding property values in the list.

If the designation is contained in several property names, the values of the corresponding property are grouped 4. The groups can be expanded and collapsed individually and the columns can be sorted in ascending and descending order.

If you click on the button 3, the view changes (for the selected material) to the [Commercial products tab](#) and shows the details of the material.

Properties charts tab



In this view you have the possibility to search for property diagrams. Currently there are about 39,000 diagrams stored in the database.

In the selection box **1** the properties are listed for which there are diagrams in the database.

Select a property and then click the [Search] button.

First, the number of diagrams is determined. If the number exceeds a certain limit, there is a hint that the listing of all diagrams will take some time and that there may be memory problems.

Afterwards the diagrams appear in the overview. Here, too, you can filter according to [polymer families](#).

If you move the mouse over a diagram and the "magnifying glass" is active, the images are enlarged accordingly.

On the right, you will also see the materials in a list view **3**, which can be shown and hidden. If you select a material in this list, the corresponding diagram is brought into the visible area of the overview and displayed with a thick border.

If you click on the button **2** in the list view, the view (for the selected material) changes to the [Commercial Products tab](#) and shows the details of the material.

Direct comparison of property values

The screenshot shows the PolCycleTime software interface. The 'Commercial products' tab is active, displaying a list of 34 commercial products found. The list includes columns for Commercial name, Family, and Manufacturer. A search bar and a 'show only commercial products of the TRIAL version' checkbox are also visible. A comparison matrix is open, showing property values for selected materials. The matrix is filtered by 'Mechanical properties; Thermal properties'. The properties listed include melting temperature, glass transition temperature, dimensional stability temperature, coefficient of linear expansion, flammability at thickness h, and Vicat softening temperature. The materials compared are CELANEX 1462Z, CELANEX 2300 GV1/30, CELANEX 1632Z, Pocan T 7331 000000, Pocan ECO T 7142 901510, Pocan BF 4232 HR 901510, Pocan A3121 000000, LNP THERMOCOMP WF008 - Asia, LNP THERMOCOMP Compound WF0039U, and LNP ELCRIN WF006NIQ2.

	CELANEX 1462Z	CELANEX 2300 GV1/30	CELANEX 1632Z	Pocan T 7331 000000	Pocan ECO T 7142 901510	Pocan BF 4232 HR 901510	Pocan A3121 000000	LNP THERMOCOMP WF008 - Asia	LNP THERMOCOMP Compound WF0039U	LNP ELCRIN WF006NIQ2
melting temperature, 10°C/min [°C]	225	225	225		260	225				
glass transition temperature, 10°C/min [°C]	60		60							
Dimensional stability temperature, 1.80 MPa [°C]	207	210	189	200	205	195	175		185	156
Dimensional stability temperature, 0.45 MPa [°C]	225	225	217	220	250	215	215		212	200
coefficient of linear expansion, parallel [E-6/K]	25	25	40	30		30	30			23
coefficient of linear expansion, perpendicular [E-6/K]	128		110	90		100	90			96
Flammability at thickness h [class]	HB	HB	HB	HB	V-0	HB			V-0	
Vicat softening temperature, 50°C/h 50N [°C]	220									
Flammability at nominal 1.5mm [class]	HB		HB		V-0	HB	HB			

It is best to switch to the main [tab Commercial products](#) first.

Click the [Compare] button to open another window **2**. This is initially more or less empty.

The individual lines of the list of commercial products are now each preceded by a [C] button **3**. By a double click in an entry within the list or by a click on this button, the material is taken over into the comparison matrix.

The comparison matrix can be filtered by property groups **4**. To delete all materials from the matrix again, click the button **5**.

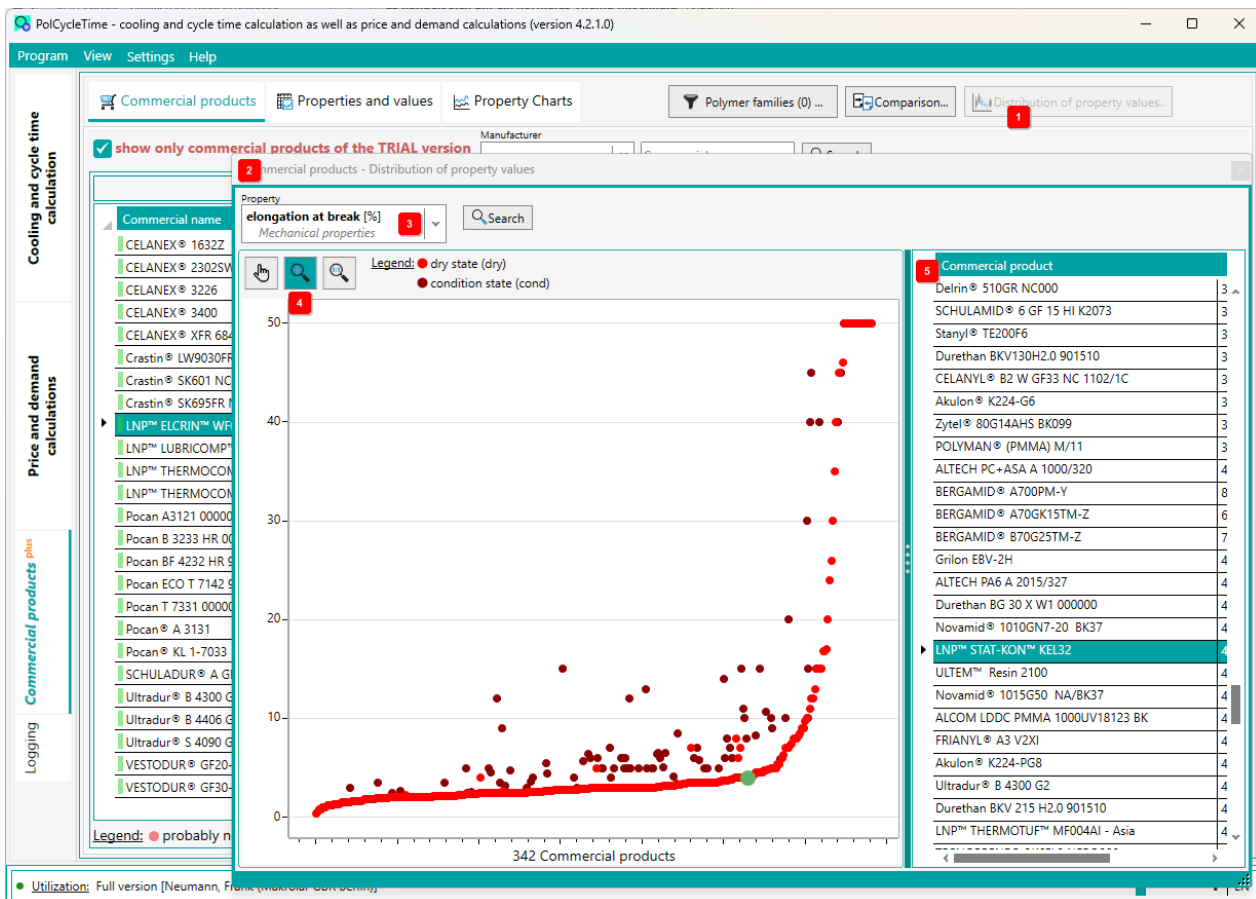
Notice:

The scope of the published data of the commercial products may vary greatly per molding compound manufacturer and per commercial product. Thus, the data of the plastic molding compounds are only comparable to a very limited extent, let alone useful for a material selection. Our **PolSelec** software is available for a manufacturer-independent plastic material selection.

Property value distribution

If you want to know how certain property values are distributed over a certain number of commercial products, you can call the corresponding function via the button [*Property values distribution*] **1** of the main view.

In this case, another window **2** will be opened.



Select the property from the selection box **3** and then click the [Search] button. The distribution of the values is now displayed graphically. The values are displayed in ascending order (from left to right).

In addition to the display as a graphic, the property values are also displayed in a list **5**.

With this function, too, you can influence the set of values by filtering according to the [polymer family](#).

To enlarge sections of the graphical display, draw a corresponding rectangle with the mouse (keep the left mouse button pressed and move the mouse accordingly and then release it).

By means of the button **4** above the graphic, the graphic can be moved, enlarged (as described before) and restored as a complete view.

If you select a material in the right list, the material will be highlighted by a green dot in the graphic. By double-clicking in the list, the material is also selected in the [main view of the commercial products](#).