



Frontier Scientific

Material Safety Data Sheet

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MDS Name

Uroporphyrin III dihydrochloride

Synonym >97% All isomers, >90% type III isomer

Catalog # U830-3

CAS#

Supplier Frontier Scientific, Inc P.O. Box 31 Logan, UT 84321 (435)-753-1901	In case Chemtrec of emergency (800) 424-9300 contact: (U.S.A.) (703) 57-3887 (Intl)
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SECTION 2 - COMPOSITION AND INFORMATION ON INGREDIENTS

Uroporphyrin III dihydrochloride

Formula C₄₀H₄₀Cl₂N₄O₁₆Purity TLV/PEL

SECTION 3 - HAZARDS IDENTIFICATION

Irritating to the eyes and skin on contact. Inhalation may cause irritation of the lungs and respiratory system. Irritation of the eye is characterized by redness, watering, and itching. Skin irritation is characterized by itching, swelling, reddening, or blistering. The toxicological properties of this material have not been investigated. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.

SECTION 4 - FIRST AID MEASURES

Eyes - Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. DO NOT use an eye ointment. Get medical aid immediately.

Skin - Get medical aid. Flush skin with soap and water - at least 15 minutes and remove contaminated clothing and shoes.

Ingestion - If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid immediately.

Inhalation - Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

SECTION 5 - FIRE AND EXPLOSION DATA

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Flammability Flash Point Auto-ignition Flammable Limits Fire fighting media: SMALL FIRE: Use DRY chemicals, CO₂, water spray, or foam.

LARGE FIRE: Use water spray, fog, or foam. DO NOT use water jet.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

In case of spill or leak, always shut off any sources of ignition, ventilate the area if dust is present in the air, and exercise caution. Use a brush and pan to put the material into a convenient waste disposal container. Finish cleaning the spill by rinsing any contaminated surfaces with copious amounts of water and detergent such as 409 ©. Use proper personal protective equipment as indicated in Section 8.

SECTION 7 - HANDLING AND STORAGE

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Store in a cool, dry place. Keep away from sources of heat and ignition. Avoid excessive heat and light. Keep container closed when not in use.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls - Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels

Personal Protection - Work in an approved fume hood. Use splash goggles, gloves, and lab coat. A respiratory protection program that meets OSHA's 29 CFR | 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Emergency phone number: (800) 424-9300

Uroporphyrin III dihydrochloride

Exposure Limits - Not Available

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State	solid	BP	Not available	Formula	C ₄₀ H ₄₀ Cl ₂ N ₄ O ₁₆
Density		MP	Not specified	Mass	903.68
Odor	None	Solubility	Strongly Acidic or Basic Aqueous Solutions		

SECTION 10 - STABILITY AND REACTIVITY DATA

Stability This material is stable if stored under proper conditions. (See section 7).

Conditions to avoid Excessive heat and light, incompatible materials, oxidants, acids.

Incompatibles Strong oxidizing agents.

SECTION 11 - TOXICOLOGICAL INFORMATION

The toxicological properties of this material have not been fully investigated. Use appropriate procedures to prevent opportunities for direct contact with the skin or eyes and to prevent inhalation.

RTECS Number	NA	Carcinogenic Effects	Not available
Toxicology	Not Available	Mutagenic Effects	Not available
Routes of Exposure	Ingestion, inhalation		

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity: Not available Environmental fate: Not available

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. Dispose of in a manner consistent with federal, state, and local regulations

SECTION 14 - TRANSPORT INFORMATION

DOT Classification	Not classified	Proper Shipping Name	None
UN/ID Number	None	Packing Group	None

SECTION 15 - REGULATORY INFORMATION

This material IS NOT on the EPA Toxic Substances Control Act (TSCA) inventory. The following notices are required by 40 CFR 720.36 (C) for those products not on the inventory list:

- 1) This product is supplied solely for use in research and development by or under the supervision of technically qualified individuals as defined in 40 CFR 720.0.
- 2) The health risks of these products have not been fully determined. Any information that is or becomes available will be supplied on an MSDS sheet.

WHMIS Classification WHMIS CLASS D-2B: Material causing other toxic effects (TOXIC)

SECTION 16 - ADDITIONAL INFORMATION

MSDS Creation Date: Nov 17, 06 Revision Date: Aug 30, 10

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall Frontier Scientific be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Frontier Scientific has been advised of the possibility of such damages.

Emergency phone number: (800) 424-9300