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Hydrosil HS-600 Compared to Activated Alumina Products

	Hydrosil HS-600	Activated Alumina
Active Ingredient	**$KMnO_4$**	**$KMnO_4$**
Substrate	**Zeolite**	**Activated Alumina**
Cation Exchange Capacity	**Yes**	**No**
Dusting	**Insignificant**	**Moderate to High**
Attrition	**Insignificant**	**Moderate to High**
Hardness of Substrate	**Hard**	**Soft**
Erosion in Air Stream	**Insignificant**	**Moderate**
Particle Size	**1 / 8" to 1 / 4"**	**1 / 16" to 1 / 4"**
Flammability	**No**	**No**
Bulk Density	**60 #'s/ft3**	**50 #'s/ft3**
% of Active Ingredient	**6.0%**	**4.0%**
#'s of Active Ingredient (1.0 cubic foot)	**3.6 #'s**	**2.0 #'s**
Moisture Content	**12 to 15%**	**Average 15%**
Disposal Cost	**Same**	**Same**
Handling Cost	**Same, but no dust**	**Same , with dust**

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Hydrosil HS-600 Compared to Potassium Hydroxide Impregnated Carbon

	Hydrosil HS-600	Potassium Hydroxide Impregnated Carbon
Active Ingredient	**$KMnO_4$ ***	**KOH**
Substrate	**Zeolite**	**Activated Carbon**
Cation Exchange Capacity	**Yes**	**No**
Dusting	**Insignificant**	**Moderate**
Attrition	**Insignificant**	**Moderate**
Hardness of Substrate	**Hard**	**Soft**
Erosion in Air Stream	**Insignificant**	**Low**
Particle Size	**1 / 8" to 1 / 4"**	**1 / 16" to 1 / 4"**
Flammability	**No**	**Yes**
Bulk Density	**60 #'s/ft3**	**32 #'s/ft3**
% of Active Ingredient	**6.0%**	**5.0%**
#'s of Active Ingredient (1.0 cubic foot)	**3.6 #'s** (MnO_4/KOH/MnO_2)	**1.6 #'s** (- / KOH / -)
Moisture Content	**12 to 15%**	**Not less than 12%**
Disposal Cost	**Same**	**Same**
Possible Combustion During Startup	**None**	**Yes**
Color Indicator When Spent	**Yes**	**No**

*** Chemically $KMnO_4$ produces three ingredients: MnO_4, KOH, and MnO_2**

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