



Oil Removal Matrix (ORM) Cartridges

MYCELX Polishing Filters

Specifications

Filtration Media

Material of

Construction:

**Polypropylene
with MYCELX
Proprietary
Chemistry**

222FEC End Cap

Material and

Dimensions:

1.75"

**Polypropylene,
Buna-N O-Ring**

Max Operating

Temperature:

160°F (72°C)

Max Operating

Differential

Pressure:

**35 psid @ 100°F
(38°C)**

Min Operating

Pressure Required:

1 psi

Operating pH

Range:

3 - 11

Operating Pressure

Drop Across Media

Upon Oil Removal:

1 psi

Typical Flow

Capacities of ORM

Based Systems:

1 - 10,000 gpm



222FEC
222 and Flat
End Cap

DOE
Double
Open End

ORM PART NUMBER CONFIGURATOR

MYCELX Treated Filter Type	Cartridge Length (Inches)	Nominal Outside Diameter (1" ID)	Raw/Untreated Nominal Filter Micron Size (µm)	End Cap
MD	5 10 20 30 40 50	S S = 2.5"	50	DOE (Leave Blank) 222FEC

Part Number Examples:
 MD40S50 (ORM 40" Long, 2.5" OD, Double Open End Option)
 MD30S50222FEC (ORM 30" Long, 2.5" OD, 222 Flat End Cap Option)

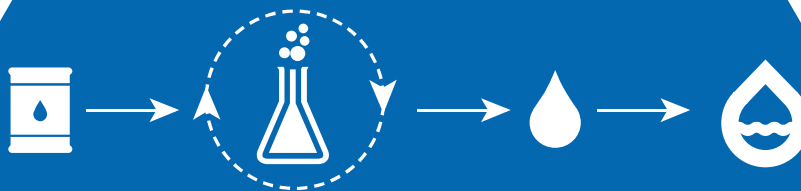
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ORM

Comparison to ALTERNATIVE Technologies	MYCELX ORM Cartridge	Clay/Carbon	OWS/Coalescers	Hydrocyclones
Mechanism of oil removal	Instant, permanent and complete oil removal upon contact. True and Broad phase affinity. No desorption. Required contact time for oil removal: < 1 sec	Adsorption Desorption isotherms apply. Required contact time for hydrocarbon removal: 5 min	Gravity or media assisted enhanced gravity based separation. Required contact time for oil removal (30-50 microns): 10-15 min	Centrifugal or enhanced gravity based separation.
Robustness to handle variable oil loading	Effectively handle high to low oil loading to same effectiveness and < 1 psi pressure drop	Fouls and plugs even with medium oil loading	Can remove oil only up to 30-50 microns oil droplet size	Can remove oil only up to 15-20 microns oil droplet size
Oil Removal Capacity to greater than 90% removal effectiveness to 1.1 micron oil droplet sizes	1-2 lbs/ lb of MyCelx media	0.03-0.3 lbs/lb of adsorbent media	Cannot remove less than 30 micron oil droplets.	Cannot remove less than 20 micron oil droplets.
Ability to handle mixed oily water streams	Yes. Instant, permanent and complete removal	No. Desorption occurs	No, only free phase or > 50 micron droplets will be removed	No, only free phase or > 50 micron droplets will be removed
Footprint of system per flow requirements	1 X	5-6 X	15-20 X	2-3 X
Cost to remove 99% of oil to 10 microns at smallest footprint, lowest waste generation and sustained effectiveness	1 X Environmentally Benign Concentrated dry oily waste	5-10 X	2-3 X 90% effective only for oil droplets > 30 microns	4-8 X 90% effective only for oil droplets > 20 microns

Absorbs Oil Without Absorbing Water



Key Benefits

Oil Removal Cartridge - Free Oil Removal

Delivered as dry cartridge – no liquid or chemicals.

Permanent immobilization of the oil in the MYCELX cartridge. No desorption.

High flow capacity at smallest footprint compared to any alternate technology.

Safe and easy to handle. No hazardous components. Certified by EPA and Fish and Wildlife Department for safe handling and discharge into aquatic environment.

Spent oily cartridge holds very little water; therefore saturated cartridge has high BTU residual fuel value due to high oil content and very low water content.