

# FILTRATION MEDIA



## METALEASE-LITE™ FILTRATION MEDIA (GREENSANDPLUS™ EQUIVALENT)

**Metalease-Lite (P/N METALEASE LITE)** is a highly effective filter media capable of reducing arsenic, iron, manganese, and hydrogen sulfide from water through oxidation and filtration. Soluble iron and manganese are oxidized and precipitated by contact with the catalytic coating on the Metalease-Lite granules. The hydrogen sulfide is oxidized to an insoluble sulfur precipitate. Precipitates are then filtered and removed by backwashing.

Metalease-Lite is an engineered media that utilizes a super high purity manganese dioxide coating bonded to a durable, lightweight silica substrate. Manganese dioxide is a powerful oxidizer and Metalease-Lite contains more manganese dioxide than other manganese based filter medias. Metalease-Lite contains almost no fines and does not require long initial backwash times. A standard sterilization treatment using chlorine is all that is needed at start up. Made in the USA.

### FEATURES

- Iron reduction over wide pH range
- Effective reduction of hydrogen sulfide in addition to iron and/or manganese
- No harmful effects from a chlorine feed
- Low attrition for long bed life
- Made in USA
- Certified to NSF/ANSI/CAN Standard 61

### Regeneration Methods and Requirements

- Continuous regeneration using chlorine feed or air are recommended
- $Mg/Cl_2$  (1x mg/l Fe) + (3x mg/l Mn)
- Air draw or air injection
- Use an injector size that is two sizes larger than a typical softener application
- Draw/slow rinse time greater than 50 minutes
- Downflow rinse (fast rinse) 4 minutes minimum

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### Physical Properties

Color.....	Black free-flowing sand
Particle Shape.....	Sub-angular
Manganese Dioxide %.....	12.5%
Bulk Density.....	84 lb per cu.ft.
True Density.....	170 lb per cu.ft.
Effective Size .....	0.52 mm
Media Substrate.....	Silica Sand
Uniformity Coefficient .....	1.5
Moisture .....	< 1%
Porosity .....	50%
1000µm x 354µm Mesh Size .....	18 x 45
18M Retain (1000µm).....	< 3%
20M Retain (841µm).....	10%
30M Retain (595µm).....	64%
40M Retain (400µm).....	22%
70M Retain (210µm).....	< 1%

### Conditions for Operation

pH.....	5.5 to 10
Maximum Temperature .....	100°F (38°C)
Bed Depth.....	12 inches minimum
Freeboard .....	40% of bed depth minimum
Service Flow Rate (Continuous) .....	2 to 10 gpm per sq.ft.
Backwash Rate @ 55°F .....	12-18 gpm per sq.ft.
(20-30% bed expansion)	(warmer waters require higher flow rates)
Backwash Time .....	5 minutes
Free Chlorine Concentration .....	< 0.5 ppm
Empty Bed Contact Time (EBCT) ...	4 minutes minimum
Adsorption Capacity .....	1000 mg / kg

### Packaging

1/2 cu.ft. bags (42 lb net weight)  
48 bags per pallet (2,066 lb net weight)

Metalease-Lite™ is a trademark of Safe Water Technologies, Inc.  
GreensandPlus™ is a trademark of The Inversand Company.

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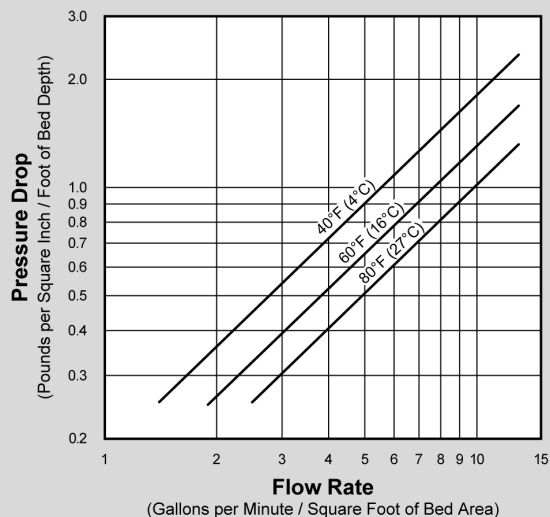
FORM 1475  
EFFECTIVE  
NOVEMBER 2025

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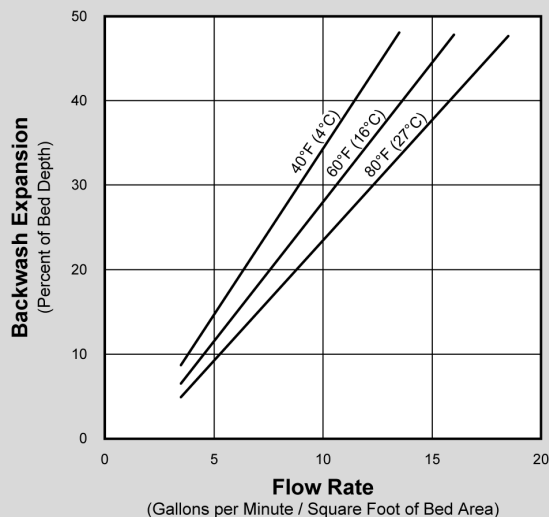
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**Service Flow Pressure Drop**



**PRESSURE DROP** — The graph above shows the expected pressure loss per foot of bed depth as a function of flow rate at various temperatures.

**Backwash Bed Expansion**



**BACKWASH** — The graph above shows the expansion characteristics as a function of flow rate at various temperatures.

### NOTES ON USING METALEASE-LITE

Untreated water should periodically be monitored for raw water parameters. Treated water should periodically be monitored for manganese, iron, and hydrogen sulfide shortly before a regeneration and immediately after a regeneration to monitor how the filter system is functioning. Elevated treated water concentrations before regeneration may mean that the filter media reduction capacity has been exceeded. Take corrective actions as necessary.

Low pH or high pH are the most likely conditions leading to media destruction.

### CATALYTIC OXIDATION (CO)

Catalytic Oxidation (CO) operation is recommended in applications where iron removal is the main objective in well waters with or without the presence of manganese. This method involves the feeding of a predetermined amount of chlorine (Cl<sub>2</sub>) or other strong oxidant directly to the raw water before the Metalease-Lite filter.

Chlorine should be fed at least 10 to 20 seconds upstream of the filter, or as far upstream of the filter as possible to insure adequate contact time. A free chlorine residual carried through the filter will maintain Metalease-Lite.

CALIFORNIA PROPOSITION 65 WARNING: This product contains crystalline silica which is known to the State of California to cause cancer and other substances which are known to the State of California to cause cancer, birth defects and reproductive harm.

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## METALEASE-LITE™ FILTRATION MEDIA (GREENSANDPLUS™ EQUIVALENT)

### Comparison Chart

	METALEASE-LITE	GREENSANDPLUS
Shipping Weight	84 lb/cu.ft.	90 lb/cu.ft.
Packaging	0.5 cu.ft. bags 48 bags/pallet	0.5 cu.ft. bags 55 bags/pallet
Service Flow Rate	2 to 12 gpm/sq.ft. continuous	2 to 12 gpm/sq.ft. continuous
Backwash Flow Rate	12 gpm/sq.ft. @ 55°F	12 gpm/sq.ft. @ 55°F
Clean Filter Pressure Drop @ 5 gpm/sq.ft.	0.8 psi per foot of bed depth	0.8 psi per foot of bed depth
Methods of Regeneration	Intermittent or continuous feed using Cl <sub>2</sub> or O <sub>2</sub>	Intermittent or continuous feed using Cl <sub>2</sub>
Active Ingredient	12.5% Manganese Dioxide	< 5% Manganese Dioxide
Certification	NSF tested and certified to NSF/ANSI/CAN Standard 61 REACH pending	WQA tested and certified to NSF/ANSI/CAN Standard 61 REACH registered
Initial Startup	Cl <sub>2</sub> sterilization recommended but not required	Requires minimum 4 hours Cl <sub>2</sub> regeneration
Commercial Systems Larger than 36 inch Tanks	Air/water scour backwash	Air/water scour backwash
Made in USA	Yes	No