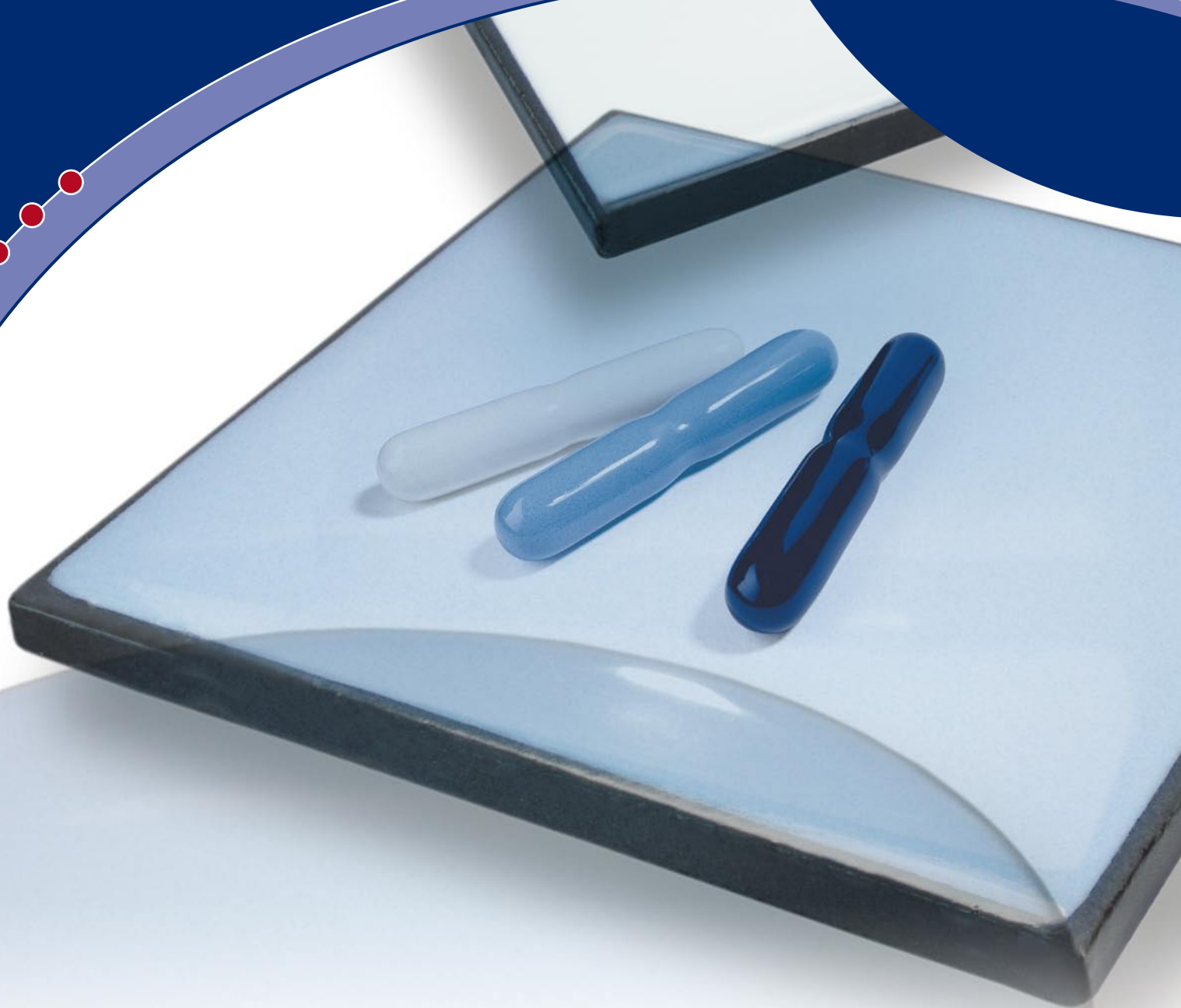


**RAS GLASS® and
Pharma Glass
made by THALETEC
Isocorrosiongraphs**



The optimal glass for your application:

- RAS GLASS® RG – white and blue
Chemical Glass
- TPE 2000 – light blue
Pharma Glass
- SS 2000 – blue
Glass for stainless steel
- REA2 – blue
Glass for heat exchangers

RAS GLASS® is a special glass with a high content of silicate. Combining glass and metal is an excellent way of combining the characteristics of glass (chemical resistance, physiological harmless and smooth surface) and the strength and toughness of metal. RAS GLASS® was tested for all naturally existing media by the Federal Institute for Materials Research and Testing (BAM). The test results according to DIN, ISO and EN standard are helpful for the comparison of the different glasses. The isocorrosion graphs offer an overview of the corrosion rate at different concentrations and temperatures for selected and specific media.

In this way by comparing the isocorrosion graphs with the production media the specialist is able to estimate the resistance (theoretical lifetime) of his reactor or vessel for his actual application. Please contact us for details.

Test results

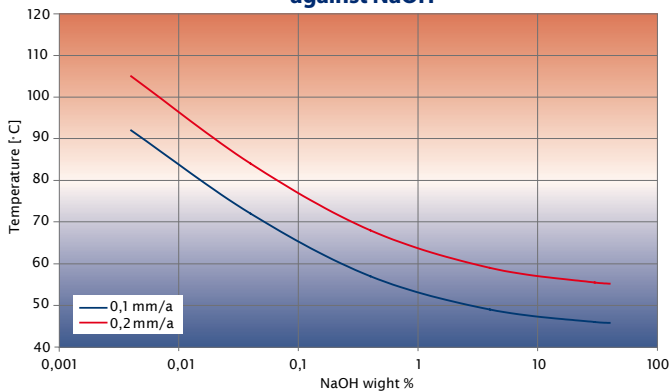
Chemical corrosion

- DIN EN ISO 28706-2 (steam phase):
(20 % HCl, boiling point, 7 days)
0,042mm/y
- DIN EN ISO 28706-2 (steam phase)
(distilled water, boiling point,
7 days) 0,029mm/y
- DIN EN ISO 28706-4 (liquid phase):
(0,1n NaOH, 80°C/176°F, 24 hours, V/S= 20)
0,25mm/y

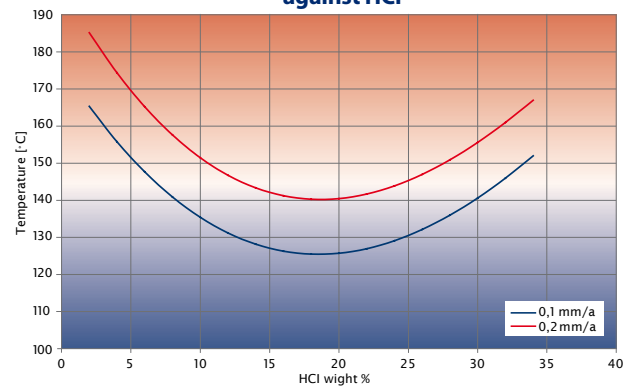
Physical characteristics

- DIN ISO 13807
(Crack formation temperature with Statiflux):
220°C/428°F
- Wear resistance (similar to DIN ISO 6370-1):
5mg/cm²h
- Impact strength (hammer fall device,
steel shot diameter =15mm),
flaking off <1cm²: 21Nm

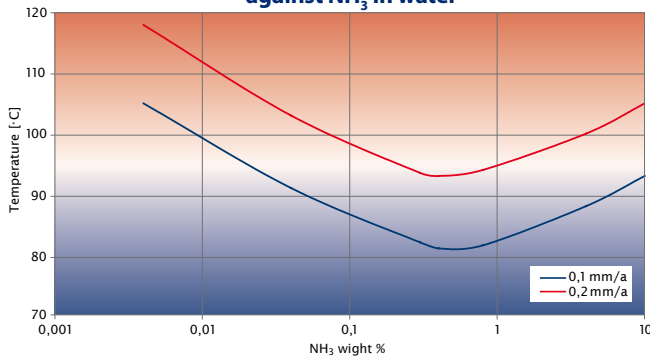
Corrosion resistance of RAS GLASS against NaOH



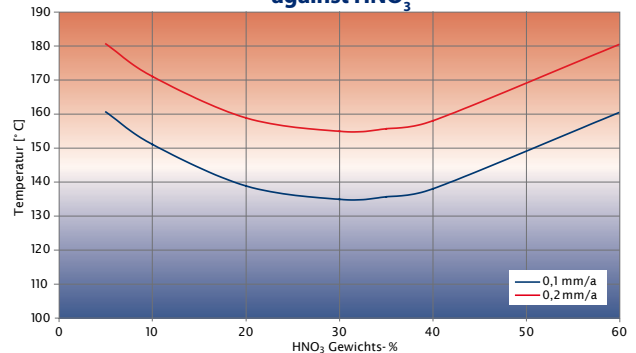
Corrosion resistance of RAS GLASS against HCl



Corrosion resistance of RAS GLASS against NH₃ in water

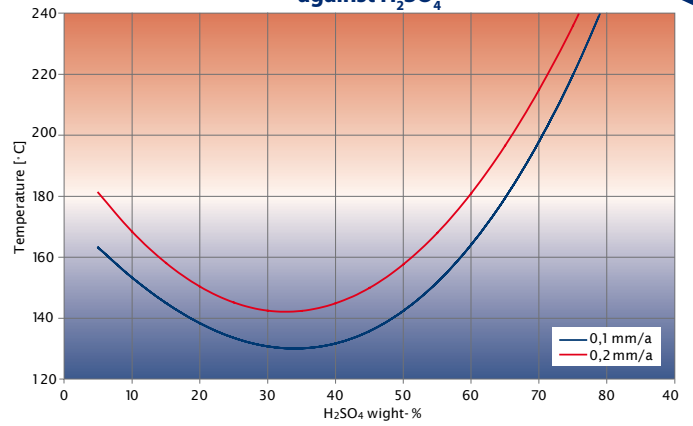


Corrosion resistance of RAS GLASS against HNO₃

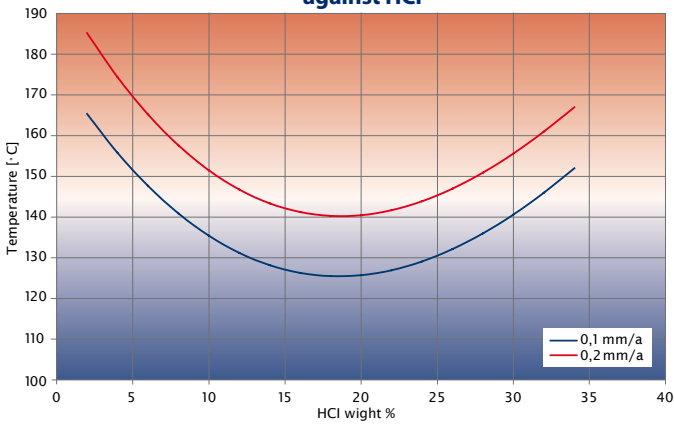


PHARMA GLASS AND GLASS FOR HEAT EXCHANGERS

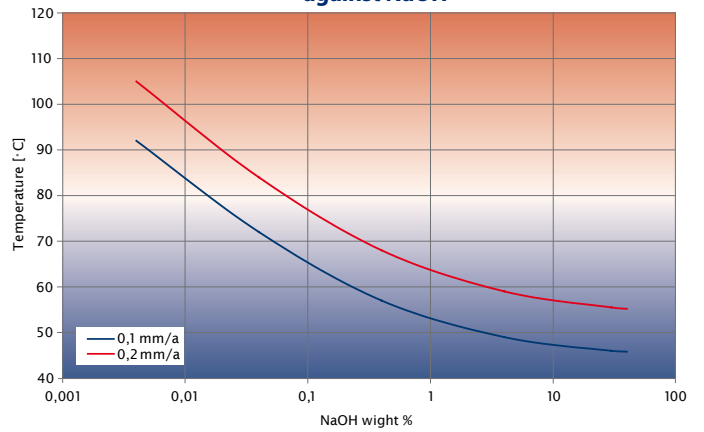
Corrosion resistance of REA2 against H₂SO₄



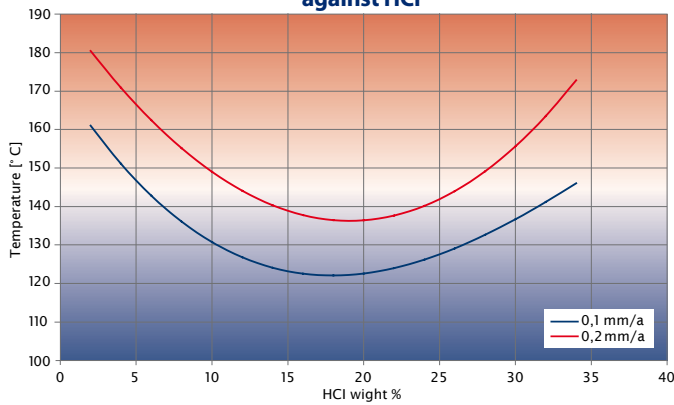
Corrosion resistance of REA2 against HCl



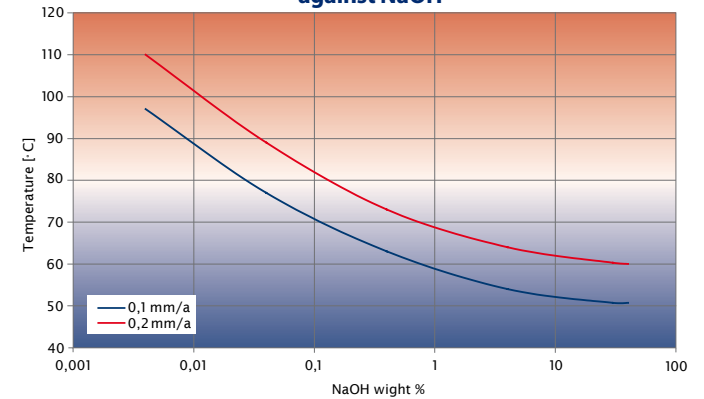
Corrosion resistance of REA2 against NaOH



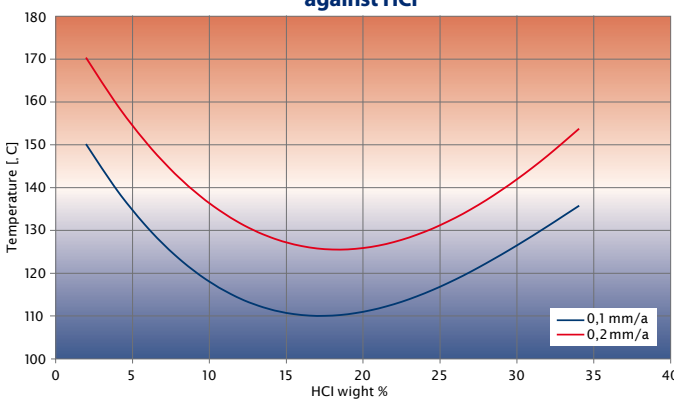
Corrosion resistance of TPE 2000 against HCl



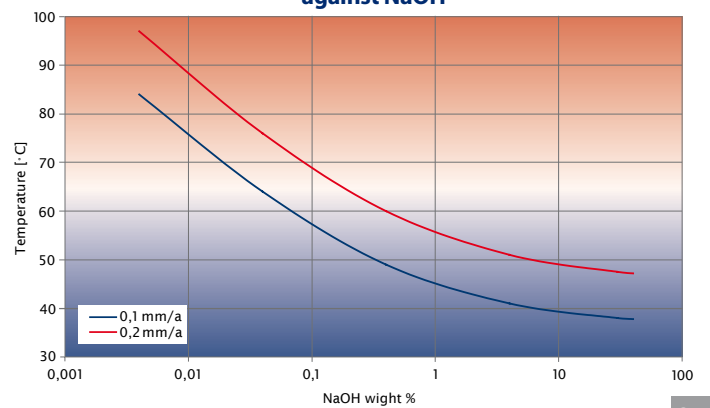
Corrosion resistance of TPE 2000 against NaOH



Corrosion resistance of SS 2000 against HCl



Corrosion resistance of SS 2000 against NaOH



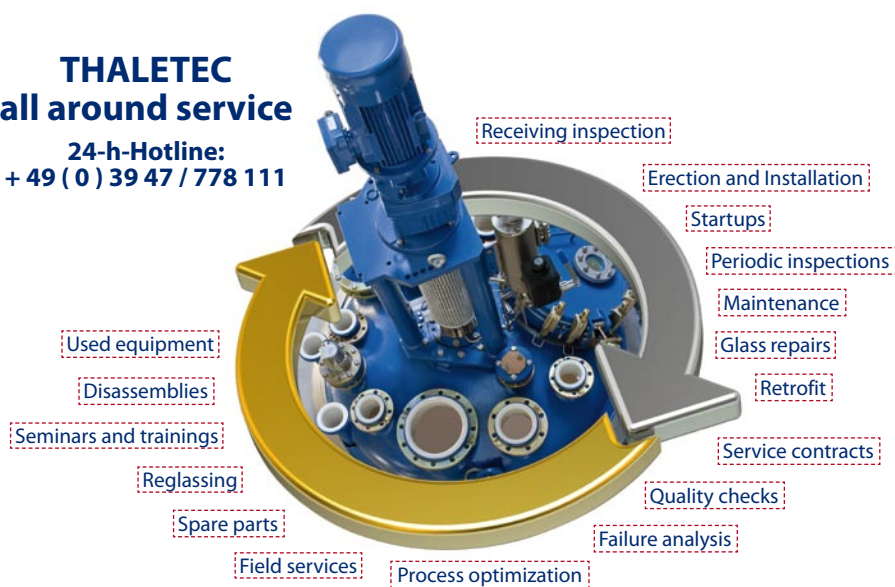
We would like to advise you regarding the advantages of glass lined equipment like:

- Glass lined reactors acc. to DIN 28136
- Glass lined Pharma Reactors
- Components for pharmaceutical and high purity applications
- Mixing technology for pharmaceutical and chemical industry
- Reactors for Polymerization
- Storage Tanks and Receivers
- Columns
- Heat Exchangers
- Sensor technology
- Accessories

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