



PHOSPHORUS NITRIDE (P₃N₅) GETTERS

GENERAL ELECTRIC COMPANY
LAMP COMPONENTS DIVISION
PRODUCT DATA SHEET 7760-A
NOVEMBER, 1981
NEW

General Electric has a line of phosphorus nitride (P₃N₅) getters designed for incandescent lamp application. Our P₃N₅ getters offer considerable advantage as a replacement for the more traditional red phosphorus type getters, especially in gas-filled incandescent lamps. Some of the advantages of these P₃N₅ getters are: (1) they are not affected by lamp processing temperatures (P₃N₅ dissociates at 800°C), (2) P₃N₅ is inert and does not hydrolyze or react with the suspending solvent, (3) there are no fire hazards from dried getter because the P₃N₅ is not flammable.

The crystalline P₃N₅ is milled to a predetermined particle size of approximately 5 microns and suspended in a suitable organic solvent system. The amount of phosphorus nitride used in each lamp is governed by the amount of solids per liter of solvent. As the slurry solids are increased, more of the P₃N₅ will be picked up by the lamp filament. These uniformly fine particle size getters result in consistent filament coating weights.

PRODUCT CHARACTERISTICS—P₃N₅ GETTERS

<u>Product Designation</u>	<u>Solids</u>	<u>Solvent</u>
P ₃ N ₅ Getter #4003115	5 Gr/L	Butanol
P ₃ N ₅ Getter #4003117	10 Gr/L	Butanol
P ₃ N ₅ Getter #4003119	15 Gr/L	Butanol
P ₃ N ₅ Getter #4003121	20 Gr/L	Butanol
P ₃ N ₅ Getter #4003124	27.5 Gr/L	Butanol
P ₃ N ₅ Getter #4003128	37.5 Gr/L	Butanol
P ₃ N ₅ Getter #4003132	10 Gr/L	Methanol
P ₃ N ₅ Getter #4003133	15 Gr/L	Methanol
P ₃ N ₅ Getter #4003134	20 Gr/L	Methanol
P ₃ N ₅ Getter #4003135	26 Gr/L	Methanol
P ₃ N ₅ Getter #4003137	35 Gr/L	Methanol
P ₃ N ₅ Getter #4003138	40 Gr/L	Methanol
P ₃ N ₅ Getter #4003145	8 Gr/L	Amyl Acetate
P ₃ N ₅ Getter #4003146	5 Gr/L	Amyl Acetate
P ₃ N ₅ Getter #4003148	10 Gr/L	Amyl Acetate
P ₃ N ₅ Getter #4003150	15 Gr/L	Amyl Acetate
P ₃ N ₅ Getter #4003152	20 Gr/L	Amyl Acetate
P ₃ N ₅ Getter #4003155	27.5 Gr/L	Amyl Acetate
P ₃ N ₅ Getter #4003159	37.5 Gr/L	Amyl Acetate

AVAILABILITY

Phosphorus nitride getters are available in glass bottles. These getters are available in production quantities with normal lead times of 2 to 3 weeks.

TOXICITY

The toxicological properties of phosphorus nitride getters have not been completely defined. The General Electric Company, therefore, suggests they be handled in such a manner as to avoid dust inhalation, ingestion and skin or eye contact. Some components of these materials are FLAMMABLE LIQUIDS and necessary precautions should be taken. Part or all of these materials may also have been reported for inventory under the Toxic Substances Control Act (PL-94-469).

ORDERING

To order phosphorus nitride getters, contact your local sales representative or:

Domestic

General Electric Company
Chemical Products Plant
1099 Ivanhoe Road
Cleveland, Ohio 44110
Phone: (216) 266-4611

International

General Electric Company
Lamp Components Division
International Sales
21800 Tungsten Road
Cleveland, Ohio 44117 U.S.A.
Telex: 985569 (GECOLCS EUCD)
Phone: (216) 266-3295

General Electric's Lamp Components Division is the source for tungsten, molybdenum, glass, fused quartz, Lucalox® ceramic, phosphors, chemicals, Dumet and Cumet wire, leads, bases and other components used by the lamp, electronic, cemented carbide and other industries. Technical and engineering assistance is available on all products. For information, contact:

General Electric Company
Lamp Components Sales Operation
21800 Tungsten Road
Cleveland, Ohio 44117
(216) 266-2451
Telex: 985569

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