THE LIFE CYCLE OF TBBPA IN ELECTRICAL & ELECTRONIC EQUIPMENT

Tetrabromobisphenol (TBBPA) is a brominated flame retardant, the most widely used in the world.

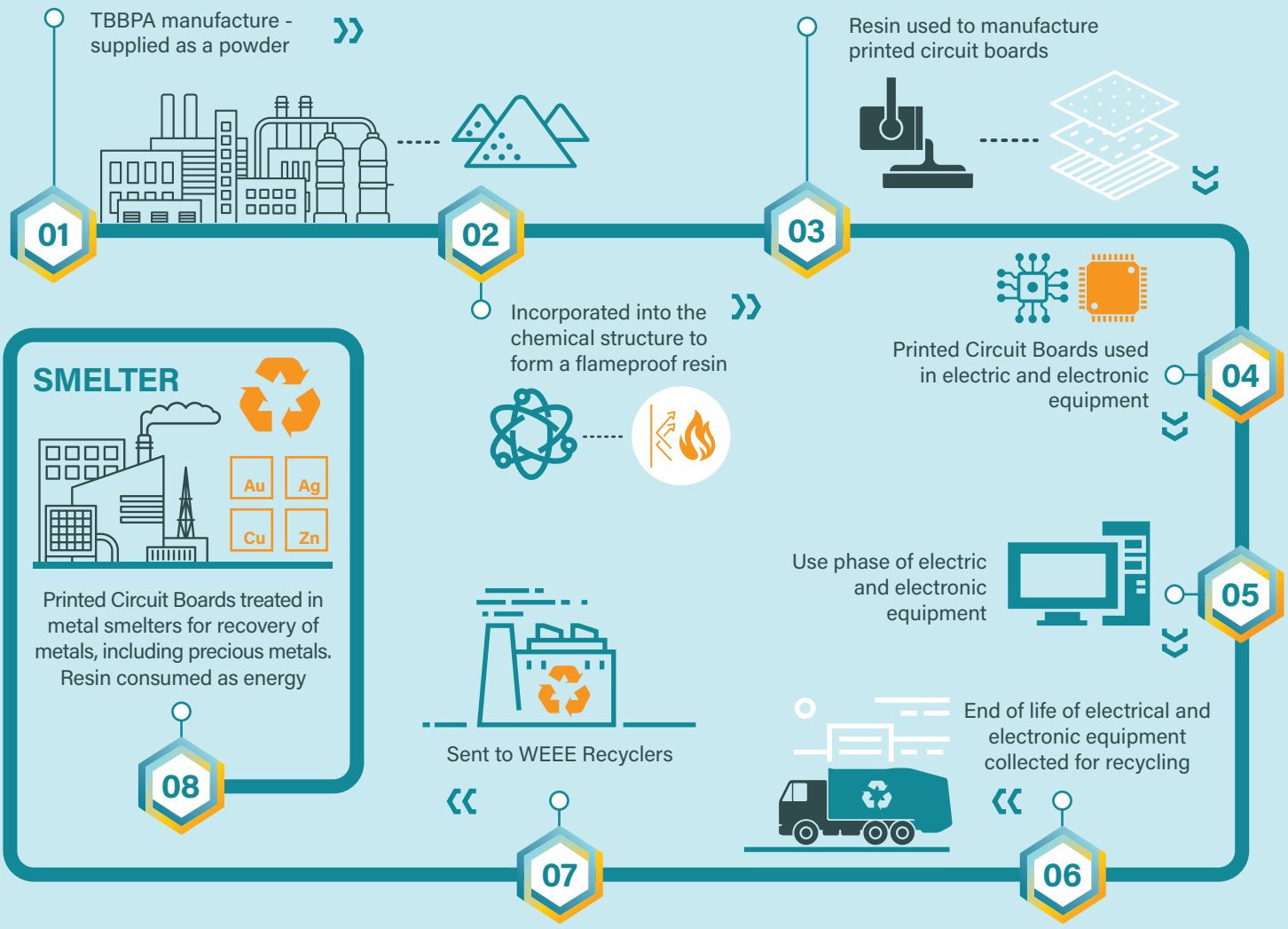
CONTRIBUTING TO FIRE SAFETY FOR ELECTRICAL & ELECTRONIC EQUIPMENT

Today, we are increasingly reliant on electrical and electronic devices – in our homes, in our offices, in our cars. The devices are becoming ever-more complex and increasingly rely on plastic materials creating potential fire risks.

Chemical flame retardants such as TBBPA are widely used to help meet specific standards for electrical and electronic equipment for particular components. TBBPA uses in electronics and electrical equipment are compatible with the Circular Economy.

USE IN PRINTED CIRCUIT BOARDS

More than 90% of TBBPA manufactured is used in the production of FR-4 type printed wired boards. In this application, TBBPA is used as a reactive flame retardant. In other words, it ceases to exist as a free chemical in the final board, becoming an integral part of the polymer matrix used to create the material for manufacturing the FR-4 printed circuit boards.



BSEF The International Bromine Council

USE IN ENGINEERED PLASTICS

The remaining 10% of TBBPA produced is used in engineered plastics in electronics products, meaning it is added to a polymer resin used for equipment. This allows them to meet stringent international and EU fire safety standards. The potential for exposure to TBBPA when incorporated into plastics is very low.

01 TBBPA manufacture - supplied as a powder

02 Production of plastics parts

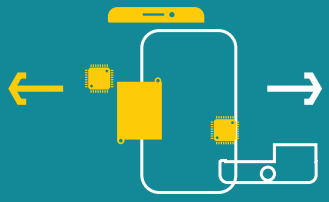
03 Incorporated into products

04 Use phase of electric and electronic equipment

05 End of life electrical and electronic equipment collected for recycling

06 Sent to WEEE Recyclers

07 Brominated Flame Retardant Plastics (including TBBPA) separated from other plastics



>2000 ppm

Incinerated with/without energy recovery

<2000 ppm

Recycled into new plastics products

Collection and treatment of Electrical and Electronic Equipment according to the European Standards for Waste Electrical and Electronic Equipment (WEEE)[1]

1. European Standards for Waste Electrical and Electronic Equipment (WEEE) www.cencenelec.eu/news/publications/publications/weee-brochure.pdf