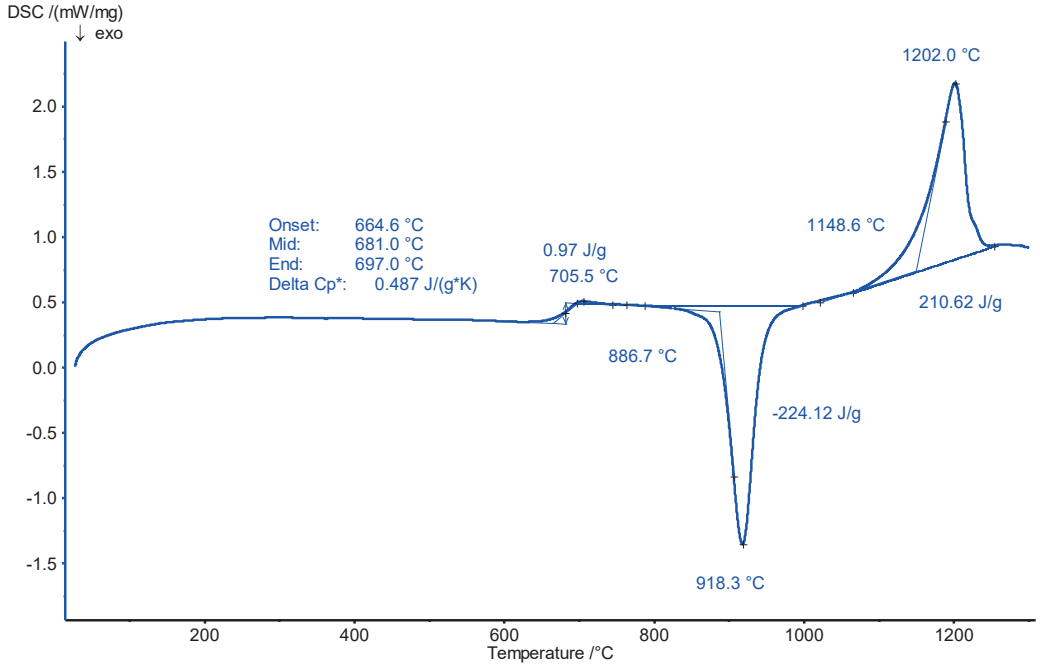
APPLICATION**SHEET**

Inorganics · Research
DSC 404 ***F1*** *Pegasus®*

Volcanic Glass – Obsedian

Introduction

Obsidian is a dark colored massive volcanic glass, often associated with rhyolitic lavas. It breaks like glass, that is, with a concoidal fracture and so was the material most often used for arrowheads and other tools by the western North American Indians. The measured sample origins from British Columbia, Canada.



Test Conditions

Temperature range:	RT ... 1300°C
Heating rate:	20 K/min
Atmosphere:	Air, static
Sample mass:	58 mg
Crucible:	Pt-Rh
Sensor:	DSC type S

Test Results

The obsidian sample shows a glass transition at 681°C (midpoint) with a Δc_p value of 0.487 J/(g·K). A small relaxation peak was detected at 706°C with a relaxation enthalpy of 0.97 J/g. At 918°C (extrapolated onset), crystallization starts. Melting was detected at about 1149°C. The melting enthalpy was determined to be 211 J/g.

NGB · Application Sheet 080 · E · 0621 · Technical specifications are subject to change.

NETZSCH-Gerätebau GmbH
Wittelsbacherstraße 42 · 95100 Selb · Germany
Phone: +49 9287/881-0 · Fax: +49 9287/881505
at@netzsch.com · www.netzsch.com