Plastic Projects within Infrastructure and Materials team – update to BPF RG
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WRAP

- Plastics still a key material
- **Addressing the barriers to recycling of bottles and mixed plastics:**
  - Technical barriers.
  - De-risking investment.
  - Information & evidence.
Infrastructure: Mixed Plastics Loan Fund (MPLF)

- Films and rigids (non-bottle).
- >15,000 t/a.
- England only (Defra funded only).
- Preferably Household (some C&I as well OK).
- Up to £1m
Tinted caps for milk bottles

- Provided evidence to dairy sector on benefits of reducing pigment in caps.
- Mid-tint being implemented by dairies to improve colour of rHDPE.
Recycling of black plastics

- No commercially available sorting technology in place yet.
- Optimised pigments enable NIR sorting.
- Manufacturing trials and NIR sorting at Jayplas.
- Masking properties not as good as carbon black.
- Pigments more expensive than carbon black. (similar to other colours).

Next steps:
- Investigate implications of masking properties with converters.
- Further testing with specific product lines.
- Final report and session with brands, retailers and recyclers – July
Food PP: Phase 2

- Challenge tests using spiked virgin PP found a process combination of Gneuss extrusion & OHL Vacuum reactor (in that sequence) can decontaminate to acceptable levels.

- All surrogates migrated less than 10 ppb.
- Allows a wide range of foods to be in contact at 20 deg C or below.
- Next steps: Trials with real PP household waste and migration tests for high temperature applications.

Gneuss MRS extruder

OHL Vacuum reactor
A mechanism for design for recyclability – awareness of the key design issues.

Tool on website – can simulate what category certain elements are before put onto market.

What gets measured gets done.

Potential to set targets for sales % in cats A, B, C.

Planning one for rigid mixed plastics (pots, tubs, trays).
Bottles: rPET Quality

- rPET forum highlighted an issue with rPET quality (food grade).

- Phase 1 plans:
  - Understand what the issues are and how significant (colour, odour, black specs, processability, other?).
  - Survey users of rPET.
  - Collate responses/info/data.

- Phase 2:
  - Share results with rPET forum and formulate a plan of action (root cause analysis?).
Rigid mixed plastics meeting – retailers, brands, recyclers.

• Update, discussion and next steps to secure engagement:
  • Black plastics
  • Food grade Polypropylene (PP)
  • Categorisation for recyclability of rigid mixed plastics.
  • 14\textsuperscript{th} July.
Films

• 3 trials completed (refuse sacks, 2 panel boards)
• MRF and retail front of store material kept separate.
• Final report being prepared.
• Considering options for work in new business plan – What are suggestions from the group?
What feedback/suggestions does the group have on WRAP’s plans?