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Frontier Specialty Chemicals, Inc. **Technical Data Sheet**  
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Catalog Number: **T40253**

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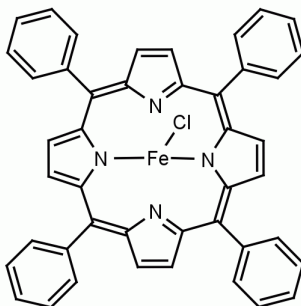
[sales@frontiersci.com](mailto:sales@frontiersci.com)

**For research use only**

Not intended or approved for  
diagnostic or therapeutic use.

**Product Name:** **Fe(III) meso-Tetraphenylporphine Chloride**  
**(1-3% chlorin)**

**Catalog Number:** T40253



**Size:** 5g, 25 g, 100g, 500g, kilogram and multi-kilogram quantities available

**Molecular Formula:** C<sub>44</sub>H<sub>28</sub>ClFeN<sub>4</sub> **MW:** 704.02 **CAS:** 13675-81-8

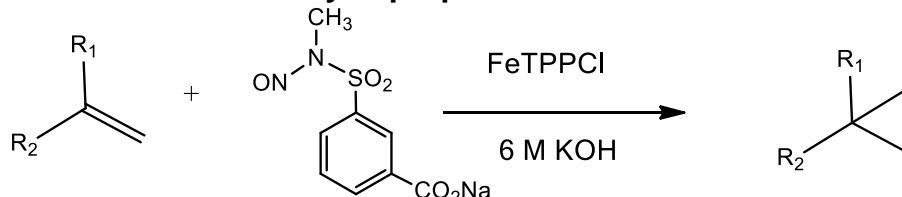
**Solubility:** 6M KOH; water

**Storage:** Store at room temperature, protect from light

**Synonyms:** Iron porphyrin catalyst; FeTPPCI

**Purity:** 97%

**Field of Interest:** **Alkene to Cyclopropane Conversion**



**Background:** Conversion of alkenes to cyclopropyl derivatives has relied previously on diazomethane formed with the use of a Diazald kit, under hazardous conditions and by the use of N-nitroso-N-methylurea, also explosive and carcinogenic.<sup>1</sup> Using N-methyl-N-nitroso-p-toulenesulfonamide, a stable and commercially available compound, along with Fe(TPP)Cl at 5 mole% in 6M KOH cyclopropanation of alkene substrates occurs with high yield, resisting decomposition under these basic conditions.<sup>2</sup> Styrene compounds possessing both electron withdrawing and donating

substituents gave high yields of cyclopropane products, as did disubstituted derivatives and even alkynes possessing alkenyl substructures. By using an iron porphyrin catalyst with a diazomethane precursor under basic conditions one can produce under safer protocols structurally diverse compounds for materials science, drug discovery and compounds of commercial interest.

## References

- (1) Aldrich Technical Bulletin No. AL-180 (Aldrich Chemical Company, Milwaukee, WI, 2004).
- (2) Morandi, B and Carreira, E. M., *Science*, **335**, 1471 (2012).

**Hazardous Properties and Cautions:** The toxicological and pharmacological properties of this compound are not fully known. For further information see the SDS on request. **Fe(III) meso-tetraphenylporphine chloride 1-3% chlorin** 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.