

About Dynamic ACC

The material we use for chemical filtration (DACC) and present in most Respro® masks (Cinqro, City, Techno, Metro) was first produced by the UK Defence Establishment back in 1980's for the protection of troops under the threat of nuclear chemical and biological warfare. Since then a number of licenses have been provided to business, including our filter manufacturer, for the production of the material for Industrial applications. In order to provide a realistic program for industrial applications the material was tested using a number of different agents. This list can be read below.

Each agent has been tested for uptake and recorded. The list has been compiled into a useable one that allows the material to be sold with credibility for industrial applications to do with both air and water filtration.

Respro (UK) Ltd use this material for filtering chemicals that are found in the urban environment that are known as Primary Pollutants and the result of vehicle combustion. These chemicals include Nitrogen Oxides including NO and NO₂, Sulphur Dioxide, A wide range of Volatile Organic Compounds (VOC's - additives in fuels) and Low Level Ozone (LLO). All these have been used in tests with DACC and rated according to their affinity to be adsorbed.

KEY TO FILTRATION PROPERTIES

E = EXCELLENT

G = GOOD

M = MODERATE

P = POOR

ALIPHATIC HYDROCARBONS

- * Acetylene -G
- * Butane (Iso-Butane) -E
- * Butylene -E
- * Butadiene -G
- * Cyclohexane -E
- * Decane -M
- * Ethane -G
- * Ethylene -M
- * Heptane -E
- * Heptylene -G
- * Hexane -E
- * Hexylene -G
- * Methane -M
- * Nonane -G
- * Octane -G
- * Octylene -E
- * Pentane -G
- * Propane -M
- * Propylene -G

AROMATIC HYDROCARBONS

- * Benzene (Respro® filter) -E
- * Napthalene -E
- * Styrene Monomer -E
- * Toluene -E
- * Toluidine -E

ESTERS

- * Butyl Acetate -E
- * Cellosolve Acetate -E
- * Ethyl Acrylate -E
- * Ethyl Formate -G
- * Isopropyl Acetate -E
- * Methyl Acetate -G
- * Methyl Acrylate -E
- * Methyl Formate -G
- * Propyl Acetate -E

ALDEHYDES & KETONES

- * Acetone -G
- * Acetaldehyde -G
- * Acrolein -G
- * Acrylaldehyde -G
- * Benzaldehyde -E
- * Crontonaldehyde
- * Cyclohexanone -E
- * Diethyl Ketone -E
- * Dipropyl Ketone -E
- * Formaldehyde -M
- * Methyl Butylketone -E
- * Methyl Ethylketone -G
- * Valeric Aldehyde -E

ALCOHOLS

- * Ethyl -G
- * Anyl -E
- * Butyl -E
- * Cyclohexanol -E
- * Isopropyl -E
- * Methanol (Methyl) -M
- * Propyl -E

SULPHUR COMPOUNDS

- * Carbon disulphide -G
- * Dimethyl Sulphate -G
- * Ethyl mercaptan -E
- * Hydrogen sulphide -M
- * Methyl mercaptan -E
- * Propyl mercaptan -E
- * Sulphur Dioxide (Respro® filter) -E
- * Sulphur trioxide -M
- * Sulphuric Acid -M

NITROGEN COMPOUNDS

- * Ammonia -M
- * Aniline -E
- * Diethyl Amine -G
- * Diethyl Aniline -G
- * Dimethyl Amine -E
- * Ethyl Amine -G
- * Nicotine -E
- * Nitric acid -G
- * Nitrobenzene -E
- * Nitroethane -E
- * Nitrogen Dioxide (Respro® filter) -E
- * Nitroglycerine -E
- * Nitromethane -G
- * Nitropropane -E
- * Nitrotoluene -E
- * Urea -E
- * Uric Acid -E

HALOGENATED HYDROCARBONS

- * Butyl Chloride -E
- * Carbon Tetrachloride -G
- * Chlorine -M
- * Chlorobenzene -E
- * Chlorobutadiene -E
- * Chloroform -E
- * Chloro nitropropane -E
- * Chloropicrin -E

ACIDS

- * Acetic -G
- * Acetic Anhydride -E
- * Acrylic -E
- * Butyric -E
- * Carbolic -E
- * Formic -G
- * Lactic -E
- * Palmitic -E
- * Phenol -E
- * Propionic -E

ETHERS

- * Amyl -E
- * Butyl -E
- * Cellosolve -E
- * Dioxan -E
- * Ethyl -G
- * Ethylene Oxide -M
- * Isopropyl -E
- * Methyl Cellosolve -E
- * Methyl -G
- * Propyl -E

HALOGENATED HYDROCARBONS

- * Propyl chloride -G
- * Tetrachloro ethane -G
- * Tetrachloro ethylene -G
- * Trichloro ethylene -G
- * Vinyl chloride -G

- * Dibromoethane -E
- * Dichlorobenzene -E
- * Bromine -G
- * Dichlorodifluoro Methane -M
- * Dichlorodifluoro Ethane -G
- * Dichlorethane -E
- * Dichloroethylene -E
- * Dichloroethyl ether -E
- * Dichloromethane -M
- * Dichloromonofluoro Methane -M
- * Dichloropropane -G
- * Dichlorotetrafluoro ethane -M
- * Ethyl bromide -G
- * Ethyl Chloride -G
- * Ethylene chlorohydrin -G
- * Ethylene dichloride -G
- * Fluorotrichloromethane -M
- * Freon -M
- * Hydrogen bromide -M
- * Hydrogen chloride -M
- * Hydrogen Cyanide -M
- * Hydroxen Fluoride -M
- * Hydrogen iodide -M
- * Iodine -E
- * Methyl bromide -E
- * Methyl chloride -E
- * Methyl chloroform -E
- * Methylene chloride -E
- * Monochlorobenzene -E
- * Paradichlorobenzene -E
- * Perchloroethylene -G

The list is not exhaustive and other chemicals may well be adsorbed by DACC but have yet to be tested.