Supporting Information

Flexible h-BN Foam Sheets for Multifunctional Electronic Packaging Materials with Ultrahigh Thermostability

Deul Kim¹, Artavazd Kirakosyan¹, Jae Woong Lee¹, Jong-Ryul Jeong¹, and Jihoon Choi¹,*

Department of Materials Science and Engineering, Chungnam National University

99 Daehak-ro, Yuseong-gu, Daejeon, 34134, Republic of Korea

Corresponding author: Email: jihoon@cnu.ac.kr
Phone: +82 42 821 6632; Fax +82 42 821 5850
**Fig S1.** Scanning electron micrographs of *as-cast* h-BN foam sheets with a variety of h-BN contents (10 – 80 wt.%).
Fig S2. Magnified SEM images of as-cast h-BN foam sheets (20 – 80 wt.%) and the corresponding EDS spectra and elemental mapping of boron and carbon.
Fig S3. Scanning electron micrographs of *roll-milled* h-BN foam sheets with a variety of h-BN contents from 10 wt.% to 80 wt.%.
**Fig S4.** Magnified SEM images of *roll-milled* h-BN foam sheets (20 – 80 wt.%) and the corresponding EDS spectra and elemental mapping of boron and carbon.
**Fig S5.** Thermal diffusivity of *as-cast* (red circles) and of *roll-milled* (black circles) h-BN foam sheets as a function of h-BN contents. Gray lines represent the theoretical thermal diffusivity of the h-BN foam sheets using Hatta and Taya model ($\alpha_{h-BN} = 180$, $\alpha_{PI/air} = 1.5 \text{ mm}^2/\text{s}$, $S = 0.5$) with different volume fraction of pores (i.e. air).\(^{25}\)
**Fig S6.** Thermal diffusivity of *as-cast* (red circles) and of *roll-milled* (black circles) h-BN foam sheets as a function of h-BN contents. Blue lines represent the theoretical thermal diffusivity of the h-BN foam sheets using Hatta and Taya model ($\alpha_{\text{h-BN}} = 180$, $\alpha_{\text{PI/air}} = 1.5 \text{ mm}^2/\text{s}$, $S = 1$) with different volume fraction of pores (i.e. air).25
Fig S7. Capacitance (left) and dissipation factor (right) as a function of voltage of h-BN foam sheet (80 wt.%).