



Durel Division

Durel Division / 2225 W. Chandler Blvd. / Chandler, AZ 85224-6155 / 480.917.6000 / Fax: 480.917.6049

MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: 1PHS021, 1PHS022, 1PHS023

CHEMICAL FAMILY: Blue-Green EL Phosphors

HMIS RATING: H 1 F 0 R 0

USE OF MATERIAL: Electro Luminescent Lamp

DATE ISSUED: 5/23/2008

EMERGENCY PHONE: 860-774-9605 (Monday – Friday 8 a.m. – 5 p.m. EST)

CHEMTREC: 800-424-9300 (U.S. & Canada) (24 Hours)
703-527-3887 (International – Call Collect) (24 Hours)

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>CAS No.</u>	<u>EINECS /ELINCS</u>	<u>%</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>China OEL</u>	<u>EU Classification</u>
Zinc Sulfide, Copper Chloride-Doped	68611-70-1	271-904-2	>90	5 mg/m ³ (Respirable PNOR) 15 mg/m ³ (Total PNOR)	3 mg/m ³ (Respirable PNOS) 10 mg/m ³ (Inhalable PNOS)	NE	Not Classified Under 67/548/EC
Amorphous Silica, fused	69012-64-2	273-46-1	<5	80 mg/m ³ %SiO ₂	2 mg/m ³ (respirable)	NE	Not Classified Under 67/548/EC
Titanium Dioxide	13463-67-7	236-675-5	<5	15 mg/m ³ (total)	10 mg/m ³	NE	Not Classified Under 67/548/EC

The material contains no other hazardous ingredients as defined in OSHA's Hazard Communication Standard 29 CFR 1910.1200 or EU directive 1999/45/EC, and do not present a health or environmental hazard according to directive 67/548/EC.

3. HAZARDS IDENTIFICATION

CLASSIFICATION OF THE MATERIAL: NE

LABELING REQUIREMENTS: NE

EFFECTS OF OVEREXPOSURE: NE

INHALATION: Breathing high concentrations of dust may produce irritation, labored breathing, and coughing.

EYE CONTACT: Mechanical irritation.

SKIN CONTACT: Repeated or prolonged exposure may cause irritation and in rare cases rash or dermatitis.

INGESTION: Not known.

CHRONIC: None known.

4. FIRST-AID MEASURES

INHALATION:	Remove to fresh air. Obtain medical attention if symptoms persist.
EYE CONTACT:	Flush eyes with large amounts of water for 15 to 20 minutes. Obtain medical attention if symptoms persist.
SKIN CONTACT:	Immediately take off all contaminated clothing and wash area with soap and water for 15 to 20 minutes. Obtain medical attention if symptoms persist.
INGESTION:	Do not induce vomiting. Obtain medical attention immediately.

5. FIRE-FIGHTING MEASURES

FLASH POINT:	NE °C (°F)	Flammable Limits:	LEL	<u>NA</u>	UEL	<u>NA</u>
AUTOIGNITION TEMPERATURE:	NE °C (°F)					
EXTINGUISHING MEDIA:	<u> </u> Water Spray	<u> </u> Foam	<u> </u> CO ₂			
	<u> X </u> Dry Chemical	<u> </u> Other –				
SPECIAL FIRE FIGHTING PROCEDURES:	Firefighters should be equipped with self-contained breathing apparatus and turnout gear. Product does not burn.					
UNUSUAL FIRE AND EXPLOSION HAZARDS:	None known.					

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:	Wear suitable protective equipment. Wear self-contained breathing apparatus and heavy rubber gloves. Avoid contact with skin and eyes.
ENVIRONMENTAL PRECAUTIONS:	Prevent from entering sewer system, surface water or soil.
CLEANING METHODS:	Sweep or vacuum spills. To minimize dust, vacuum cleaning with a Hepa filter is preferred.

7. HANDLING AND STORAGE

HANDLING:	Wear suitable protective equipment (refer to Section 8). Wash hands with soap and water after handling.
STORAGE:	Store in sealed containers in a cool, well-ventilated area.

8. ENGINEERING CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION:	None needed under normal conditions. NIOSH/MSHA-approved N95 respirator if exposure levels exceed permissible limits. A qualified individual should evaluate each situation.
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VENTILATION

LOCAL:	Recommended for all industrial operations.
GENERAL:	Recommended for all industrial operations.

PERSONAL PROTECTION

HAND:	Heavy Rubber Gloves
EYE:	Safety glasses with side shields.
SKIN:	As needed to prevent gross contact.
OTHER:	Safety shower/eyewash in the area if possible tissue exposure to materials.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Off-White Sandy Powder
ODOR:	Solvent-Like
PHYSICAL STATE:	Solid
BOILING POINT:	Sublimes at 1185°C
MELTING POINT:	NE °C (°F)
FREEZING POINT:	NA °C (°F)
FLASH POINT:	NE °C (°F)
WATER SOLUBILITY:	Insoluble
VAPOR DENSITY:	NA
VAPOR PRESSURE:	NA
SPECIFIC GRAVITY:	4.1 g/cc (Water = 1)
PARTITION COEFFICIENT:	NA
EVAPORATION RATE:	NA
RELATIVE DENSITY:	NA
VISCOSITY:	NA
AUTO-IGNITION TEMPERATURE:	NA °C (°F)
DECOMPOSITION TEMPERATURE:	NA °C (°F)
PH:	NA
FLAMMABILITY:	NA

10. STABILITY AND REACTIVITY

STABLE	<u>X</u>	UNSTABLE	_____
CONDITIONS TO AVOID:	Not reactive.		
MATERIALS TO AVOID:	Contact with strong acids, chlorates, iodine monochloride, and strong oxidizers.		
HAZARDOUS POLYMERIZATION:	_____	May Occur	<u>X</u> Does Not Occur
HAZARDOUS DECOMPOSITION PRODUCTS:	Zinc oxide, oxides of sulfur and copper.		

11. TOXICOLOGICAL INFORMATION

CARCINOGENIC STATUS: NA

12. ECOLOGICAL INFORMATION

ECOTOXICITY: NA

13. DISPOSAL CONSIDERATION

PHYSICAL/CHEMICAL PROPERTIES AFFECTING DISPOSAL: None

ENVIRONMENTAL TOXICITY DATA: NA

WASTE DISPOSAL METHOD: Dispose of in accordance with applicable federal, state, provincial, and local laws and regulations.

14. TRANSPORT INFORMATION

UN NUMBER: Not Regulated

UN PROPER SHIPPING NAME: Not Regulated

HAZARD CLASS (ES): Not Regulated

PACKING GROUP: Not Regulated

ENVIRONMENTAL HAZARDS: NE

15. REGULATORY INFORMATION

INTERNATIONAL REGULATIONS:

Canadian (DSL/NDSL): LISTED
Australian (ACIS): LISTED
Korea (KECI): LISTED
Japan (ENCS, MITI): LISTED
China (SEPA): LISTED
EU Directive 2002/95/EC (RoHS): Does not contain any intentionally added substances mentioned by the RoHS directive.

European:

Symbol: Not classified according to directive 67/548/EEC (dangerous substances) and 1999/45/EC (dangerous preparations).

R-Phase(s): NA

S-Phase(s): NA

TSCA

(*Toxic Substances Control Act*):

All materials are listed or exempt from TSCA listing.

CERCLA

(*Comprehensive Emergency Response, Compensation, and Liability Act*):

NA

SARA TITLE III

(*Superfund Amendments and Reauthorization Act*):

NA

311/312 HAZARD CATEGORIES: Immediate (Acute) Health Hazard

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and 40 CFR 372:

<u>TRI CHEMICAL CATEGORY</u>	<u>CHEMICAL NAME</u>	<u>PERCENT BY WEIGHT</u>
N982	Zinc Compound	>90

16. OTHER INFORMATION

NA = Not Applicable

NE = Not Established

NC = Not Classified

FILE: Phosphor Blue-Green (02x series).doc
99139

PREPARED BY: Mary Katherine Starr

REVIEWED BY: Michal Werbecki

Date Prepared: 5/23/2008

REVISION ITEMS & DATE:

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