

Reducing the Environmental Impact of Products (Part 2)

We are designing semiconductor production equipment to conserve resources and reduce hazardous substances, and have ongoing efforts to minimize the environmental burden that arises during use.

Approach Lead-Free

Lead can cause nervous system disorders if it accumulates in the body. Under the normal conditions of equipment use, there is no concern about injury arising from lead. However, the potential exists for impact on human health through the pollution of ecosystems if acid rain falls on disposed equipment and waste and then seeps into the environment. The European Union's WEEE Directive*1 and RoHS Directive*2 ban the use of hazardous substances such as mercury, cadmium and lead in electrical equipment, starting in June 2006. Although semiconductor production equipment does not fall under

these directives, in order to be proactive in preventing pollution, TEL is promoting its own voluntary and systematic efforts to go lead-free.

TEL has begun to consider the introduction of lead-free solder for products manufactured by TEL Group companies. We are also investigating the status of solder use by our suppliers and urging them to cooperate in this initiative.

*1WEEE : Waste Electrical and Electronic Equipment

*2RoHS : Restriction of the use of Hazardous Substance in electrical and electronic equipment

Lead-Free Implementation Plan

Action Plan	FY 2004				FY 2005				FY 2006			
	Apr.	July	Oct.	Jan.	Apr.	July	Oct.	Jan.	Apr.	July	Oct.	Jan.
Establish Lead-Free Task Team, start work	→											
In-house awareness-raising	→											
Supplier survey, technical cooperation, action plan	→											
Consider technologies and materials used	→											
Evaluate, summarize the potential for lead-free			→									
Prepare for mass production			→									
Trial production and evaluation of boards and assemblies (practical training about soldering)			→									
Mass production										Starting January 2006 →		

TOPICS

Developing Coating Methods for reducing Photoresist

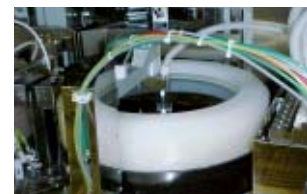
The developing process during semiconductor production uses an organic photosensitive chemical, known as photoresist, for coating the wafer surface. This photoresist accounts for a relatively large portion of the equipment running costs. For that reason, and also from the perspective of saving resources, it would be valuable to reduce the amounts used.

TEL has developed a prewet coating method that reduces the amount of photoresist used to less than one-fourth of what is conventionally used, by applying a solvent immediately before applying the photoresist, improving the bond with the wafer. This method is being used in the major coater/developer line, the CLEAN TRACK ACT series. Today, our customers around the world are using this process.

The rising performance of semiconductors requires larger dies. In order to economically produce equal number of dies per wafer, wafer sizes increases. Because of this, TEL will continue with its efforts to find ways to reduce the amount of photoresist used and save resources in other ways.

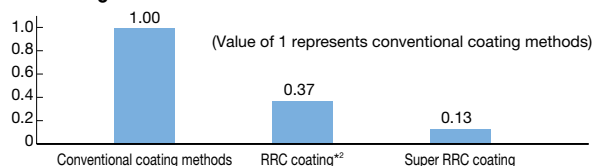


Coater/Developer (CLEAN TRACK ACT 12)



Prewet Coating Method

Reducing the Use of CAR Photoresist*1



*1Chemically amplified photoresist for fine processing that has been popular in recent years.

*2Acronym for "Reduce Resist Consumption."