March 2, 2018

Dear IWSFG Group;

On behalf of INDA, the Association of the Nonwoven Fabrics Industry, I would like to submit comments for the *Second Draft of IWSFG Flushability Criteria* for flushable products. If any of the explanations are unclear please let me know and I will do my best to clarify. Although INDA has chosen to respond via this public comment process, it in no way endorses the overall conclusions, methods, or pass/fail criteria chosen by the IWSFG.

I would like to begin by commending the IWSFG for their considerable efforts in responding to the first draft comments. Based on the documents published on the IWSFG website, there were numerous comments from a variety of organizations. The changes proposed for the Second Draft show the IWSFG made a conscious effort to listen and respond to many of the comments provided. In addition, I would like to acknowledge the IWSFG’s adoption of several of the INDA/EDANA test methods for flushability. INDA, EDANA, and many of its members have worked for many years to refine these methods and deliver a holistic framework for assessing flushable products. Not only have our associations and industry members been involved in the development of this framework, but so too have many individuals from the wastewater sector.

In essence, the IWSFG agrees more with our methodologies and test methods than disagrees. This is key to our two groups mutually agreeing to a path forward. There are, however, still critical areas of disagreement within the narrative you have provided. I think it prudent to point out the positives and negatives within the second draft documents:

- We would like to recognize the effort taken by the IWSFG to request copyright permission of the INDA/EDANA guidelines and test methods. We appreciate the cooperation between our organizations.
- The work by IWSFG on these second draft documents conveys a much higher level of professionalism than the first draft. There were many fewer editorial issues with this version. Kudos to the drafting team involved.
- The organizations and associations represented by the IWSFG are closely involved with water and wastewater systems, yet nowhere in any of the first or second draft documents is there a general reference given to the workings of these systems. Your documents describe many complicated processes and systems that, in general, the layman does not understand. It would be in the best interest of the IWSFG to provide some general references such as the EPA’s primer on wastewater systems that can be found at … https://www3.epa.gov/npdes/pubs/primer.pdf.
• Although we are pleased that the IWSFG responded to the first draft issues of toilet paper being considered in scope, and the negative position on regenerated cellulose, the language chosen in the second draft should be reconsidered. Specifically, PAS1 calls out removal of toilet paper from the scope, and then immediately suggests it is ok to include, while the PAS3 language remains unacceptably broad. Likewise, although language in the second draft no longer includes quantification of regenerated cellulose fiber, the IWSFG is insistent in its position that the fiber remains an issue. This language should be removed altogether in the second draft.

• A key feature of the 3rd ed. Guidelines (GD3) developed by INDA and EDANA is the holistic treatment of the pathways considered for assessing flushability. Although the IWSFG has adopted the general framework of GD3, the methodology is missing two key features for protecting infrastructure – pump tests, especially the household pump test (FG503), and the aerobic biodisintegration test (FG505). If the goal of the IWSFG is to protect wastewater infrastructure, we would highly recommend at least these two additional tests be adopted. As a side note, an aerobic test was included in the first IWSFG draft, but was removed with no explanation.

• In general, the three disintegration tests described in the first IWSFG draft raised significant concerns. We are pleased to see the removal of two of the tests with adoption of a single test. However, there were substantial changes to the parameters and pass/fail criteria in this one test with no discussion or justification either in the response to comment document, or in the current PAS3 document. Some form of justification is necessary for these dramatic changes to the method.

• Perhaps the single most contentious issue between the IWSFG and members of the INDA and EDANA associations is the concept regarding the necessity of having materials “rapidly disintegrate” in wastewater infrastructure to insure compatibility. There is more evidence to the contrary based on both laboratory and field studies. One key to understanding this issue is to look at the difference between a baby wipe and a paper towel. Although neither material is designed to be flushed, wastewater experts over the years have insisted that paper towels are not the issue when it comes to clogs and plugs in these systems, but baby wipes clearly are. Yet neither material “rapidly disintegrates” in wastewater infrastructure. One must investigate the core material properties of these products to understand why this difference exists. In addition, there are 2 and 3-ply toilet paper products that cannot pass the current PAS3 slosh box method. To the best of our knowledge, there has been no wholesale effort to remove toilet paper from the market because of some potential role in creating clogs and plugs.

• There were several positive additions to the slosh box methodology that should be highlighted. These were addition of gridlines in the bottom of the box and photography to visualize endpoints, along with measurement of rock angle. A group of wastewater and industry representatives instigated these changes during a round robin study in 2016. Development and adoption of these changes shows that combining knowledge is always more powerful than working alone.

• I have one comment regarding the “example” shown in Annex 8 of PAS3. The photographic record is an exceptional way of examining the endpoint of a test. I am
amazed that the material shown in this example, see the photo "After 30 Minutes", is considered a FAIL for this method. The implication is that a material that disintegrates to this extent in 30 minutes is INCOMPATIBLE with a wastewater system. Can the IWSFG provide any justification whatsoever why this would be considered a failure?

I hope that the IWSFG will consider suggestions and recommendations made on this second draft much as they did on the first draft. Our position continues to be that wipes passing GD3 and that are marketed as "flushable" are not the cause of the issues experienced in wastewater infrastructure. This is evident based on the recent work done on blockage analyses carried out by Water UK (Wipes in Sewer Blockage Study – Final Report 2017). Materials that are flushed that were never designed to be flushed are the primary cause of clogs and problems faced within these systems.

Regards,

[Signature]

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