

# NOR-KOTE ELV™ ELECTROLESS NICKEL

## Lead Free/Cadmium Free

In September 2000, the European Parliament passed the European Union End-of-Life Vehicles (ELV) Directive, a set of requirements related to the storage and recycling of vehicles after they are no longer in use (Directive 2000/53/EC of the European Parliament and the Council of the European Union). Automakers around the world, including the United States, were quick to adopt this directive which requires vehicle manufacturers to provide the information needed for dismantling a vehicle, such as details of vehicle components and location of hazardous substances, to authorized recycling facilities.

*The directive was written to include the following:*

*Annex II. June 2002*

*Lead, Cadmium, Hexavalent Chromium and Mercury must not be intentionally introduced:*

*“Intentionally introduced shall mean deliberately utilized in the formulation of a material or component where its continued presence is desired in the final product to provide a specific characteristic, appearance or quality...”*

Traditional electroless nickel contains trace amounts of lead and cadmium and is not ELV compliant. Lead is used as a stabilizer in the bath and cadmium is used as a brightening agent.

Pioneer Metal Finishing's **NOR-KOTE ELV™** is an Electroless Nickel coating that meets all End Of Life Vehicles (ELV) Directives and is lead free and cadmium free.

***If your parts need to be free of lead, cadmium, hexavalent chromium and mercury, consult your local Pioneer Metal Finishing sales engineer for finishes that comply with these directives.***

### **NOR-KOTE ELV™ Electroless Nickel Plating Attributes:**

**Hardness:**

556 Knoop = 50 Rockwell  
920 Knoop = 68 Rockwell (after heat treatment for 1 hour at 750 °F)

**Phosphorus Content:**

7-10% by weight

**Wear Resistance:**

Baked panel:  
11.0 mg/1000 cycles (Taber Wear Index)

**Part Dimensions:**

Maximum part dimension is 35" x 30" x 55"

### **What Do OEM's and Suppliers Need To Do?**

OEM's must comply with the End-of-Life Vehicles (ELV) Directive by reporting a great deal of information about materials, parts and systems that OEMs manufacture and assemble. In order for OEMs to comply with this directive, it is necessary that the supply chain be engaged as part of the reporting process.

Suppliers must report on specific chemicals found in the materials, parts and systems they manufacture and assemble. In its most complete form it requires material constituent disclosure for all raw materials used in all components and assemblies that comprise a vehicle. To do this, a chain of information must be built from the final vehicle assembly all the way back through parts manufacturing to the raw materials.

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Other industries like consumer electronics, copiers, printers, medical, food and computers have or are considering directives similar to ELV to remove these heavy metals from their parts. Pioneer Metal Finishing's **NOR-KOTE ELV™** is also compliant with these directives:

**RoHS:** "Reduction of Hazardous Substances"  
*Bans use of certain substances in electrical devices and electronic equipment or products.*

**WEEE:** "Waste Electrical and Electronic Equipment"  
*Works in concert with RoHS and deals with recovery, sorting and treatment of non-compliant materials.*



486 Globe Avenue  
Green Bay, WI 54304

1717 W. River Road  
Minneapolis, MN 55411

525 Ternes Drive  
Monroe, MI 48162