



# KS PERMAGLIDE® plain bearings

## Legal requirements for bearing materials

The use of materials for technical products is regulated in various directives. These directives set limit values for materials which pose a risk to health or the environment, and which are used in industrial applications.

**KS PERMAGLIDE® plain bearings are available made from materials which conform to these directives.**

Directive	Scope of application	KS PERMAGLIDE® material
1. 2000/53/EC End of Life Vehicle Directive	<ul style="list-style-type: none"> <li>Automotive industry: Motor vehicles, including their components and materials</li> <li>Valid for EU member states</li> </ul>	<ul style="list-style-type: none"> <li>P14</li> <li>P147</li> <li>P200</li> <li>P202</li> <li>P203</li> </ul>
2. 2011/65/EU RoHS or 2002/95/EC RoHS II Directive "Restriction of the use of certain Hazardous Substances" (in electrical and electronic equipment)	<ul style="list-style-type: none"> <li>Electrical and electronics industry: Electrical and electronic equipment</li> <li>Valid for EU member states</li> </ul>	<ul style="list-style-type: none"> <li>P14</li> <li>P147</li> <li>P200</li> <li>P202</li> <li>P203</li> </ul>

### 1. End of Life Vehicle Directive, 2000/53/EC

The aim of the directive is to promote the recycling of old vehicles and their components, and to reduce vehicle waste and production waste.

Dangerous substances such as mercury, chromium or lead may not be used in vehicles or their components. Exceptions are outlined in Appendix II to directive 2000/53/EC.

### 2. RoHS, 2011/65/EU or 2002/95/EC

The aim of the directive is to reduce the use of hazardous substances such as mercury, chromium or lead in electronic equipment. In the EU, several types of military and medical equipment are exempted from RoHS-conformity.

### Unleaded KS PERMAGLIDE® plain bearings

KS PERMAGLIDE® plain bearings are available made from materials whose manufacturing processes are performed without the use of hazardous substances. As such, these materials conform to the aforementioned directives.

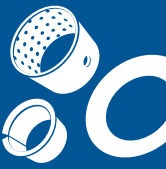
These substances include – in particular – emulsifiers containing PFOA, which are used in the chemicals industry for processing PTFE, for example. KS Gleitlager has developed new process technology methods which preclude all toxic risks for employees, customers and the environment.

KS PERMAGLIDE® materials that conform to the aforementioned directives include:

- P14
- P147
- P200
- P202
- P203

**All KS PERMAGLIDE® plain bearings conform to the EU REACH Regulation.**



**Limit values according to RoHS**

The highest permissible concentration in homogeneous materials as a percentage of weight

- Lead (Pb), 0.1%
- Mercury (Hg), 0.1%
- Cadmium (Cd), 0.01%
- Hexavalent chromium (Cr+6), 0.1%
- Polybrominated biphenyls (PBB), 0.1%
- Polybrominated diphenyl ethers (PBDE), 0.1%

KS PERMAGLIDE® plain bearings containing lead can be used in applications with no legal restrictions. The advantages of materials containing lead are their good dry running and emergency running properties. The low friction values and high durability of the maintenance-free and low-maintenance KS PERMAGLIDE® plain bearings increase the energy efficiency of equipment and machines. The use of additional lubricants can be reduced or omitted entirely.

**Further information on  
KS PERMAGLIDE® materials:**

- KS PERMAGLIDE® catalogue, item no. 50003863-02
- KS PERMAGLIDE® online catalogue [www.permaglidge.com/onlineshop](http://www.permaglidge.com/onlineshop)