

## Safe Operating Procedure (SOP) for DPPT-TT (CAS: 1260685-66-2)

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**Chemical formula:**  $(C_{60}H_{88}N_2O_2S_4)_n$

**Synonyms:** PDBT-co-DTT, PTT-DTDPP, PDPP-DTT, DPPT-TT, DPP-TTT, PDPP2T-TT, PDPP2T-TT-OD, DPPDTP, Poly[2,5-(2-octylododecyl)-3,6-diketopyrrolopyrrole-alt-5,5-(2,5-di(thien-2-yl)thieno [3,2-b]thiophene)]

**Solubility:** Chloroform, chlorobenzene and dichlorobenzene

**SAFETY:** Use with adequate ventilation (always under fume hood or inside glove box). Wear gloves (nitrile gloves) and other appropriate protective apparel (Face shield AND safety glasses). Normally no personal respiratory protection is necessary.

**IMPORTANT NOTE: Don't touch the substance. When peeling off the gloves, avoid skin touch with substance. Avoid inhalation and ingestion. Wash your hands thoroughly after you are done.**

**Storage:** Keep the material in sealed glass vial and in well-ventilated area.

**Waste disposal:** Do not dispose waste into sewer. Dispose generated liquid waste from DPPT-TT only in glass containers and avoid mixing it with other solvents. Double-bag generated dry waste (samples, wafers, etc.) using sealable transparent bags.

**Spill and Accident Procedure:** Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Do not attempt clean-up without minimum PPE. Contact Uwaterloo's Spill control (UW police) ext. 519-888-4911 or ext. 22222.

### SOP:

This material is a high mobility p-type polymer semiconductor, suitable for OFET and sensing and photovoltaic applications.

- 1- Wear proper PPE (safety goggles, nitrile gloves and lab coat).
- 2- The DPPT-TT solution (here 1,2-Dichlorobenzene, Solvent) will be stored in small glass vials with close and tight caps. Bring it to lab table where the polymer spinner located.
- 3- Prepare for polymer spinner: Cover in the spinner with Al foil so during the spinning sprayed materials can be easily removed and clean up thoroughly when you finish.
- 4- Place the substrate (wafers or glass) in the spinner. Under proper ventilation transfer your solution with the micropipette on the substrate (Needed volume of solution depends on the size of the substrate, e.g. 50 microliter for 3x3 cm wafers).
- 5- Operate the spinner based on your experimental conditions. When you finish with the spinner, close the lid of glass vial tightly then seal it with the para-film.
- 6- Keep proper ventilation condition. Clean up all Al foil and sprayed materials in the spinner with the wipers and proper solvents of this materials (e.g. Toluene, chloroform, chlorobenzene, and 1,2-dichlorobenzene). Then the wipers and contaminated foils should be placed in the contaminated waste beaker in the wet bench to evaporate the solvent. After it is dry, dispose this waste to designated waste disposal container – non-toxic dry waste.