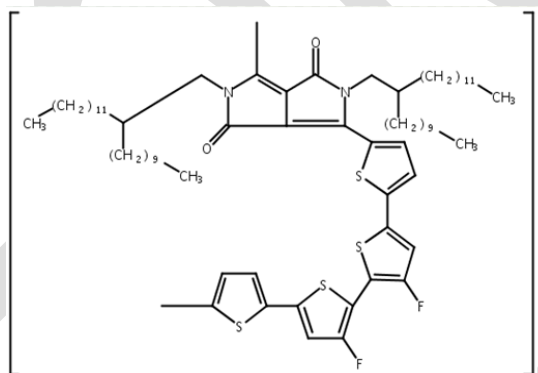


CERTIFICATE OF ANALYSIS

Product: OS0462/PDPP4T-2F/PDQT-2F

Full Name: Poly[2,5-bis(2-octyldodecyl)pyrrolo[3,4-c]pyrrole-1,4(2H,5H)-dione -3,6-diyl)-alt-(3'',4'- difluoro[2,2';5',2'';5'',2'''-quaterthiophen]-5,5'''-diyl)]

Chemical Structure:



Lot number: YY19186CH

Appearance: Dark blue-black fine particles

Molecular weight (GPC): ~125,000 (Mw, PS Standard)

Polydispersity(PDI): ~2.3

Solubility: Soluble in dichlorobenzene (ODCB), chlorobenzene and CHCl₃

NMR analysis: Structure confirmed