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## **NEW PAINT-PRIMING AGENT REDUCES SUBSTANCES OF ENVIRONMENTAL CONCERN**

Toyota has jointly developed with Nihon Parkerizing Co., Ltd (Parkerizing) the world's first\* pre-paint vehicle surface treatment agent that results in significant reductions in both landfill waste and harmful by-product metals, while allowing proper corrosion resistance.

Before vehicle bodies are painted, they are first primed to prevent corrosion and ensure paint adhesion. Conventionally, manufacturers use a surface treatment agent containing zinc phosphate, which generates an iron phosphate sludge that is disposed of in landfills. Zinc phosphate also contains phosphorus, nickel and manganese, which are eventually rinsed off and end up in plant wastewater - resulting in the need for on-site purification.

Sludge disposal and wastewater purification from the use of zinc phosphate treatment agents is a common and major unavoidable problem for automakers. With the goal of reducing substances of environmental concern in all its activities, Toyota has been working with Parkerizing since 2000 to develop a better surface treatment agent.

Conventionally, using zinc phosphate agents has been the only way to achieve a smooth and even coat on materials such as steel, zinc plating and aluminum, which are often used in vehicle body panels. Until now, use of alternative treatment agents has always resulted in insufficient corrosion resistance.

Based on a revolutionary technology that does not use zinc phosphate, the new treatment agent developed by Toyota and Parkerizing uses zirconium compounds and special organic substances, which generate less sludge and are less harmful to the environment. During development, the new agent was tested on dozens of raw materials achieving the same level of corrosion resistance as traditional zinc phosphate agents.

In addition to corrosion resistance, the new surface treatment agent also possesses the same levels of performance or higher in terms of paint adhesion, durability and finish, and it has the potential to become the standard surface treatment agent in the near future, replacing those using zinc phosphate.

In early January 2006, Toyota introduced this new surface treatment agent into a body-component painting line at its Takaoka Plant in Japan. Introduction at other Toyota plants around the world will be considered and announced separately.

\*According to a Toyota survey, as of December 2005