I.W. Tremont Co., Inc.

Filter & Technical Specialty Papers
79 Fourth Avenue - Hawthorne, New Jersey 07506

Tel: 973-427-3800
Fax: 973-427-3778
www.iwtremont.com

Technical Data Sheet

Material Designation: **VSS®**

Material Properties Summary

- ☒ *Binderless*
- ☐ *Organic Binder*
- ☐ *Double Laminated*
- ☐ *Acrylic Binder*
- ☐ *Laminated*
- ☐ *Hydrophobic*

This binder free material is manufactured using a proprietary glass chemistry which permits usage in high heat applications beyond typical borosilicate glass blends. Ideally suited for determination of "Fixed & Volatile Solids Ignited at 550°C" method 2540E. Low fiber shedding improves quality assurance of test results and low percentage of weight loss when used in gravimetric tests. High loading capacity is an attribute of the high surface area and complex pore structure.

Material is also compliant with the requirements of standard method 2540C & 2540D as well as EPA Method 160.2 for establishing water quality in suspended solids content. Total Suspended Solids (TSS) are defined as those which are retained by a "Glass-fiber filter disk without organic binder".

Widely used in air pollution monitoring, high temperature flue gas and filtration of high temp. solvents.

Micron rating	Basis Weight	Caliper Thickness	Mean Pore Size
1.5	39	0.011 - 0.015	-
µm	*lbs/3,000 ft^2*	*inches - 4 psi*	*µm*
	TAPPI Method T410	*TAPPI Method T411*	

DOP Smoke Penetration	Air Flow Resistance	Tensile Strength MD	Tensile Strength CD
.02	34 - 37	3.0	2.0
% at 0.3 µm @ 10.5 ft/minute	*mm H_2O @ 10.5 ft/minute*	*lbs / inches*	*lbs / inches*
ASTM Method D-2986	*ASTM Method D-2986*	*TAPPI Method T494*	*TAPPI Method T494*

Dry Elongation MD	Dry Elongation CD	Frazier Permeability	Gurley Stiffness
3.0	4.0	-	-
%	*%*	*ft^3 / min / ft^2 @ 0.5in H_2O W.G.*	*mg*
TAPPI Method T494	*TAPPI Method T494*	*ASTM Method F778-82*	*TAPPI Method T543*

Water Repellency	Ignition Loss
-	Binderless
Inches H_2O	*% Loss*

Comments:
Initial Filtration Speed (secs/100ml) = 47-52
Wet Burst (kPa) = 3.7-4.1
Wet Burst (psi) = 0.54-0.58
Color white, surface smooth & very soft.

Actual filtration performance, i.e. efficiency and dust holding capacity, will vary depending upon filter design parameters and the normal variation of the media properties consistent with the specification range. We continuously strive to define our products and hence the specifications are subject to change.

Product Testing and Evaluation Certification Report

Prepared for I.W. Tremont Co., Inc.

August 12, 2010

North American Testing, LLC
201A Plank Road
PO Box 323
Norwalk, OH, USA 44857

North American TESTING

PO Box 323
Norwalk, OH 44857
Ph 419-685-1981

Product Testing and Evaluation Certification Report

Date: August 12, 2010
Test No.: 020100144
For: I.W. Tremont Co., Inc.

I.W. Tremont Co., Inc. requested comparative performance testing of their Grade VSS glass microfiber filter media versus the Grade 934-AH® filter media. Treated municipal wastewater effluent from three different on-site systems was used to conduct the following analysis (data attached as Page 3):

A. One sample from each of the three systems was analyzed for Total Suspended Solids following SM2540D. Duplicate analysis was performed on each sample for quality control purposes.
B. One sample from each of the three systems was analyzed for Fixed and Volatile Solids following SM2540E. Duplicate analysis was performed on each sample for quality control purposes.

In summary, we found the Grade VSS filter media to be of equal quality to the Grade 934-AH® filter media. The performance of the Grade VSS filter media was equal to the performance of the Grade 934-AH®.

Alan Hepp
Vice President

Douglas Steele
Technical Manager

TSS Data

Date 8/10/2010 TechDAS

Sample	Filter Type	Filter #	Sample volume (mL)	W_{1-1} (g)	W_{1-2} (g)	W_{2-1} (g)	W_{2-2} (g)	SS (mg/L)
7-E1	934-AH	2	25	0.116		0.126		396
		3	25	0.116		0.126		400
	VSS	12	25	0.109		0.119		412
		13	25	0.111		0.121		396
10-E1	934-AH	4	175	0.116		0.120		22.3
		5	175	0.119		0.123		20.6
	VSS	14	175	0.112		0.116		21.1
		15	128	0.110		0.113		21.1
13-E1	934-AH	6	450	0.118		0.123		11.3
		7	450	0.119		0.123		10.4
	VSS	16	450	0.110		0.115		10.9
		17	450	0.109		0.113		10.2
Blank	934-AH	1	0	0.116		0.116		
	VSS	11	0	0.110		0.111		

VSS Data

Date 8/10/2010 TechDAS

7-E1	934-AH	2	25	0.126		0.118		324
		3	25	0.126		0.117		324
	VSS	12	25	0.119		0.111		328
		13	25	0.121		0.113		328
10-E1	934-AH	4	175	0.120		0.116		18.3
		5	175	0.123		0.120		17.7
	VSS	14	175	0.116		0.112		18.3
		15	128	0.113		0.111		18
13-E1	934-AH	6	450	0.123		0.118		10.7
		7	450	0.123		0.119		9.6
	VSS	16	450	0.115		0.111		9.6
		17	450	0.113		0.109		9.3
Blank	934-AH	1	0	0.116		0.116		
	VSS	11	0	0.111		0.111		