



PRODUCT SAFETY DATA SHEET
 PSDS IC-012
 KINO FLO FLUORESCENT LAMPS

Fluorescent lamps manufactured for Kino Flo Lighting Systems are "Articles" that are exempted from the requirements of the OSHA Hazard Communication Standard (29 CFR 1910.1200). The following information is provided as a service to Kino Flo customers.

I. PRODUCT IDENTIFICATION:

This data sheet covers the following Kino Flo Fluorescent Lamps: **All T-5, T-8 & T-12 Kino Flo Fluorescent Lamps (KF29, KF32, KF55, 525 Green, Pink, 420 Blue, 450 Blue, Gold, Red)**

KINO FLO Lighting Systems
 2840 North Hollywood Way
 Burbank, CA. 91505

II. LAMP MATERIALS AND HAZARDOUS INGREDIENTS:

The following materials may be released if the lamp is broken:

Chemical Name	CAS Number	% by Wt.	Exposure limits in air (mg/M ³)	
			ACGIH (TLV)	OSHA (PEL)
Glass- Soda Lime	-----	80-95	----	----
Mercury	7439-97-6	<0.20	0.025	0.1
Lead Oxide	1317-36-8	<0.21	0.05	0.05
Aluminum Oxide	1344-28-1	<0.20	10	15
Phosphor Powder (As nuisance dust)	-----	<3.0	----	----

Lamp phosphors and cathodes may contain:

Barium	7440-39-3		0.5	0.5
Barium Sulfate	7727-43-7		----	----
Barium Titanate	12047-27-7		----	----
Calcium	-----		----	----
Strontium	7440-24-6		----	----
Tungsten	7440-33-7		1.0	----
Fluoride	-----			2.5
Manganese	7439-96-5		0.2	5.0
Tin	7440-31-5		2.0	2.0
Yttrium	7440-65-5		1.0	1.0
Magnesium	7439-95-4		----	----
Mg Fluoro Germanate	68784-13-4		----	----
Antimony	7440-36-0		0.5	0.5
Antimony Trioxide	1309-64-4		0.5	0.5
Zinc	7440-66-6		----	----
Zinc Silicate	68611-47-2		----	----
Europium	7440-53-1		----	----
Cerium	7440-45-1		----	----
Lanthanum	7439-91-0		----	----
Terbium	7440-27-9		----	----
Aluminum	7429-90-5		----	----
Lead	7439-92-1		0.15	0.05
Phosphorus	7723-14-0		0.1	0.1

III. PHYSICAL DATA:

Not applicable to intact lamp. The lamp may be up to 10 feet long, and up to 1-½ inches in diameter.

IV. FIRE AND EXPLOSION DATA

Not combustible. When exposed to high temperatures, the glass tube might melt or crack. Toxic fumes may be released from broken lamps.

V. REACTIVITY DATA

Stability:	Stable.
Polymerization:	Will not occur.
Incompatibility:	Glass will react with Hydrofluoric Acid.
Conditions to Avoid:	None for intact lamps.

VI. HEALTH HAZARDS

THERE ARE NO KNOWN HEALTH HAZARDS FROM EXPOSURE TO LAMPS THAT ARE INTACT. Some lamps produce light that may cause personal injury if overexposed. Read lamp label and always follow instructions.

No adverse effects should occur as a result of breaking one or a few fluorescent lamps as the exposure levels should be insignificant. Avoid prolonged or frequent exposure to broken lamps unless there is adequate ventilation. When breaking a large number of lamps for disposal, industrial hygiene monitoring and controls should be used to minimize airborne levels. Local exhaust ventilation, make-up air, and personal protection equipment such as respirators may be needed. The possibility of glass cuts from broken lamps is a major hazard.

For more information on effects of overexposure to chemicals/materials – See “NIOSH/OSHA Occupational Health Guidelines for Chemical Hazards” and, or “NIOSH Pocket Guide to Chemical Hazards”

VII. DISPOSAL INFORMATION

Materials should be placed in closed containers to avoid generating dust. It is the responsibility of the waste generator to ensure proper classification of waste products. TCLP tests should be conducted on all waste products to determine the ultimate disposition in accordance with applicable federal, state, and local regulations. Some states have specific regulations for lamps containing mercury. Lamps that pass the EPA’s TCLP test are considered non-hazardous waste in most states. Review your local and state regulations, which may vary.

VIII. PRECAUTIONS FOR SAFE HANDLING – BROKEN LAMPS

After handling broken lamps, always wash hands thoroughly before eating, smoking or handling tobacco products, applying cosmetics, or using toilet facilities. Use adequate general and local exhaust ventilation to maintain exposure levels below the PEL or TLV limits. If such ventilation is not available, use appropriate NIOSH approved respirators. OSHA specified safety glasses, goggles or face shield are recommended if any lamps are being broken. OSHA specified cut and puncture resistant gloves are recommended when breaking lamps, or handling broken lamps.

The information contained herein is based on data available to us and is believed to be correct. However, Kino Flo makes no warranty, expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.