

Waste Stream briefing

Hexabromocyclododecane (HBCD)

July 2016

Information from the Environment Agency on the destruction of waste containing HBCD. From 30 September 2016 waste which contains Hexabromocyclododecane (referred to as HBCDD or HBCD) (a brominated flame retardant) must be destroyed. HBCD has been used in expanded polystyrene (EPS) and extruded polystyrene (XPS) insulation foam boards and blocks since the 1970s and HBCD can be found in some upholstered furniture and electric and electronic equipment. These wastes can no longer be landfilled, re-used or recycled. It will be referred to as HBCD in this note.

Regulation (EU) 2016/460 comes into force on 30 September 2016 and because it requires materials containing HBCD to be destroyed, those materials must be discarded and will therefore be waste.

How to identify this waste

It is believed that approximately 40% of all EPS and XPS insulation boards and blocks used in construction since the 1970s contained HBCD, manufactured in a wide range of styles, sizes, colours and thicknesses that are commonly unmarked and will be difficult to differentiate by sight alone.

Polystyrene boards and blocks containing HBCD may be bound to other products to form a composite or panel system and may include a vapour barrier foil or an architectural face e.g. vinyl. Testing of all rigid insulation boards and blocks may be necessary in the future to determine which ones contain HBCD. Where proper assessment of EPS/XPS construction materials does not rule out the presence of HBCD it should be assumed that HBCD is present and that the material should be destroyed in accordance with the Persistent Organic Pollutants Regulations 2007.

This applies to material containing >1000 mg/kg of HBCD and to off-cuts arising from stocks of new material still in use. In most cases whilst the use of HBCD as a flame retardant has ceased, it will continue to be removed from the demolition of buildings for the next 50 years or longer.

How to achieve destruction

From 30 September 2016 products containing HBCD should not be landfilled or recycled.

Unless testing proves otherwise it should be assumed that all polystyrene blocks used in buildings contain the flame retardant HBCD.

The safe way to destroy HBCD in England is by incineration. HBCD is unlikely to be present in concentrations that make it a hazardous waste so it is acceptable for it to be destroyed in a municipal incinerator.

Waste handling

Waste materials containing HBCD should be handled in such a way as to not release the HBCD. Melting polystyrene containing HBCD into blocks is not allowed as it may release the POP. This has been carried out previously to reduce transport costs and/or to aid recycling.

Duty of Care requires that all waste be properly described on waste transfer documentation so that the right onward management can take place in line with the waste hierarchy. Waste containing HBCD should be properly identified and described. Early segregation will help the management of the waste and may save on handling costs.

Packaging waste: Polystyrene is commonly used as a packaging material for a wide range of goods. It is unlikely that EPS/XPS used in packaging will have been treated with the flame retardant HBCD.

Storage of products containing HBCD: Anyone storing more than 50kg of materials (not waste) containing HBCD will need to notify the Environment Agency.

Where to find out more:

NFDC - DRIDS

<http://nfdc-drids.com/drid/insulation/z3-boards-blocks-containing-hbcdd.html>

GOV.UK

Disposal of Pops <https://www.gov.uk/dispose-of-waste-containing-persistent-organic-pollutants-pops>

Storage of pops <https://www.gov.uk/storing-persistent-organic-pollutants-pops>

Stockpile notification form <https://www.gov.uk/government/publications/persistent-organic-pollutants-notifying-pops-stockpiles>

Legislation

The European Commission's [Regulation on persistent organic pollutants](#) is implemented in the UK by the [Persistent Organic Pollutants Regulations 2007](#). [Regulation \(EU\) 2016/460](#)

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customer service line
03708 506 506

incident hotline
0800 80 70 60

floodline
0845 988 1188

www.environment-agency.gov.uk