



Agriculture Division of DowDuPont™

ECHA workshop on microplastic particles

A perspective from the Seed & Plant Protection
industry

30 MAY 2018

Key messages

Inadequate & ambiguous microplastics working definition* →

Agriculture sector endorsing CEFIC definition:

1. Solid particles having a size between 1 μm and 5 mm in the largest dimension should be considered
2. Microplastic particles are predominantly constituted of plastic
3. Plastic is defined as a material made of synthetic polymers and that is molded and retains its form in the intended application.

Timeline is too aggressive → Not enough time for investigation, data collection and consolidation

Seed industry perspective

Seed treatment technology & treated seeds:

- Seeds treated with polymers, but not considered as plastics*
- Low concentration in final products
- Technology benefits:
 - i. **Improving environmental and operator safety** by reducing dust formation
 - ii. Shaping of seeds for **improved sowing**
 - iii. Enabling coating with nutrients and plant protection products
 - iv. **Minimizing significantly the amount of pesticide (AI)** required to achieve pest & disease control

Plant protection industry perspective

Potential intentionally added microplastic solid particles in pesticides

→ Micro-capsule technology:

- Intentionally added micron sized hollow spheres (typically in the range 1-50 μm) consisting of a thin polymer shell, filled with active substance(s) and solvent.
- Most often made of polyureas, but other polymers may also be used.
- Technology benefits:
 - i. **minimize** the **amount** of **pesticide** (AI) required to achieve pest & disease control;
 - ii. **minimize** pesticide **toxicity** and associated **risk(s)** to operators;
 - iii. **minimize environmental impact(s)** associated with pesticide application.

Potential consequences of REACH restriction of micro-capsules

All stakeholders of the food supply chain potentially impacted:

- **Reduction of the safety** of the product for the end user and no possibility to achieve environmental benefits of such formulations;
 - Need to establish cool chains, cold storage in the distribution channel and on farms (in case storage stability or temperature stability is reduced);
 - Yield losses in case of less controlled crop safety and/or underperforming products;
 - higher application rates to control weeds/pests/diseases;
- **Significant economical impacts for farmers:** yield decreases, cost increases and income losses

Critical use for agriculture

Thank you.

Questions?

