

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
10 April 2025 (10.04.2025)



(10) International Publication Number
WO 2025/076217 A1

(51) International Patent Classification:

C08G 59/32 (2006.01) C08L 63/00 (2006.01)
C08G 59/40 (2006.01) C08L 25/14 (2006.01)
C08G 59/50 (2006.01) C08L 61/14 (2006.01)
C08G 59/68 (2006.01)

SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(21) International Application Number:

PCT/US2024/049783

(22) International Filing Date:

03 October 2024 (03.10.2024)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/588,417 06 October 2023 (06.10.2023) US

(71) Applicant: ISOLA USA CORP. [US/US]; 6565 W. Frye
Road, Chandler, AZ 85226 (US).

(72) Inventor: WONG, Teck Kai; c/o Isola Group, 164 Gul Cir-
cle, #01-06, Singapore (SG).

(74) Agent: HANLEY, Megan K.; McDonnell Bochen Hul-
bert & Berghoff LLP, 300 South Wacker Drive, Chicago, IL
60606 (US).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ,
CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM,
DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG,
KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY,
MA, MD, MG, MK, MN, MU, MW, MX, MY, MZ, NA,
NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO,
RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS,
ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, CV,
GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, SD, SL, ST,
SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ,
RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ,
DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT,
LU, LV, MC, ME, MK, MT, NL, NO, PL, PT, RO, RS, SE,

(54) Title: THERMOSETTING COMPOSITIONS, CURED COMPOSITIONS, AND PREPREGS AND LAMINATES BASED ON
SAME

(57) Abstract: This disclosure relates to thermosetting compositions suitable for use in making electronic materials such as circuit
board substrates, as well as cured compositions, prepregs and laminates based on such thermosetting compositions. One aspect of
the disclosure is a thermosetting composition comprising: an aromatic epoxy resin component; a poly(styrene- co-maleic anhydride)
component; a maleimide-bearing oligomer component; the maleimide- bearing oligomer component having an average of at least 4
maleimides per molecule, on a number average, and a softening point of no more than 100 °C; a benzoxazine/maleimide component,
that is a bis(benzoxazine) subcomponent and a bis(maleimide) subcomponent, and/or a reaction product thereof; an aromatic primary
diamine component; micro particulate silica; an organic halogen-free fire retardant component; an effective amount of one or more
catalysts.



WO 2025/076217 A1