## Strem Chemicals, Inc.

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Catalog # 15-1376

(11bR)-2,6-Bis[3,5-bis(trifluoromethyl)phenyl]-8,9,10,11,12,13,14,15-octahydro-4-hydroxy-4-oxide-dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 98%, (99% ee)

## **Technical Notes:**

- 1. The preparation of binaphthol monophosphoric acid derivatives.
- 2. **Sigmatropic Rearrangements:** Used in the organocatalytic aryl-aryl bond-forming process for the regio-and atroposelective synthesis of 2,2'-diamino-1,1'-binaphthalenes (BINAMs). In the presence of catalytic amounts of axially chiral phosphoric acids, achiral *N*,*N*'-binaphthyl hydrazines undergo a facile [3,3]-sigmatropic rearrangement to afford enantiomerically enriched BINAM derivatives in good to excellent yield.

## References:

- 1. JP 4725757, EP 1038877, US 6274745, 2000-3-21.
- 2. J. Am. Chem. Soc., 2013, 135, 7414-7417.