The Data in this folder are from this publication:

2012 Hofmeister A.M., and Whittington A.G., Effect of hydration and annealing on thermal diffusivity of fused quartz, fused silica, and their melts at high temperature from laser-flash analysis *Journal of Non-Crystalline Solids* 358, 1072-1082.

**See Glasses Database File in metadata folder for complete list of Glass samples/compositions and references.**

**Data collected at Washington University, St. Louis, MO**

**Supported by NSF: EAR-0711020 & EAR-0748411**

Files

Table 1 – Properties of fused silica samples.

Figure 1 A & 1 B – Thermal diffusivity of dry Type 1, with oxygen deficiencies

Figure 2 – Thermal diffusivity of glasses with low hydroxyl.

Figure 3 – Thermal diffusivity of hydrous samples.

Example IR Spectra – PRN files

Column 1: Wave number (cm-1)

Column 2: Absorption Coefficient (mm-1)

|  |  |  |  |
| --- | --- | --- | --- |
| **IR Spectra File Name** | **Sample Thickness (mm)** | **Description** | **Sample ID** |
| KCSIL327 | 1.2 | apt, 2000 scans, res = 4 | KU #3 |
| KCSIL312 | 1.672 | apt, 451 scans, res = 2 | KU #3 |
| KASIL312 | 0.572 | apt, 364 scans, res = 2 | KU #2 |
| KDSIL312 | 1.628 | apt, 900 scans, res = 2 | KU #1 |
| KBSIL312 | 1.039 | apt, 419 scans, res = 2 | KU #4 |
| GE5G729 | 5.6 | apt, mct-caf2, 500 scans, res = 2 | GE124 |
| GEGL802 | 25.12 | apt, mct-caf2, 1000 scans, res = 2 | GE124 |
| SILIG624 | 2.35 | big aperture, 1 screen, 1000 scans, res = 2 | Suprasil |
| SILIG622 | 1.663 | big aperture, 1 screen, 1000 scans, res = 2 | Infrasil |
| SILIF627 | 2.0 | 2000 scans, res = 2 | Infrasil |
| SILIG623 | 1.666 | big aperture, 1 screen, 1000 scans, res = 2 | Herasil |
| SILIC423 | about 0.001 | dac w/ heated, 1500 scans, res = 4 | 7980-OC |
| KISIL312 | 1.456 | apt, 100 scans, res = 2 | KI |
| KV730 | 3.86 | apt, mct-caf2, not polished, 300 scans, res = 2 | KV |
| KVGL729 | 7.82 | apt, mct-caf2, 300 scans, res = 2 | KV |
| KVGL801 | 2.76 | apt, mct-caf2, one side polished, 700 scans, res = 2 | KV |
| KVSIL308 | 0.918 | apt, mid, heated, 2000 scans, res = 4 | KV |
| KVSIL409 | 0.99 | apt, 500 scans, res = 2 | KV |