Risk Management and Impurities in substances

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About the European Precious Metals Federation

Website: www.epmf.be

Companies

National Federations
Precious Metals Industry

Mining

Refining, recycling

Manufacturing, Importing

Banking, Trading

Electronics

Glass/Mirrors

Jewellery

Automotive

Alternative energy

Gold

Silver

Rhenium

Platinum

Ruthenium

Palladium

Rhodium

Iridium

Around 100 substances registered!
Introduction
Substances in Substances/Mixtures: raising awareness

- Attention originates from the use of phthalates in plastics

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### Plastic Resin Codes

<table>
<thead>
<tr>
<th>Code</th>
<th>Name</th>
<th>Container types</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PET / PETE</td>
<td>Polyethylene Terephthalate &lt;br&gt;Recycled on USAG-HI: Water bottles, soda bottles, microwaveable food trays, mouthwash bottles, peanut butter jars &lt;br&gt;Post-consumer uses: Fiber for carpet, fleece jackets, comforter fill, tote bags, food containers, beverage bottles</td>
</tr>
<tr>
<td>2</td>
<td>HDPE</td>
<td>High Density Polyethylene &lt;br&gt;Recycled on USAG-HI: Milk, water, and juice jugs, detergent bottles &lt;br&gt;Not recycled at USAG-HI: Grocery bags, cereal box liners &lt;br&gt;Post-consumer uses: Shampoo and detergent bottles, outdoor decking, floor tiles, flower pots, buckets, recycling bins</td>
</tr>
<tr>
<td>3</td>
<td>V / PVC</td>
<td>Vinyl / Polyvinyl Chloride &lt;br&gt;Recycled on USAG-HI: Blister pack/clamshell packaging, shampoo bottles &lt;br&gt;Not Recycled on USAG-HI: Deli and meat wrap &lt;br&gt;Post-consumer uses: Traffic cones, garden hose, gutters, loose-leaf binders, fencing, gutters, cables, mud flaps</td>
</tr>
<tr>
<td>4</td>
<td>LDPE</td>
<td>Low Density Polyethylene &lt;br&gt;Recycled on USAG-HI: Bottles (i.e. ketchup/mustard), shrink wrap &lt;br&gt;Not Recycled on USAG-HI: Bread bags, dry cleaning bags, frozen food bags &lt;br&gt;Post-consumer uses: Shipping envelopes, garbage bags, furniture, trash cans, floor tile</td>
</tr>
<tr>
<td>5</td>
<td>PP</td>
<td>Polystyrene &lt;br&gt;Recycled on USAG-HI: Yogurt and margarine containers, medicine bottles, bottle caps, ketchup/syrup bottles &lt;br&gt;Post-consumer uses: Car battery cases, brooms, ice scrapers, bicycle racks, ed funnels, shipping pallets, garden rakes</td>
</tr>
<tr>
<td>6</td>
<td>PS</td>
<td>Polystyrene &lt;br&gt;Not Recycled on USAG-HI: Meat/poultry trays, plastic cups/plates, packing peanuts, CD cases, aspirin bottles &lt;br&gt;Post-consumer uses: Thermometers, light switch plates, rulers, license plate frames, camera or video cassette casings</td>
</tr>
<tr>
<td>7</td>
<td>OTHER</td>
<td>Other, combination of resins &lt;br&gt;Not Recycled on USAG-HI: Three and five-gallon reusable water bottles, citrus juice bottles, ketchup bottles, oven baking bags &lt;br&gt;Post-consumer uses: Bottles and plastic lumber</td>
</tr>
</tbody>
</table>

*USAG-HI recycles hard plastic resins 1-5 and shrink wrap

*Source: American Chemistry Council at americancchemistry.com
Substances in Substances/Mixtures: raising awareness

- Attention originates from the use of phthalates in plastics ....

ISSUE: RECYCLING distributes the phthalates for non-intended uses
Authorisation as a Risk Management Option?

Can (increased) recycling leads to (increased) exposure of unwanted chemicals?

Unwanted: Annex XIV substances in the supply chain!
Legal background and CARACAL discussions
CARACAL discussions: Authorisation and impurities for recovered substances on their own or in mixtures

• Legal background:
  • Where an Annex XIV substance is “present” in a mixture at or above the concentration limits established in Article 56(6), the use of the substance in the mixture is subject to Authorisation.
  • Where a material recovered from waste meets the REACH definition of mixture, it is not necessary to examine whether Annex XIV substances present are impurities or not.
  • Where a substance X contains a constituent Y which is listed in Annex XIV and the substance X itself is not listed in the annex, substance X is not subject to Authorisation obligations when used on its own.

⇒ For the same substance which has a constituent listed in annex XIV, the applicability of Authorisation requirements depends on whether that substance is used on its own or a component of a mixture: ASYMMETRY to be addressed!!
CARACAL discussions: Authorisation and impurities for recovered substances on their own or in mixtures

• Two options to address the asymmetry:

1. To include in annex XIV both the substance and its constituent (e.g. « substance X containing substance Y ») along with a separate entry for substance Y on its own

2. To include in annex XIV an entry referring to « substance Y on its own or as a constituents of other substances » - group entry - substance in substance approach

Need further legal analysis and policy perspective…
What is at stake for the metals industry?
Broader context...

• REACH authorities are increasingly focusing their scrutiny and risk management efforts on impurities (or minor constituents) with SVHC properties

• In 2017 the Member States launched a pilot project coordinated by RIME to check how the need for Risk Management Measures for impurities could/should be checked
Huge potential impact on the metals sector...

- A long series of metal input materials and metal products potentially subject to authorisation AND probably multiple times for the same use due to a series of impurities or minor constituents listed on Annex XIV

- For example: Impurities and/or constituents in:
  - The recycling of metal scarps
  - The mixing of Ores and Concentrates
  - The use of slags
  - Some other recycling steps
  - Use of metals (compounds) making articles

- Potential wider impact on Recycling and Circular Economy objectives

If not:
- An intermediate
- A waste
- < 0.1% (or SCL)
Secondary inputs are complex

Composition usually known (but highly variable)

Challenge: Prevent market access for recycling products being constrained!

Recycling under controlled conditions

Challenge: How to ensure flexibility for UVCBs while ensuring good quality chemicals management?

Hazardous substances as “carrier” metals

Challenge: Ensure metals recovery provide safe uses of recovered substances

Challenge: RMOas should recognise role of carrier metals

Various regulatory processes

Challenge: Regulatory alignment focused on risks rather than on hazards
Questions raised by the CARACAL document

• The REACH Substance definition explicitly includes impurities (REACH Art. 3(1))
  Question: Is it legally valid to regulate such impurities through Authorisation?

• The REACH SVHC definition builds on the Substance definition
  Question: Is it legally valid to subject impurities to Authorisation, even if the parent substance is not an SVHC?

• The structure of REACH Article 56
  Question: Is it legally valid to impose an Authorisation requirement for a constituent that is not "used"?

• Authorisation vs. Restriction
  Question: Are these processes to be treated similarly with regard to the possible regulation of impurities?

• What is the best RMOa to manage the "Substance in Substance" issue?
An important part of THE answer!
Conclusions
## Conclusions

| The “Substance in Substance” issue could have a huge impact on the Metals Industry and Circular Economy |
| Adequate reflection and analysis of the options discussed at CARACAL is needed |
| More involvement in the debate of the industry would be welcomed |
| RMOa is key to establish an efficient Risk Management of Impurities |
THANK YOU

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