# PRODUCT COMPARISON CHARTS TABLES AND REPORTS

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\*PRODUCT EFFICACY COMPARISON FireStopper® XL FFC vs. Tyco/Chemguard" "Fracking Pump Vehicle Protection Flammable Area Simulation (Commissioned by Lewis Energy Group)

\*\*PRODUCT EFFICACY COMPARISO FireStopper® Extinguisher Aviation Cockpit Application (Commissioned by Robinson Helicopters)

### **Comparison With Other Products:**

<b>○ FIRESTOPPER</b> .	Dry Powder**	Gas (CO <sub>2</sub> )	Wet Chem
NON-TOXIC "GREEN"	Toxic	Toxic	Low Order Acute Toxicity
NON-CORROSIVE	Very Corrosive	Asphyxiant, Irritant, Oxidizer	Corrosive
CLEAN AGENT (Easy Clean- Up)	Impossible To Clean	Use In Well Ventilated Area	Must Be Cleaned
NON-IRRITANT (SKIN & EYE)	Irritant: Inhaling May Cause Serious Harm	Gas (Harmful If Inhaled) Eye Irritant - Skin: Frostbite, Blister	Skin & Eye Irritant, May Damage Eye
ENVIRONMENTALLY SAFE	Does Not Biodegrade	Greenhouse Gas/Ozone Depleter	N/A (Not Studied)
LIGHT & EASY TO OPERATE	Heavy & Hazardous If Indoors	Heavy & Hazardous If Indoors	Heavy; Large Quantity: 6- Liter And Above
EFFECTIVE FIRE CLASS: A-B-C-D-K	Fire Class: A-B-C; Class "D" (Separate Product)	Effective Fire Class: B-C	A, K
ENVIRO-SAFE® (FOAMING AQUEOUS AGENT)	Varied Chemical Powders	Co <sub>2</sub> Gas (Carbon Dioxide) Ozone Depleter	A Potassium salt and water mixture
EXTREME RETARDANT PROPERTIES	None	None	N/A
CLASS K (COOKING FATS & OILS)	Not Rated Nor Qualified	Not Rated Nor Qualified	Rated: 6-Liter & 2.5 Gal.
FIRST & ONLY OF ITS KIND IN THE WORLD	Old Technology (Over 100 Yrs.)	Old Technology	Old Tech.
ALL STAINLESS STEEL BODY (REFILLABLE)	Aluminum/Plastic (Disposable)	Aluminum, Brass Valve, Steel Handle	ALL STAINLESS STEEL BODY (Refillable)
DISCHARGE DISTANCE: 8 - 10 FT.	*(711-A Kidde Product) 5 Ft.	5 –7 Ft.	8 –12 Ft.
FREEZE RESISTANT: -100°F	-60°F	N/A	-20°F
20-YEAR WARRANTY	12-Year	5-Year	6-Years

\* \* Please note: although Kidde was able to meet UL711-A in order to make the Kitchen representation, this product by virtue of what it clearly is, brings with it to market tremendous contingent liabilities to the retailer from end users, e.g.: corrosiveness, inability to cool the flammable media, which may expose the user to the danger of reignition. In addition, there is a great potential for possible health implications of its use should the end user inhale the micro particles inherent in the product.

### RESIDENTIAL PRODUCT LINE (Initial Unit Pricing)

MODEL	MSRP	EC Rating/UL Rating*/^
PFE-101 (400-ml fog)	89.99	UL: 1B, C, K
_		EC: 3A, 21B, D, 25F
PFE-102 (400-ml foam)	99.99	UL: 2B, C, K
		EC: 3A, 21B, D, 25F
PFE-103 CAVS (1-liter fill)	149.99	UL: 2B, C, K (1A^, D^)
Fog style		EC: 5A, 55B, D, 40F
PFE-103 CAV (1-liter fill)	159.99	UL: 2B, C, K (1A^, D^)
Foam style		EC: 5A, 55B, D, 40F
PFE-1LRS (1500-ml fog)	189.99	UL: 5B, C, D^, K* (1A^)
		EC: 8A, 89B, D, 75F
PFE-1LCF (1500-ml foam)	199.99	UL: 5B, C. D^, K* (1A^)
		EC: 8A, 89B, D, 75F

<sup>^</sup> These test for ratings are pending for Listing with UL



### FireStopper® Unit Price vs. Economic Correlations

Model: PFE-101/PFE-102 (400ML)

Rated: 1B (2B w/foam nozzle) C, K

An All Stainless Steel Kitchen Appliance

(The images are in approximate ratio)



**REFILLABLE** 

NON-IRRITANT

MSRP: \$89.99

(Not Pictured)

NON-CORROSIVE

\*PFE-1LCS: \$99.99

**NON-TOXIC** 

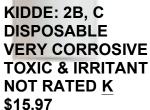




\*KIDDE: 711A K **DISPOSABLE VERY CORROSIVE TOXIC & IRRITANT NOT RATED K** \$19.97

\*Note: website omit corrosiveness of the product in addition to toxicity with all ABC dry Chem products







**CLASS "D" EXTINGUISHER** WEIGHT: 53 lbs.

AMEREN HIGHT: 32 in COST: \$703.00 + 87.36 **S&HAMAZON: Amerex #B571REFILLABLE** 

**TOTAL COST: \$826.30** 

#### Model: PFE-103CAVS/PFE-103CAVF\* (1-Liter)

Rated: >2B C, K

An All Stainless Steel All Purpose Appliance

(The images are in approximate ratio)



REFILLABLE NON-TOXIC NON-IRRITANT NON-CORROSIVE MSRP: \$149.99

\*PFE-1LCS: \$159.99

(Not Pictured)



KIDDE: 5B, C DISPOSABLE VERY CORROSIVE TOXIC & IRRITANT NOT RATED <u>K</u> \$17.88



CLASS "D" Amerex #B571REFILLABLE EXTINGUISHER WEIGHT: 53 lbs.

HIGHT: 32 in

AMAZON: \$703.00 + S&H: \$87.36

TOTAL COST: \$1,007.24

Model: PFE-1LR/1LCS\* (1.5-LITER)

ALL FIRE CLASS EFFECTIVE (ABCDK)

UL711 Rated: 5B, C, K (Commercial Rated)

An All Stainless Steel Kitchen Appliance

20-yr. Ltd. Warranty



**REFILLABLE NON-TOXIC NON-IRRITANT NON-CORROSIVE** MSRP: \$199.99

\*PFE-1LCS: \$189.99 (Not Pictured)



**Ansul K-Guard** (UL711 K-Rated) \$199.00



\$17.88



TOTAL COST: \$1,007.24

### PORTABLE EXTINGUISHER COMPARISON WITH ABC DRY CHEMICAL EXTINGUISHERS

*WARRANTY MODEL	FireStopper® VOL./SIZE WT.	CLASS "A" COVERAG E	CLASS "B" COVERAGE	C-RATED 100KV	EFFECTIVE/ RATED "D"	CLASS "K" COVERAGE	COST-TBD (MSRP)
PFE-101	400-ml/1-lbs.	5280-in <sup>3</sup>	7-ft²	YES	YES	25-Liters	\$89.99
PFE-102	400-ml/1-lbs.	5280-in <sup>3</sup>	7-ft²	YES	YES	25-Liters	\$99.99
PFE-103CAVS	1-Liter/2.7-lbs.	8360-in <sup>3</sup>	18.5-ft <sup>2</sup>	YES	YES	40-Liters	\$149.99
PFE-103-CAV	1-Liter/2.7-lbs.	8360-in <sup>3</sup>	18.5-ft <sup>2</sup>	YES	YES	40-Liters	\$159.99
PFE-1LRS	1.5-Liter/4-Lbs.	13860-in <sup>3</sup>	30-ft <sup>2</sup>	YES	YES	75-Liters	\$189.99
PFE-1LR	1.5-Liter/4-Lbs.	13860-in <sup>3</sup>	30-ft <sup>2</sup>	YES	YES	75-Liters	\$199.99
PFE-3LCS	3-Liter/8-Lbs.	22528-in <sup>3</sup>	>48.6-ft <sup>2</sup>	YES	YES	>75-liters	\$219.99
PFE-3LC	3-Liter/8-Lbs.	22528-in <sup>3</sup>	>48.6-ft <sup>2</sup>	YES	YES	>75-liters	\$239.99
PFE-6LCS	6-Liter/16-Lbs.	36388-in <sup>3</sup>	>62-ft²	YES	YES	>75-liters	\$279.99
PFE-6LC	6-Liter/16-Lbs.	36388-in <sup>3</sup>	>62-ft²	YES	YES	>75-liters	\$299.99
PFE-10LCS	10-Liter/27-Lbs.	46640-in <sup>3</sup>	>79-ft²	YES	YES	>75-liters	\$389.99
PFE-10LC	10-Liter/27-Lbs.	46640-in <sup>3</sup>	>79-ft²	YES	YES	>75-liters	\$409.99

<sup>\*</sup>All FireStopper® Products Carry 20-year Limited Warranty

#### **AVAILABLE KIDDE CONSUMER PRODUCTS & ANSUL COMMERCIAL PRODUCTS**

ABC DRY CHEM (wt.)	WARRANTY	CLASS "A" COVERAGE	CLASS "B" COVERAGE	"C" RATED 100KV	EFFECTIVE/ RATED "D"	CLASS "K" COVERAGE	*COST/ ^MSRP
Kidde <sup>1</sup> : 2.5lbs	12-Yrs.	NONE	NONE	NO	NO	<2-Liter	\$20.00
Kidde PRO	6-Yrs.	8000-in <sup>3</sup>	25-ft <sup>2</sup>	YES	NO	NO	*\$36.97
Kidde PRO-210	6-Yrs.	15625-in³	25-ft <sup>2</sup>	YES	NO	NO	*\$47.97
Kidde Full Home	10-Yrs.	24389-in <sup>3</sup>	100-ft <sup>2</sup>	YES	NO	NO	*\$39.97
Kidde PRO-340	6-Yrs.	24389-in <sup>3</sup>	100-ft <sup>2</sup>	YES	NO	NO	*\$54.97
Kidde PRO-460	6-Yrs.	32768-in <sup>3</sup>	150-ft <sup>2</sup>	YES	NO	NO	*\$75.00
Ansul K-Guard	6-Yrs.	15625-in³	NONE	NO	NO	37.85-Liters	^\$294.00

<sup>\*</sup>HOME DEPOT ^ASUL- Refillable

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<sup>&</sup>lt;sup>1</sup> All Kidde units are disposable



## PORTABLE EXTINGUISHER COST COMPARISON WITH ABC DRY CHEMICAL EXTINGUISHERS

20-Year WARRANTY MODEL	FireStopper® VOL./SIZE WT.	CLASS "A" COVERAGE	CLASS "B" COVERAGE	C- RATED 100KV	EFFECTIVE/RATED "D"	CLASS "K" COVERAGE	COST (MSRP)
PFE-101	400-ml/1-lbs.	5280-in <sup>3</sup>	7-ft²	YES	YES	25-Liters	63.00 \$89.99
PFE-102	400-ml/1-lbs.	5280-in <sup>3</sup>	7-ft²	YES	YES	25-Liters	70.00 \$99.99
PFE- 103CAVS	1-Liter/2.7- lbs.	8360-in <sup>3</sup>	18.5-ft²	YES	YES	40-Liters	105.00 \$149.99
PFE-103- CAV	1-Liter/2.7- lbs.	8360-in <sup>3</sup>	18.5-ft <sup>2</sup>	YES	YES	40-Liters	112.00 \$159.99
PFE-1LRS	1.5-Liter/4- Lbs.	13860-in³	30-ft²	YES	YES	75-Liters	133.00 \$189.99
PFE-1LR	1.5-Liter/4- Lbs.	13860-in³	30-ft²	YES	YES	75-Liters	140.00 \$199.99
PFE-3LCS	3-Liter/8-Lbs.	22528-in³	>48.6-ft²	YES	YES	>75-liters	168.00 \$239.99
PFE-3LC	3-Liter/8-Lbs.	22528-in³	>48.6-ft²	YES	YES	>75-liters	156.00 \$259.99
PFE-6LCS	6-Liter/16- Lbs.	36388-in³	>62-ft²	YES	YES	>75-liters	210.00 \$299.99
PFE-6LC	6-Liter/16- Lbs.	36388-in³	>62-ft²	YES	YES	>75-liters	224.00 \$319.99
PFE-10LCS	10-Liter/27- Lbs.	46640-in³	>79-ft²	YES	YES	>75-liters	317.85 \$489.99
PFE-10LC	10-Liter/27- Lbs.	46640-in³	>79-ft²	YES	YES	>75-liters	357.00 \$509.99



#### COMPETITIVE COMPARISON WITH ALL AFFF

PRODUCT	CERTIFIED USAGE	APLICATION RATE/ APPROX. AREA	APPROX. EXTINGUISHMENT TIME	AFFF	APLICATION RATE/ APPROX. AREA	APPROX. EXTINGUISHMENT TIME
AB 40002 FFC	6%	90/GPM/1000-ft <sup>2</sup>	<15-secs	6%	90/GPM/1000-ft <sup>2</sup>	4 to 6-min
XL FFC	3%; 6%	90/GPM/1000-ft <sup>2</sup>	<10-secs	3%	90/GPM/1000-ft <sup>2</sup>	4 to 6-min
XL "PLUS" FFC	1%; 3%; 6%	90/GPM/1000-ft <sup>2</sup>	<5-secs	1%	90/GPM/1000-ft <sup>2</sup>	4 to 6-min

#### **ECONOMIC COMPARISON**

PRODUCT	COST BY USAGE	AFFF (Chemguard)	COST BY USAGE
AB 40002 FFC	1-min@90/GPM/1000-ft² @ \$60.95/gal=\$329.13÷4= <b>\$82.28</b>	6%	1-min@90/GPM/1000-ft² @ \$20.95*/gal=\$113.13x4= <b>\$452.52</b>
XL FFC	1-min@90/GPM/1000-ft² @ \$74.95/gal=\$374.75÷6= <b>\$62.45</b>	3%	1-min@90/GPM/1000-ft² @ \$32.99*/gal=\$171.54x4= <b>\$686.19</b>
XL "PLUS" FFC	1-min@90/GPM/1000-ft² @ \$97.50/gal=\$487.50÷6= <b>\$40.62</b>	1%	1-min@90/GPM/1000-ft <sup>2</sup> @ \$44.20*/gal=\$229.84x4= <b>\$919.36</b>

<sup>\*</sup>ALL CHEMGUARD FOAM UNIT PRICING AQUIRED FROM AMAZON.COM

#### PRODUCT EFFICACY COMPARISON

#### FireStopper® XL FFC vs. Tyco Chemguard Fracking Pump Vehicle Protection Flammable Area Simulation

(Commissioned by Lewis Energy Group)

PRODUCT	SIMULATED FIRE AREA	NOZZLES	FUEL	CONCLUSION
FireStopper® XL FFC @ 3%	8'X8'X8'	8	Diesel and Gasoline	FireStopper® XL FFC @ 3% extinguished the fire in approx. 2.6-sec • Total spray time: <5-sec
Tyco/Chemguard AFFF @ 3%	66	66	66	Chemguard @ 3% extinguished the fire in approx. 13-sec • Total spray time: approx. 19-sec

#### Additional Information:

An attempt to reignite the extinguished fuel on both exercises (not shown)

Result:

FireStopper®: no re-ignition possible

Chemguard: once flame was applied to exposed fuel re-ignition was obtained; foam closed the opened gap and fuel was extinguished

FULL VIDEO COMPARISON AVAILABLE UPON REQUEST Please see photo sequence below:

#### FireStopper®



Video: @ 0 seconds



@ 2 seconds



@ 3 seconds

#### Tyco/Chemguard



Video: @ 0 seconds



@ 4 seconds



@ 17 seconds

#### FireStopper® Portable Extinguisher Comparison

(Aviation Application)

### PFE-101 (400-ml Fog Spry Type Nozzle) Vs.

H<sub>3</sub>R Aviation's Model: RT-A400

(.9-lb Halon 1211-1301 Blend Typical use: Cockpit/Cabin)

PRODUCT	SIMULATED FIRE AREA	NOZZLES	FUEL	CONCLUSION
FireStopper® PFE-101	2-B	Fog/Spray	1-gal Jet-A & Av-Gas	<ul> <li>FireStopper® PFE- 101 Extinguisher controlled the fire in &lt; 1 sec. fully extinguish the fire in &lt; 5 secs.</li> <li>No re-ignition of fuel possible</li> <li>Total spay time 6- seconds</li> </ul>
H₃R Aviation Model: RT-A400	££	Standard Halon Application	"	<ul> <li>Extinguishment was attempted for 17 secs till empty</li> <li>Failed to extinguish the fire</li> <li>The area was fully engulfed in fire</li> <li>Total spray time 17-seconds</li> </ul>

#### H₃R Aviation Model: RT-A400



1-sec



12-secs



8-secs



14-secs

#### FireStopper® PFE-101



1-sec



4-secs



2-secs



5-secs