temp-gard / temp-chart

Short Instructions

ENGLISH

Please note the detailed operating instructions in English on CD.

temp-gard Operation

USB Port 2

USB Port 1

Temperature Probe Connections

Enter Button ↵	Switch on
	Select function
	Start / Stop a measurement
esc Button	Always takes you one level up
UP / Down Button ▲ ▼	Navigation
USB Port 1	Transfer via cable
USB Port 2	Transfer via USB-Stick

Note:
When the temp-gard logger is switched on the status of the setup settings will be displayed.

Main Menu

Start / Stop	Start / Stop a measurement
Temperature Profile	Display of temperature curve
Actual values	Displays the actual temperature data of the connected probes
Setup	Definition of measurement and instrument parameters

Setup Menu

Measurement Parameters	Set number of probes
	Set measurement time
	Set trigger for measurement start
	Set measurement interval
	Define temperature units (°C / °F)
Instrument	Select display time
	Enter time / date
	Select language
	Info (Serial No. – Version)

# Quick Start with temp-gard logger

- Define the measurement and instrument parameters in the "Setup menu".
- Go back to Main Menu and start measurement with Start/Stop
- LED will blink green → logger is active. Temperature data will be saved based on trigger and interval settings!

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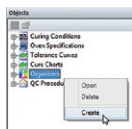Additives & Instruments

Setup via temp-chart Software

How to create an Organizer?

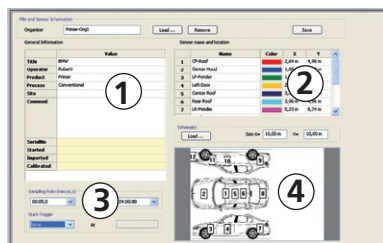…define the "Setup parameters" and names of the probe position

- Select Objects
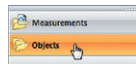
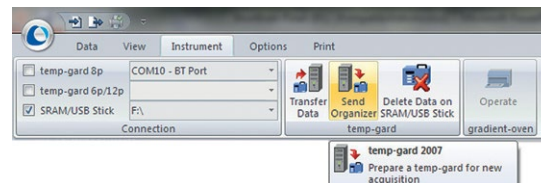- Select Organizer

Right mouse click to create a new organizer
→ A blank organizer template will appear
→ Name organizer by pressing **"Save As"** button

1: General Information to enter customer name, location, comments

2: Sensor names

3: Measurement parameters: sampling rate, trigger duration

4: Load Schematic: bmp or jpg-file sensor locations are shown on the schematic by dragging it from the upper left

How to transfer an Organizer to the temp-gard logger?

- Connect USB-Stick to computer (or transfer via cable)
- Select Instrument Menu
- Select SRAM/USB Stick
- Select Drive
- Select Send Organizer

- Select Organizer
→ and Confirm "**OK**"
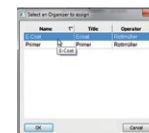
- Select Organizer
→ Transfer of organizer to USB-Stick is done after selecting **OK**

- Connect USB-Stick to temp-gard logger
- USB-Stick will be detected automatically
- Press OK to transfer the organizer to the temp-gard logger

How to transfer data to temp-chart?

- Switch on the temp-gard logger
- Connect USB-Stick to temp-gard logger
- Data will be automatically saved on the USB-Stick

1. Empty USB-Stick

→ Measurement data is saved on USB-Stick and remain on logger

2. USB-Stick with Organizer Files

→ The selection menu "Configuration Files" will appear
  - No configuration → organizer & measurement data remain in logger, data is saved on USB-Stick
  - Organizer xxx → measurement data is saved on USB-Stick organizer & data are deleted in logger → new organizer is transferred to logger
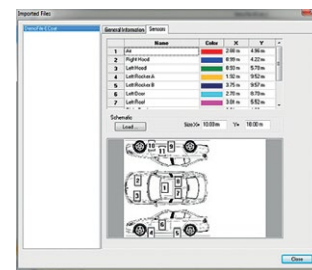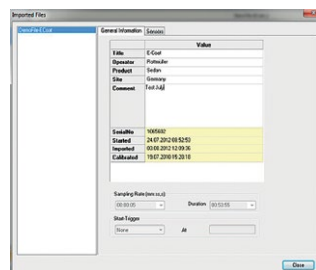
- Remove stick from logger and connect to PC
- Select menu "Instrument" in temp-chart
- Select SRAM/USB Stick
- Select "Transfer Data"
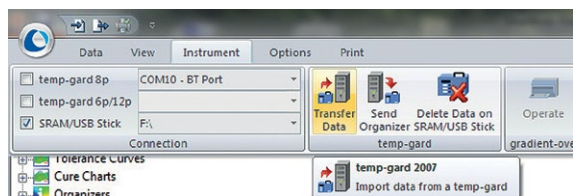
- Select file to be transferred → Organizer name will be offered as file name (changeable)
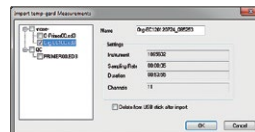
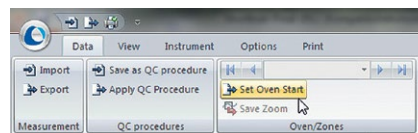Confirm or Modify "General Information" and Sensors

- **Close** → Measuring Curve will be displayed

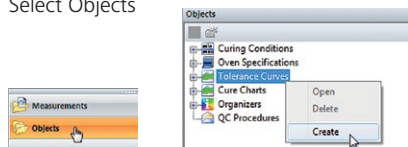# How to set Oven Start?

- Data Menu
→ Set Oven Start
  A vertical line appears which can be fixed on the real start point.

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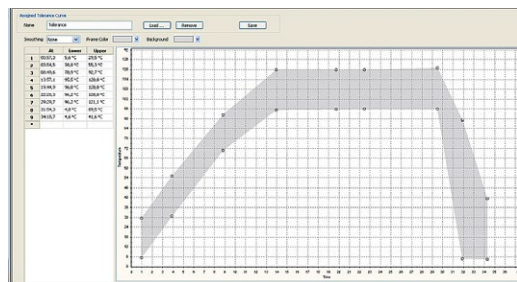
How to Set a Tolerance Curve?

- Select Objects

- Select Tolerance Curves

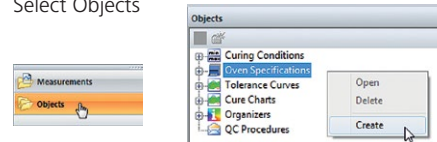Right mouse click to create new tolerance curve
→ A blank tolerance curve template will appear
→ Name tolerance curve by pressing **"Save As"** button
→ Enter tolerance settings

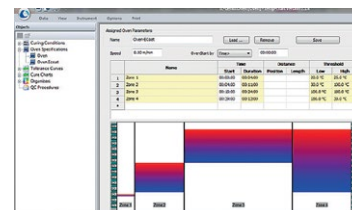- Save

How to Set Oven Specifications?

- Select Objects
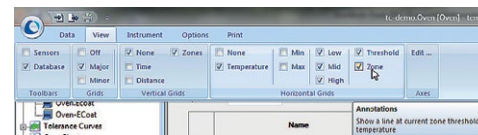

- Select Oven Specifications

Right mouse click to create new oven specifications
→ A blank oven specifications template will appear
→ Name oven specifications by pressing **"Save As"** button
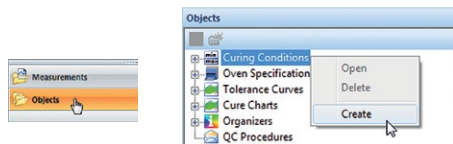→ Enter the oven specifications

- Save

The set oven specifications will be displayed on the graph, if they are selected in View menu

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How to Set Curing Conditions?

The paint makers recommended temperature/time conditions will be compared to the actual temperature/time.
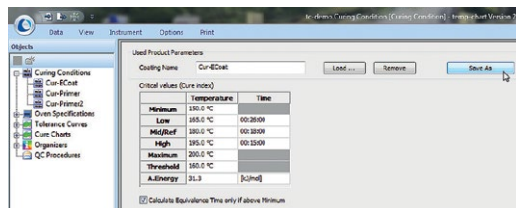
- Select Objects

- Select Curing Conditions

Right mouse click to create new curing conditions

→ Empty curing conditions template will appear

→ Name curing conditions by pressing **"Save As"** button

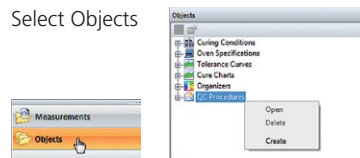→ Enter the recommended curing conditions

- Save

Critical Values and Cure Index will be calculated based on these curing conditions
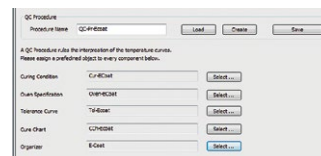
How to set a QC-Procedure?
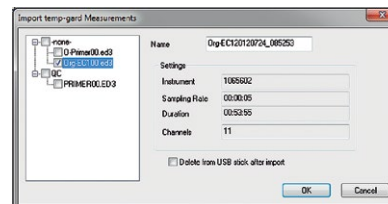
- Select Objects

- Select QC-Procedure

Right mouse click to create new QC-Procedure

→ Empty QC procedure template will appear

→ Name QC-Procedure by pressing **"Save As"** button

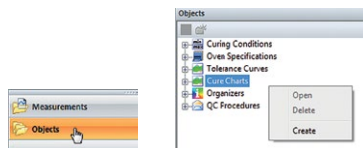→ Select the objects which should be grouped in the QC-Procedure

- QC-Procedure allocates "Curing Conditions", "Oven Settings" and "Tolerance curve" to a measurement curve.
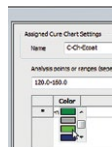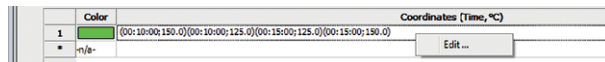
How to create a Cure Chart?

- Select Objects
- Select Cure Chart

- Right mouse click to create a new cure chart
→ Empty Cure Chart template will appear
→ Name Cure Chart by pressing "Save As" button
→ Select a color e.g. green for the zone "perfect"

- Right mouse click into the row for editingcuring conditions

→ The "Edit Cure Chart Area" Window will appear

- There are different possibilities to edit the area

→ Typing into the table duration time & temperature

→ Grabbing the box at the edges

→ Add an additional corner mark

→ Delete or insert a row
  by right mouse click into the 1st column

- Additional Zones will be created by selecting another color and defining coordinates again.
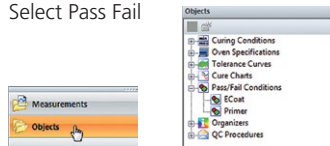

- Cure chart is complete when
→ All coordinates are listed
→ Analysis temperatures and steps are filled in the related row
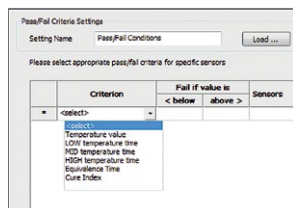→ Annotations and Target Points can be defined

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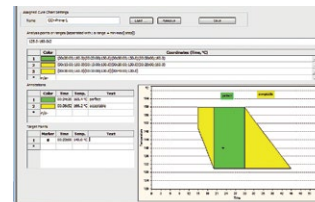
How to set Pass / Fail Conditions?

- Select Objects
- Select Pass Fail

- Right mouse click to create Pass / Fail Conditions
→ Empty Pass / Fail template will appear
→ Name Pass / Fail by pressing "Save As" button
→ Select a Criterion

→ Type in Fail Values

Pass / Fail Results are shown as:
- P/F dots in database listing
- RED marked values in analysis tables
- Pass / Fail Result table

Database Handling

- There are different ways to create or change the database
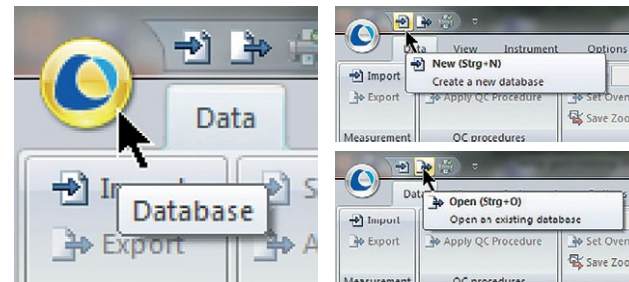
Edit Functions

- Menu Data
→ Edit tab
→ Comment, allows to put in comments after data transfer. These comments will be displayed in the comment field of the printout
→ Remark, allows putting in remarks – text boxes for additional information, which appear in the chart area.

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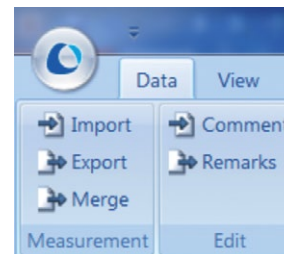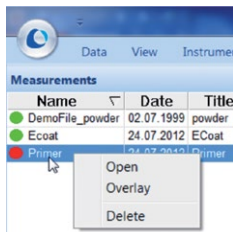# How to display multiple measurements?

## Overlay → display of several measurements – no saving

- Open the desired measurement from database pane → curve will be displayed
- Right mouse click into database pane to pick out the second curve → select "Overlay"

The analyse table will show all results in the order 1. selection , 2. selection
Analysis according to the objects of the 1. Measurement

Merge → combines several measurements – new file will be created

- Select Data → Measurement → Merge
  Merge Multiple measurement window will appear
- → select the complete data set or individual sensors
  The functions "Move up" and "Move down" will change the order and the selection of analysis objects.
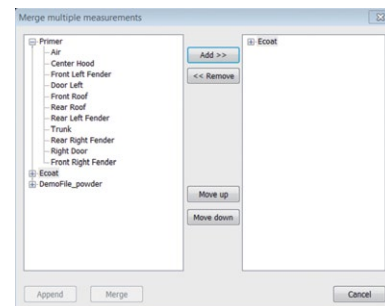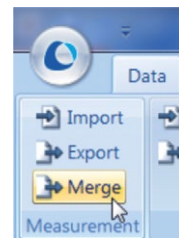
- Select "Merge" to combine several measurements
- → Analyze table lists sensors of all selected measurements
- → Analysis will be done according to the first selected measurement.

- Select "Append" to show the measurement consecutively
- → Analyze table lists sensors of first selected measurement. Results will be summarized
- → Analysis will be done according to the first selected measurement.

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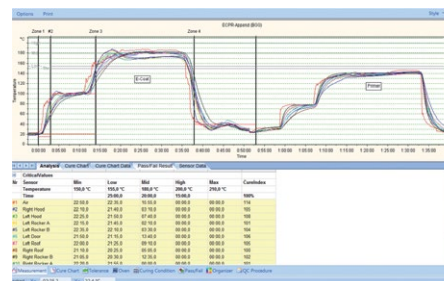
temp-gard Technical Specifications

Accuracy	+/- 0.5 °C
Resolution	0,10 °C from 0 – 400 °C 0.18 °F from 32 – 752 °F
No. of Channels	6 or 12
Memory	20,000 readings per channel
Sampling interval	0.1 sec up to 24 hrs
Temperature Range	0 – 400 °C (32 – 752 °F)
Battery Capacity	0.5 sec interval = 50 hrs
Display	Color, 79 x 60 mm (3.1 x 2.4 in)
Interface	USB 2.0
Thermal Barrier	255 x 215 x 135 mm 10 x 8.5 x 5.3 in
Weight	3.56 kg (7.82 lbs)
Maxium Duration	at 100 °C – 8.5 hrs at 200 °C – 2.5 hrs at 250 °C – 2.0 hrs

temp-chart Hardware Requirements

PC	with Pentium processor
Interface	USB port
Memory	min 256 MB RAM recommended 512 MB
Hard Disk Capacity	min 100 MB
Disk drive	CD-ROM
Monitor resolution	XGA (1024 x 768) or higher
Operating System	Windows 2000 or higher
Exel version	2003 inkluding VBA

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