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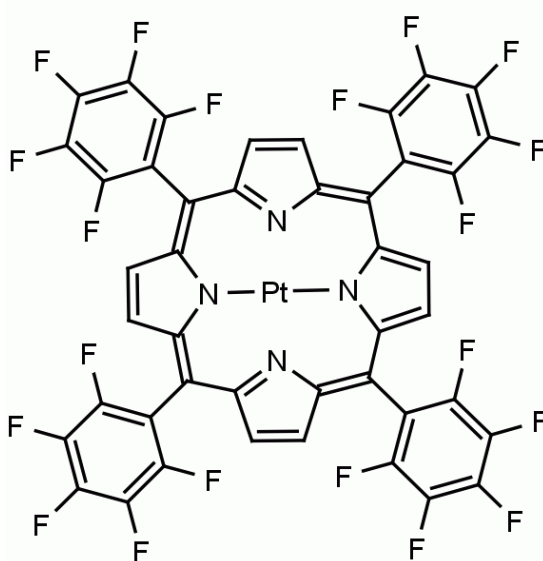
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Technical Data Sheet
Catalog Number: **PtT975**

For research use only
Not intended or approved for
diagnostic or therapeutic use.

Product Name: Pt(II) meso-Tetra(pentafluorophenyl)porphine

Catalog Number: PtT975



Size: 250 mg, 1 g, and larger sizes available, kilogram and multi-kilogram quantities available

Molecular Formula: C₄₄H₈F₂₀N₄Pt **MW:** 1167.6 **CAS:** 109781-47-7

Storage: Store at room temperature, protect from light

Synonyms: Pt(II)-meso-tetra(pentafluorophenyl)porphine, Platinum(II) meso-tetra(pentafluorophenyl)porphine, 5,10,15,20-Tetrakis(pentafluorophenyl)-21h,23h-porphine, platinum(ii)

Solubility: CH₂Cl₂, CHCl₃, toluene

Purity: 97%

Field of Interest: Organic Synthesis, Photocatalysis, Photodynamic Therapy, Photooptics and Oxygen Measurement

Background: Pt(II) meso-Tetra(pentafluorophenyl)porphine is a stable metalloporphyrin possessing perfluorinated phenyl groups and a platinum ligand that enhances its photophysical and oxygen sensing capabilities. ^{1,2} The compound also works in cells measuring metabolic changes while also efficiently measuring oxygen in sol-gel matrices. ^{3,4} Industrial uses include pressure sensitive paints, oxygen sensors for food, films and medical products, and in photonics and photocatalysis.⁵⁻⁷

References:

- 1) Russell, Michael D.; Gouterman, Martin; Van Zee, James A., Excitation-emission-lifetime analysis of multicomponent systems-III. Platinum, palladium and rhodium porphyrins, *Spectrochimica Acta, Part A: Molecular and Biomolecular Spectroscopy* (1988), 44A(9), 873-82.
- 2) Lee, Sang-Kyung; Okura, Ichiro, Photostable optical oxygen sensing material: platinum tetrakis(pentafluorophenyl), *Analytical Communications* (1997), 34(6), 185-188.
- 3) Fercher, Andreas; Borisov, Sergey M.; Zhdanov, Alexander V.; Klimant, Ingo; Papkovsky, Dmitri B., Intracellular O₂ Sensing Probe Based on Cell-Penetrating Phosphorescent Nanoparticles, *ACS Nano* (2011), 5(7), 5499-5508.
- 4) Yeh, Tai-Sheng; Chu, Chen-Shane; Lo, Yu-Lung, Highly sensitive optical fiber oxygen sensor using Pt(II) complex embedded in sol-gel matrices, *Sensors and Actuators, B: Chemical* (2006), 119(2), 701-707.
- 5) Puklin, Eileen; Carlson, Brenden; Gouin, Sebastien; Costin, Colin; Green, Edmond; Ponomarev, Sergey; Tanji, Hideaki; Gouterman, Martin, Ideality of pressure-sensitive paint. I. Platinum tetra(pentafluorophenyl)porphine in fluoroacrylic polymer, *Journal of Applied Polymer Science* (2000), 77(13), 2795-2804.
- 6) O'Riordan, Tomas C.; Voraberger, Hannes; Kerry, Joe P.; Papkovsky, Dmitri B., Study of migration of active components of phosphorescent oxygen sensors for food packaging applications, *Analytica Chimica Acta* (2005), 530(1), 135-141.
- 7) To, Wai-Pong; Liu, Yungen; Lau, Tai-Chu; Che, Chi-Ming, A Robust Palladium(II)-Porphyrin Complex as Catalyst for Visible Light-Induced Oxidative C-H Functionalization, *Chemistry - A European Journal* (2013), 19(18), 5654-5664.

Hazardous Properties and Cautions: The toxicological and pharmacological properties of this compound are not fully known. For further information see the SDS on request. Pt(II) meso-Tetra(pentafluorophenyl)porphine is manufactured, shipped according to standard practices, and intended for research and development in a laboratory utilizing prudent procedures for handling chemicals of unknown toxicity, under the supervision of persons technically qualified to evaluate potential risks and authorized to enforce appropriate health and safety measures. As with all research chemicals, precautions should be taken to avoid unnecessary exposures or risks.

Warranty and Disclaimer: Frontier Specialty Chemicals, Inc. warrants the product conforms to the specifications stated herein. In the event of nonconformity, Frontier will replace products or refund purchase price, at its sole option, and Frontier shall not be responsible for any other loss or damage, whether known or foreseeable to Frontier. No other warranties apply, express or implied, including but not limited to warranty of fitness for any purpose or implied warranty of merchantability. Purchaser is solely responsible for all consequences of its use of the product and Frontier assumes no responsibility therefore, including success of purchaser's research and development, or health or safety of any uses of the product.