

PLAINFIELD AREA REGIONAL SEWERAGE AUTHORITY

200 CLAY AVENUE, MIDDLESEX, NJ 08846

(732) 968-2471 FAX: (732) 968-2450

Serving Dunellen, Fanwood, Green Brook, North Plainfield, Plainfield, Scotch Plains, South Plainfield, Watchung and Bridgewater

July 31, 2014

Dear Mr. Nippert,

Thank you for letting me test the new flushable substrate from Haso USA. All I can say is WOW!! Your product blows away all the other flushable substrates on the market and performs even better than toilet paper. The wastewater industry is excited by the results and hopes that it reaches the market soon, and is discussed as a replacement for the non-flushable baby wipes that are causing us major problems due to their strength. It is the only product other than toilet paper that breaks apart during the toilet flush. It presented a unique challenge in the INDA GD3 FG502 Slosh Box Test, and FG 507 Municipal Pump Test since it broke down so much during the product preparation steps, that I was unable to introduce it into the test proper. In case there is a question that means it passed the test with flying colors. To be able to get any results from the Slosh Box it was introduced directly into the test from the package. In a proposed alternate version of Slosh Box Test your product reached the end stage of breaking into 1" pieces in 5 minutes. This is comparable to 2-ply Toilet paper and 10 times quicker than current best of class flushable labeled wipe. To date these are the only 2 nonwoven products that have passed this dispersibility test.

I guess the best way for people to understand this is through the simple Bucket of Water demonstration that I used in my You-Tube video. The test measures how long it takes before a wipe is unable to support itself after it is placed in a container of water. The quicker it tears as you try to lift it, the quicker it will disperse in a wastewater system: The results are as follows:

Product Type	Time to Lose Strength
Haso USA Flushable Wipe	5-10 seconds
2-Ply Toilet Paper	20-25 seconds
Current Best In Class Flushable Wipe	60 minutes
All other GD3 Compliant Flushable Wipes	weeks to months
Baby Wipes	months to years

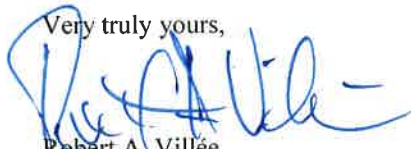
If this product was used as the substrate for all products, such as Baby Wipes, Flushable Labeled Wipes, Feminine Hygiene Wipes and Hard Surface Disinfecting Wipes likely to be flushed by their usage, I would predict that the problems the wastewater industry is currently experiencing would go away.

As a bit of background, I am the Executive Director of a public wastewater utility in NJ, former chair of the Water Environment Federation National Collection System Committee (2010-2012), and since 2011 have been heavily involved in the discussions with INDA and the manufacturers regarding nonwoven wipe products and their impacts on wastewater systems. I am one of six wastewater professionals on a Joint Technical Workgroup, that also includes 6 manufacturing representatives. The group which is sponsored by INDA, WEF, NACWA and APWA, is looking at the technical aspects of what properties a nonwoven wipe must have to bear the term "flushable" or as the wastewater side says "dispersible". Ground rules for the group prohibit me from talking about the validity of the INDA GD3 tests for determining flushability, or any of the ongoing deliberations. However I can tell you outside of the manufacturers and a couple of independent test laboratories, I am the only one with the test apparatus to perform the INDA FG 502 Slosh Box test, and have had one of my variations of the test nicknamed the Villee Test by the manufacturers.

I will be happy to discuss this further, including by phone, but would request that the initial contact be made via email – rvillee@parsa-nj.org

If there are any questions, please contact me.

Very truly yours,



Robert A. Villée
Executive Director