



**MATERIAL SAFETY DATA SHEET
READY-TO-USE
CHEMILUMINESCENT SUBSTRATE**

**SECTION I
PRODUCT IDENTIFICATION**

PRODUCT NAME: Attoglow 450PLUS

CHEMICAL NAME: [(4-Methoxy)-4-(3-phosphoryloxy-4-chlorophenyl)] spiro [1,2-dioxetane-3, 13'-tricyclo[7.3.1.0^{2,7}] tridec-2,7-ene], disodium salt

CHEMICAL FORMULA: C₂₁H₂₄ClO₇PNa₂

FORMULA WEIGHT: 501.5

CHEMICAL ABSTRACTS SERVICES NUMBER: unknown

CHEMICAL FAMILY: 1,2-Dioxetanes, soluble in aqueous system

**SECTION II
PRODUCT AND COMPONENT HAZARD DATA**

HAZARDOUS INGREDIENTS:

1,2-dioxetane-ene	<1.0%
Water (DI)	>95%
Buffer (Tris)	<2.0%
Enhancers (cross linked Phosponium salts of Poly vinyl benzyl Chloride and Non-Fluorescent organic molecules)	<1.0%
Sodium Azide	<0.1%

TOXICITY HAZARDS:

The toxicological properties of 1,2-dioxetane-ene itself have not been investigated. All materials and mixtures may present unknown hazards and should be used by workers technically qualified to handle potentially hazardous chemicals. The buffering components are known to be basic and an irritant to the upper respiratory system upon prolonged inhalation.

HEALTH HAZARDS:

Avoid Contact:: In case of contact with eyes, immediately flush with copious amounts of water and seek medical attention. In case of contact with skin, flood the area with water and wash with and running water. Wash contaminated clothing before reuse. May be harmful if swallowed; in case of ingestion, immediately seek medical attention

FIRE AND EXPLOSION HAZARDS:

The aqueous solution is nonflammable. The dried material can burn to give oxides of carbon and nitrogen, as well as, hydrogen chloride. Phosphorous oxides and/or phosphines can also result. A self-contained breathing apparatus should be worn by fire fighting personnel.

SECTION 3

PHYSICAL DATA

DESCRIPTION: A multi-component mixture in a clear, aqueous, alkaline, solution.

BOILING POINT: 1000C

SPECIFIC GRAVITY: Approximately 1.00 g/ml

pH: Alkaline

SECTION 4

INCOMPATIBLES:

Store away from acid, combustible materials and strong oxidizing or reducing agents

SPILL OR LEAK PROCEDURES:

Absorb large spills, with an inert cellulosic materials such as absorbent paper. Evaporate the water and transfer the impregnated dry material to a suitable container for disposal in accordance with federal, state and local regulations. Use a NIOSH/MSHA approved respirator during transfer to avoid breathing dust. The preferred disposal method is burning in a chemical incinerator Wash the spill site with water.

HANDLING PRECAUTIONS:

impervious gloves, safety glasses or goggles and a laboratory coat are recommended as protective equipment during any handling operation. Access to an eyewash station and safety shower should also be secured before working with this material.

STORAGE:

Keep container tightly closed. Store solution away from heat or light. The shelf life of this solution is approximately one year when stored in the dark at 2 to 80C,

The above information is believed to be correct but not all inclusive and shall be used

