

Salare, Inc. Quality Policy

At Salare, Inc., building customer relationships while producing high quality, state-of-the-art laboratory products is our number one priority.

Salare's promise to customers is to collaborate with them to design, produce, and deliver highly effective, long-lasting solutions that enhance their laboratory safety. To be recognized as the most valued supplier, based on meeting the requirements of each and every customer, Salare, Inc. commits to deliver reliable products and services of the highest quality, competitively priced, and deployed on time.

Salare will not sacrifice nor compromise its commitment to the promise or to the quality of the products and services that carry the Salare, Inc. brand.

Robert Esquivel  
President

Salare, Inc.

Salare, Inc.

P.O. Box 583—88 Parham Spring Lane—Henderson, NC 27536  
1-800-293-1004  
Fax: 252-430-0025

Salare® FUME HOOD FILTER Information Sheet

Our customer's safety is a primary focus at Salare, Inc. Please take the time to read this information and share it with all who will be using the filtering equipment which has been chose for your laboratory.

Before operating the Fume Hoods

- Identify the substances used and created in your process
- Establish approximate concentration of contaminants, then
- Select and install appropriate types of filters.

SALARE filters employ coconut shell carbons with a very highly developed internal surface area. All various grades of activated carbons used in the filters of Work Stations are essentially of a non crystalline structure produced by controlled oxidation of coconut shells. The Cellulose structure of shell determines the efficiency of the adsorptive media, i.e. a very high internal adsorption surface which consists of a mass of millions of press and capillaries of molecular dimensions.

FILTER RANGE

The various types of filters described below cover a wide range of applications.

The C-100 filters for instance contain 10 or 15 kg of coconut shell carbon, the quality of which is described by reference to its total surface area is normally determined by the B.E.T. method using nitrogen as the adsorbent and the adsorptive capacity by the weight of the carbon Tetrachloride adsorbed expressed as a percentage of the carbon's own weight.

The quality of the activated carbon in our C-100 filter is of 1100 to 1200 m<sup>2</sup>/gramme and CC14 adsorption of 60 to 65 percent. An estimate of the approximate capacity of the C-100 filter has been given in the Adsorption Index, which confirms suitability of the C-100 filter for use with the substances indicated. It is possible therefore to establish the approximate expected filter life following the indications of the typical adsorption levels expressed in percentage of weight of contaminant related to the weight of the carbon in the C-100 filter.

Select from the following main filters:

(If you do not find your chemistry in the following list, please call to get our assistance with determining the right filter for your need.)

FILTERS ORDERING INFORMATION

Partial Listing - Other Sizes and Types Available

Size A	Size B	
C1001	C1002	C-100 Filter will adsorb the majority of aliphatic and aromatic hydrocarbons, solvents, organic vapors, aldehydes, ketones, alcohols, organic acids, esters, halogens and sulfur compounds, nitrogen compounds and odors (refer to absorption index in filters for work stations)
C1E01	C1E02	C-100E High-Activity Filter for Ethers
C2001	C2002	CI-200 Filter for formaldehyde – HCHO for glutaraldehyde or OCH(CH <sub>2</sub> )CHO (in Cidex) – and for substances specified in the C-100 Filter absorption index on opposite page.
C3001	C3002	CI-300 Filter for ammonia or amines (+C100 index)
C3501	C3502	CI-350 Filter for predominantly alkaline type of odors, such as urine and excreta (+C100 index)
C4001	C4002	CI-400 Filter for S <sub>2</sub> O, H <sub>2</sub> S <sub>04</sub> , HCl (other inorganic acids and compounds on opposite page)
C4101	C4102	CI-410 Filter for H S and mercaptans (+C100 index)
C4201	C4202	CI-420 Filter for Hydrogen Cyanide - HCN
C4501	C4502	CI-450 Filter for predominantly acidic types of odors (such as Putrescine, cadaver and animal odors (+C100 index)
CHG01	CHG02	CI-HG Filter for mercury vapors (+ C100 index)
CR101	CR102	CI-RI Filters for I125, I129, Methyl iodide
00148	00149	HEPA Filter for high efficiency particulate filtration (of 99.99% efficiency on 0.3 micron)
00148U	00149U	ULPA Filter for high efficiency particulate filtration (of 99.9997% efficiency on 0.1 micron)
SM101	SM102	SM-100 Filter molecular sieves for C0
CMS01	CMS02	CMS Filter multilayered composite filters for schools
CMH01	CMH02	CM-100 Filter composite filters combining C-100 with HEPA Filter
CM201	CM202	CM-200 Filter composite filters combining CI200 carbons with HEPA Filter
CMR11	CMR12	CMRI Filter composite filters for radioactive iodine and methyl iodide (combining CI-RI and HEPA)
FT121	FT122	FILTRETE® electrostatic particle prefilter (of 99.5% filtration efficiency on 3 micron)



CHEMICAL ADSORPTION INDEX

The index below is intended as a guide to approximate how much of the toxic contaminant the C-100 filter may adsorb. At a filter weight of 22 lbs. (10 kg) and the index of "1", up to 50% or 11 lbs. (5 kg) of the toxin may be adsorbed within the filter. The index does not indicate the filtration efficiency, but the approximate weight of the contaminant that may be adsorbed within the filter. In general an index of "1" or "2" is a good indication of the filter's suitability for use with that specific chemical. If another type of filter would be more appropriate, it has been indicated in parentheses in the partial chemical listing that follows.

Load Capacity Index for a 22lb. Activated Carbon Filter			
Index	Load Capacity	%	Approx. Weight of Contaminant
1	Excellent	15-50	3.3 lbs. to 11 lbs. (1.5 kg to 5 kg)
2	Good	5-20	1.1 lbs. to 4.4 lbs. (0.5 kg to 2 kg)
3	OK	<5	Up to 1.1 lbs. (0.5 kg)
4	Poor	<1	Up to .22 lbs. (0.1 kg)

Note: Many factors affect bonded carbon filter load capacity. This chart is provided as a reference only. Specific load capacity may only be calculated on an application by application basis. Please consult an application specialist for an analysis of load capacity for your application.

CHEMICAL ADSORPTION LIST			
<b>Acids</b> 1. Acetic 1. Acetic Anhydride 1. Acrylic 1. Butyric 1. Caprylic 1. Carboic 2. Formic (CI-400)* 1. Lactic 1. Palmitic 1. Phenol 1. Propionic 1. Valeric 1. Phenic 4. Phosphoric (CI-200)* 3. Formic (CI-400)* 2. Acetic 2. Propionic 3. Methacrylic (CI-400)* 1. Oxalic 4. Sulfuric (CI-400)* 4. Nitric (CI-400)* 4. Hydrochloric (CI-400)* 3. Hydrobromic (CI-400)* 1. Caprylic 1. Carboic  <b>Amines</b> 4. Methylamine (CI-300)* 3. Ethylamine (CI-300)* 3. Isopropylamine (CI-300)* 4. N-Propylamine (CI-300)* 3. Cyclohexylamine (CI-300)* 3. Dimethylamine (CI-300)* 4. Benzidine (CI-300)*  <b>Aldehydes</b> 3. Acetaldehyde (CI-200)* 2. Acrylaldehyde 1. Benzaldehyde 2. Butyraldehyde 3. Formaldehyde (CI-200)* 3. Glutaraldehyde (CI-200)*	<b>Alcohols</b> 1. Ethyl 1. Amyl 1. Butyl 1. Cyclohexanol 1. Isopropyl 2. Methanol (Methyl) 1. Propyl 2. Ethanol 2. 1-Propanol 2. 2-Propanol 3. Allyl Alcohol 2. 1-Butanol 2. 2-Butanol 2. Isobutyl Alcohol 1. Amyl Alcohol 1. Benzyl Alcohol  <b>Esters</b> 1. Butyl Acetate 1. Cellosolve® Acetate 1. Ethyl Acetate 1. Ethyl Acrylate 2. Ethyl Formate 1. Isopropyl Acetate 2. Methyl Acetate 1. Methyl Methacrylate  <b>Ethers</b> 1. Amyl 1. Butyl 1. Cellosolve® 1. Dioxane 2. Ethyl 2. Ethylene Oxide 2. Isopropyl 1. Methyl Cellosolve® 2. Methyl 1. Propyl 2. Methyl Ether 2. Ethyl Ether 2. Vinyl Ether 1. Ethylene Glycol Monobutyl	<b>Ketones</b> 1. Methyl Isobutyl Ketone 1. Methyl Ethyl Ketone 1. Dipropyl Ketone 1. Diethyl Ketone 3. Ketene 2. Acetyl Acetone 2. Methyl Propyl Ketone 2. Methyl Isopropyl Ketone 1. Diethyl Ketone 2. Methyl Butyl Ketone 2. Methyl Isoamyl Ketone 1. Dipropyl Ketone 1. Ethyl Butyl Ketone 1. Methyl Amyl Ketone 1. Ethyl Amyl Ketone 2. Isophorone 2. Methyl Isobutyl Ketone 2. Acetone 1. Cyclohexanone  <b>Hydrocarbons</b> 1. Benzene 1. Naphthalene 1. Styrene Monomer 1. Toluene 1. Toluidine 1. Xylene 4. Acetylene 2. Isobutane 2. Butylene 3. Butadiene 1. Cyclohexane 3. Hexylene 2. Pentane 3. Propane 2. Propylene 4. Ethylene 1. Cyclopentane 1. Hexane 1. Octane 1. Ethyl Benzene 1. Pyrene	<b>Nitrogen Compounds</b> 2. Ammonium Acetate 3. Ammonium Chloride (CI-300)* 4. Ammonium Hydroxide (CI-300)*  <b>Miscellaneous</b> 1. Adhesives 1. Animal odors 1. Camphor 4. Carbon Monoxide (SM-CO) 4. Carbon Dioxide (SM-CO2) 1. Citrus fruits 1. Cooking odors 1. Degreasing solvents 2. Deodorizers 1. Detergents 1. Hospital odors 1. Human odors 1. Leather 1. Ozone 1. Nicotine 1. Perfumes 1. Petrol 1. Putrefying odors 1. Putrescine 2. Products of incomplete combustion 1. Plastic 1. Poultry odors 1. Rancid oils and fats 1. Resins 1. Rubber 1. Stale odors 1. Odors from stables 1. Tar odors 3. Tobacco smoke 1. Toilet odors 1. Turpentine 1. Varnish 1. Vinegar 2. Wood Alcohol

\*Using impregnated filter indicated in parenthesis improves adsorption index to "1".  
NOTE: The above is only a partial listing. If you do not find your chemistry there, please call for assistance.

PRE-FILTERS are very important

In order to protect the main filter beds from particulate contamination, all work stations are fitted with the Filtrete® electrostatic particle filters with the efficiency of 99.5% for particles down to 3 micron in diameter.

The high efficiency particle pre-filters should be replaced regularly (monthly or bi-monthly), as accumulation of particulate contaminants in the pre-filters will reduce air flow speeds; which should be kept at a minimum 0.3 m/sec or 60 LFM at front opening. These pre-filters also protect the effective life of the main filter; ensuring safety and minimizing expense.

Safety check

Check filter efficiencies regularly by monitoring contaminant concentration levels (ppm or mg/m3) at the outflow port of the Fume Hood using the chemical detector tubes and entering the data in the Safety Log Book which was provided with your equipment. If this log book is missing, you may call to receive a replacement.

Filter change

Replace filters when concentration levels of contaminants begin to rise and before the level would reach its Threshold Limit Values (refer to Occupational Exposure Limits. MAK, etc.). The filters should also be replaced following chemical emergencies like gas leaks and accidental spills. Spare sets of replacement filters should therefore be kept in the laboratory. When kept in the sealed package, the filter will last indefinitely.

WARNING

Should required types of filters not be available, the Fume Hood should not be operated in the re-circulatory mode; it should be operated in the ducted mode using the transition adapter.

Avoid using incompatible substances within the enclosure of the Fume Hood and check that new substances introduced are not incompatible with chemicals already adsorbed in the filters. Enter details of all substances, types of filters used and dates of their use in the Safety Log Book.

Correct filter selection ensures better operator protection, higher containment factor and longer filter life. Following the instructions will ensure correct use of this Fume Hood which is the responsibility of the Operator. When in doubt, contact your local distributor or our Customer Service Department at 1-800-293-1004 or 252-431-1208 for advice.

FILTER DISPOSAL

Biological Hazard Process – follow State requirements for disposal of bio hazard material.

Non Bio-Hazard Use - Impregnated Carbon – The filter has already neutralized the chemical so it can be thrown in a dumpster.

Non Bio-Hazard Use - Prefilters – The filter can be thrown in a dumpster