

# HEPA-XFP™

## HEPA LEVEL OVERSPRAY FILTRATION SYSTEM FOR AEROSPACE APPLICATIONS

### The HEPA-XFP™ is the most advanced aerospace system available for chromated paint.

The HEPA-XFP™ is the only filtration system giving aerospace paint booths HEPA level filtration without high-cost HEPA system booth construction and upgrades. Already used in some of the most sensitive U.S. military and commercial aerospace applications, the HEPA-XFP™ protects equipment, employees, and the environment. The HEPA-XFP™ is designed to eliminate nearly 100% of chromate particles.

### FIRST STAGE

The CPA pre-filter is a multi-layered polyester media constructed of lofted denier and heavier densified fiber. The air leaving side is inkjet printed for identification and proper installation.

### SECOND STAGE

The ME/PT pre-filter is constructed of two different layers of tackified polyester media, RF heat-sealed together. Additional face sealing secures the two layers. Each layer is constructed of a multi-layered, multi-density polyester with heavy, non-migrating tackifier on the air-leaving side.

### THIRD STAGE

The first patented HEPA level achieving filtration system designed for aerospace applications. The HEPA-XFP™ 6 Pocket Bag Filter is constructed using 2 plies of electrostatic medias.



The first and second plies are a composite of melt blown and spun bound polyester fibers. The third, air leaving ply, is constructed of polypropylene and acrylic media.

Using 3 layers of electrostatic media, the HEPA-XFP™ achieves 99.97% efficiency on 0.3  $\mu\text{m}$  size particles of low viscosity and high viscosity paints, as well as Method 319 test agents, KCL and Oleic Acid. High paint holding capacity and low initial pressure drop ensure a cost-effective solution to achieving the highest efficiency standards available.

### SECURELY SEALED WITH NO PAINT BY-PASS

Each pocket is securely sealed with a galvanized metal gasket header. This eliminates any paint bypass through or around the bag filter.

## LMS TECHNOLOGIES, INC.

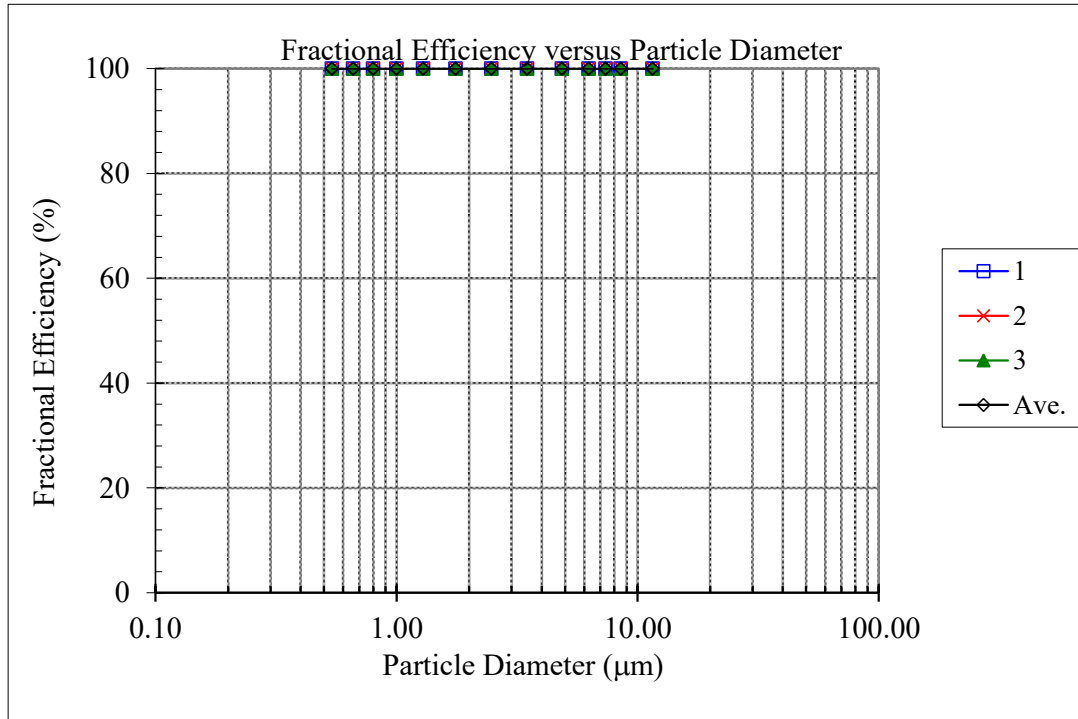
Date :	June 1, 2011	Flow Rate: 333 cfm
Filter ID :	HEPA-XFP 6 Pockets Bag Filter	
Descriptions:	3 STAGE SYSTEM	Requested by:
Test Type :	NESHAP Method 319 (3-Stage)	A.J.Dralle, Inc.
Test Aerosol :	<u>KCl, neutralized</u>	Mfr.:

Number	1	2	3	Ave.
$\Delta P$ (" H <sub>2</sub> O)	0.249	0.250	0.255	0.251
Size Range ( $\mu\text{m}$ )	Fractional Efficiency (%)			
0.49-0.59	99.989	99.983	99.986	99.986
0.59-0.73	99.993	99.990	99.992	99.992
0.73-0.87	100.000	99.991	100.000	99.997
0.87-1.16	100.000	99.995	100.000	99.998
1.16-1.44	100.000	100.000	100.000	100.000
1.44-2.14	100.000	100.000	100.000	100.000
2.14-2.85	100.000	100.000	100.000	100.000
2.85-4.25	100.000	100.000	100.000	100.000
4.25-5.55	100.000	100.000	100.000	100.000
5.55-7.07	100.000	100.000	100.000	100.000
7.07-7.66	100.000	100.000	100.000	100.000
7.66-9.46	100.000	100.000	100.000	100.000
9.46-14.1	100.000	100.000	100.000	100.000

MINIMUM  
>75%  
>85%  
>95%

$$F_{eff} = \frac{C_{up} - C_{down}}{C_{UP}} \times 100\%$$

$F_{eff}$  = Fractional Efficiency  
 $C_{up}$  = Particle Concentration Upstream of Filter  
 $C_{down}$  = Particle Concentration Downstream of Filter



# LMS TECHNOLOGIES, INC.

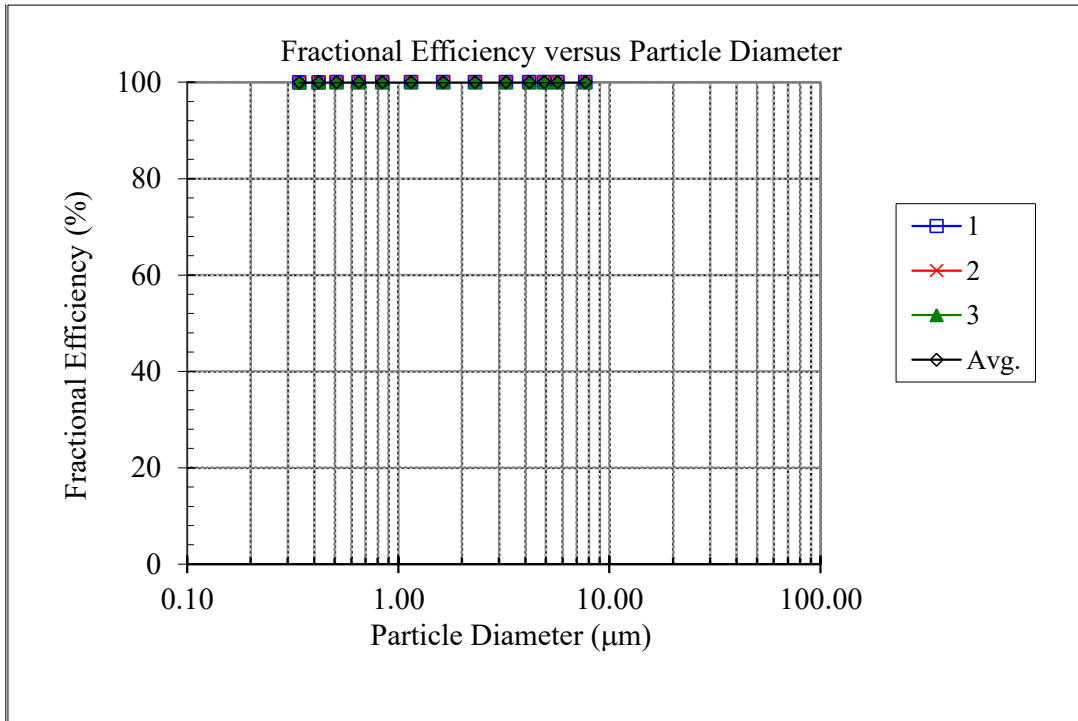
Date : June 1, 2011 Flow Rate: 333 cfm  
 Filter ID : HEPA-XFP 6 Pockets Bag Filter  
 Descriptions: 3 STAGE SYSTEM Requested by:  
 Test Type : NESHAP Method 319 (3-Stage) A.J.Dralle, Inc.  
 Test Aerosol : Oleic Acid, neutralized Mfr.:

Number	1	2	3	Avg.
ΔP (" H <sub>2</sub> O)	0.255	0.246	0.248	0.250
Size Range (μm)	Fractional Efficiency (%)			
0.31-0.37	99.979	99.981	99.978	99.979
0.37-0.47	99.980	99.996	99.999	99.992
0.47-0.56	100.000	100.000	100.000	100.000
0.56-0.75	100.000	100.000	100.000	100.000
0.75-0.94	100.000	100.000	100.000	100.000
0.94-1.41	100.000	100.000	100.000	100.000
1.41-1.88	100.000	100.000	100.000	100.000
1.88-2.83	100.000	100.000	100.000	100.000
2.83-3.69	100.000	100.000	100.000	100.000
3.69-4.71	100.000	100.000	100.000	100.000
4.71-5.11	100.000	100.000	100.000	100.000
5.11-6.29	100.000	100.000	100.000	100.000
6.29-9.43	100.000	100.000	100.000	100.000

MINIMUM  
 >65%  
 >80%  
 >95%

$$F_{eff} = \frac{C_{up} - C_{down}}{C_{UP}} \times 100\%$$

$F_{eff}$  = Fractional Efficiency  
 $C_{up}$  = Particle Concentration Upstream of Filter  
 $C_{down}$  = Particle Concentration Downstream of Filter



TEST SUPERVISOR  
EMILE TADROS

## A.J. DRALLE, INC.

1830 West Mound Road • Rockdale, Illinois 60436 • info@ajdralle.net  
 (800) 325-5339 • (815) 730-0505 • Fax (815) 730-0565

ENGINEERING APPROVAL  
K. C. KWOK, PH.D.

