

THE INCANDESCENT LAMP AND CONTENTS

These lamps are composed of a lime glass envelope surrounding a tungsten wire filament. Certain automotive lamps have an amber glass envelope where required by the Department of Transportation. Depending on the lamp type, the envelope is either clear or coated with a diffusing material. The material used as a diffuser on the coated lenses may vary depending on the specific lamp. If the coating is on the interior of the lamp, it is either a specially prepared Kaolin clay (Soft-White) or a mixture of Kaolin clay and a pigment (Dawn Pink and Bug Yellow). If the coating is on the exterior of the lamp, it consists of a fired glass material containing a suitable pigment. In addition to the tungsten lamp filament, other wires made from molybdenum, copper, iron and/or nickel are used as support wires or for electrical connections. Lamp bases may be either brass or aluminum, and contain a lead solder. Many lamp types are manufactured without bases.

Tungsten, molybdenum, copper, iron, nickel, and the clay are all considered hazardous chemicals, but because of their form or relatively low toxicity, do not present a hazard. Neither do the pigments used in the exterior coatings, due to the insolubility of the glass coating.

In the case of the Dawn Pink bulbs, cadmium selenide is used a minor ingredient in the interior coating. Although the evidence is limited and conflicting, cadmium and certain cadmium compounds have been listed by the International Agency for Research and Cancer (IARC) and by the National Toxicology Program (NTP) as possible human carcinogens. The risk from exposure to the coating in a single lamp, if broken, is negligible. However, if a number of lamps are broken, steps should be taken to control airborne levels and limit inhalation of the coating. We have been and are continuing to try to identify a replacement pigment for this material.

A Toxic Characteristic Leachate Test (TCLP) conducted on the based lamps for lead could cause the lamps to be classified as a hazardous waste. The lead used in the solder should pose little risk of exposure under normal use and handling. While small numbers of these lamps placed in ordinary trash should not appreciably effect the nature or method of disposal of the trash, under some circumstances disposal of large quantities may be regulated. You should review your waste handling practices to assure that you dispose of waste lamps properly.

I hope this will answer any concerns that you may have regarding these lamps. Should you have any further questions, please call me at (216) 266-3349.

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and Safety Department

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