

| Paper Cup Disposal Method (BINFRASTRUCURE)  | PE Plastic Lined Cup  | PLA Lined Compostable Cup (PLA is a plant based plastic)  | TCCC Aqueous Lined Recyclable and Compostable Cup  |
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| Hight Street Newspaper Bin  | This product should not be disposed of in this waste stream, If this happened it is hoped that it will be picked up at sorting and rejected, but if it goes through it risks contaminating the entire stream, leading to the rejection of all other products in the bin.  | PLA Compostable Plastic and Paper are bonded together and cannot be separated. The PLA lining can contaminate the whole paper recycling process.  | Can be recycled anywhere that paper is recycled.   |
| High Street Mixed Recycling Bin   | This product will not be recycled through this stream. Mixed recycling bins are sorted after, so plastic bottles, newspapers, cardboard etc can be sorted into their respective steams. This paper cup is two materials bonded together (paper and plastic) and it should be rejected at this point and sent to landfill. However, like above, if it goes through it risks contaminating the entire stream, leading to the rejection of all other products in the bin.  | PLA Compostable Plastic and Paper are bonded together and cannot be separated. The PLA lining can contaminate the whole paper recycling process.  | Can be recycled anywhere that paper is recycled.   |
| Office Paper & Cardboard Bin  | This product should not be disposed of through this waste stream. The plastic will contaminate the entire stream.   | PLA Compostable Plastic and Paper are bonded together and cannot be separated. The PLA lining can contaminate the whole paper recycling process.  | Can be recycled anywhere that paper is recycled.   |
| Household Mixed Recycling Bin   | This product will not be recycled through this stream. Mixed recycling bins are sorted after, so plastic bottles, newspapers, cardboard etc can be sorted into their respective steams. This paper cup is two materials bonded together (paper and plastic) and it should be rejected at this point and sent to landfill. However, like above, if it goes through it risks contaminating the entire stream, leading to the rejection of all other products in the bin.  | PLA Compostable Plastic and Paper are bonded together and cannot be separated. The PLA lining can contaminate the whole paper recycling process.  | Can be recycled anywhere that paper is recycled.   |
| Specialist Paper Recycling Bins<br>(bringback schemes supported by McDonalds, Starbucks, Costa etc - the cup then goes to a specialist facility to separate the paper and plastic lining) | This is the ideal end of life scenario for these cups. They must go to a specialist facility to be recycled. No other disposable method works for these cups and that is why more than 98% end up in landfi.  | PLA Compostable Plastic and Paper are bonded together and cannot be separated. The PLA lining can contaminate the whole paper recycling process.  | Can be recycled anywhere that paper is recycled.   |
| General Waste Bin<br>Landfill   | <p>This is where the majority of these cups end up, and is terrible. They will outlive us all, and there is no excuse. Alternative linings are available but there is nothing as cheap as plastic and that is why the big companies keep churning them out.</p> <p>If disposed of in this bin the product will most likely end up in landfill. Depending on the country and area there is a chance of incineration, but usually a sealed or installed landfill. Sealed landfills are starved of oxygen and degradation is suspended.</p> <p>In an unsealed landfill - This product would break down at varying rates depending on time of year, moisture content, sunlight exposure, organic materials present, bacteria etc.</p> <p>The paper element would largely biodegrade. The plastic element would fragment into microplastics.</p> | <p>This is where the majority of these cups end up, and is terrible. They will outlive us all, and there is no excuse. Alternative linings are available but there is nothing as cheap as plastic and that is why the big companies keep churning them out.</p> | <p>If disposed of in in thus bin the product will most likely end up in landfill. Depending on the country and area of there is a chance of incineration, but usually a sealed or unsealed landfill. Sealed landfills are starved of oxygen and degradation is suspended.</p> <p>In an unsealed landfill - This product would break down at varying rates depending on time of year, moisture content, sunlight exposure, organic materials present, bacteria etc. Would break down at a comparable rate to a newspaper. Both the paper element and the lining would fully biodegrade.</p> |
| Incineration  | Releases toxic pollutants into the atmosphere from the plastic being burned.  | PLA is plant based and the data suggests it does not release harmful toxins when incinerated.   | Our lining does not release harmful toxins when incinerated.   |
| Left in the Environment<br>A field, a hedgerow, in the sea. Of course, this would never be encouraged, but we are just commenting on what would happen if this were to be the case        | <p>Will not break down. Causes a risk to wildlife.</p> <p>The paper element of the product would break down at varying rates depending on time of year, moisture content, sunlight exposure, organic materials present, bacteria etc. The plastic lining element would not break down.</p>  | PLA will only break down if industrially composted as it needs a very high temperature. The cup would last for hundreds of years.   | Will break down at a comparable rate to a newspaper which would always vary depending on moisture, time of year and sun exposure. Does not pose a threat to wildlife. Does not leave micro plastics in environment.  |
| Commercial Food Waste Compost Bin<br>(Must be taken away by a specialist waste contractor for industrial composting)  | Will not break down. Can contaminate everything else. Food Waste industrial composting produces nutrient rich compost which would be spoiled by the plastic lining from these rogue cups.   | If the bin is taken away for industrial composting by a designated waste handler then this is the best scenario for PLA lined cups. Can produce nutrient rich compost.  | Both the paper and the lining will fully compost in any composting scenario. Would break down at a comparable rate to a newspaper.   |
| Garden Waste Bin or Council Compost Bin<br>Kerbside bin removed by local council  | Will not break down. Can contaminate everything else.   | PLA will only break down if industrially composted. Check local council. Most local council garden waste bins are NOT industrially composted.   | Both the paper and the lining will fully compost in any composting scenario. Would break down at a comparable rate to a newspaper.   |
| Household Compost Bin<br>Maintained in your garden  | This product cannot be composted. Plastic does not compost. The paper board would compost but the plastic debris would remain. This product will contaminate this waste stream, and can lead to the rejection of all materials within the stream at the time.   | Will not break down. PLA needs a very high temperature to break down, which is why it needs to be industrially composted.   | Both the paper and the lining will fully compost in any composting scenario. Would break down at a comparable rate to a newspaper.   |