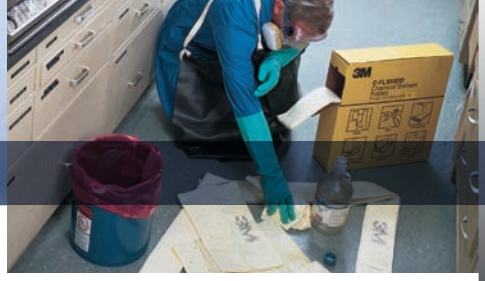

Chemical Sorbents Reference Guide

Use
For control of spills of most hazardous liquids.

Product Description
3M™ Chemical Sorbents are made from inert, synthetic fibers principally of polypropylene. They are available in a wide range of formats and are lightweight and dust free. They have a high absorption capacity which minimizes the amount of waste for disposal.

Color
Yellow—highly visible.

Selection Guide
- **Pads/Sheets:** A highly adaptable format.
- **Multiformat:** Combines four formats in one product. It can be used as booms, pillows, sheets or rolls.
- **Rolls:** For fast coverage and absorption of spills. Rolls can be torn to the required length. Can be used to wipe up the final residue of liquid once the bulk has been absorbed.
- **Minibooms:** For surrounding/containment of spills. Prevents further spreading of the spill.
- **Pillows:** For absorption of the bulk volume of a spill. Also useful for plugging holes.
- **Particulate:** For fast coverage and absorption of spills.
- **Spill Response Kits:** These convenient kits assist with providing fast and effective containment and clean-up of hazardous chemical spills.

Absorption/Sorbency
The case sorbency quoted in the table is based on the American Standard Test Method (ASTM) F726-81 using a medium viscosity fluid (20 weight motor oil).

Another method of measuring absorbent performance is by calculating the sorbency ratio. This is the ratio of liquid weight absorbed to the dry absorbent weight.

$$\text{Sorbency} = \frac{\text{wet weight - dry weight}}{\text{dry weight}}$$

The sorbency ratio and speed of absorption depend upon the ambient temperature, the polarity of the liquid, its surface tension and viscosity. For 3M™ Chemical Sorbents the sorbency ratio is 10–15 for most liquids.

Physical Data

Product No.	Size	Case Sorbency (Gallons)	Billing Unit	Quantity Per B.U.
Pads/Sheets				
C-PD914DD	9 in x 14.5 in	23.5	CASE	150 pads
P-110	11 in x 13 in	17	CASE	200 sheets
Multiformat				
C-FL550DD	5 in x 50 ft	31.5	CASE	3 cartons
Rolls				
C-RL15150DD	15.25 in x 150 ft	31	EACH	1 roll
C-RL38150DD	38 in x 150 ft	76	EACH	1 roll
T-190	19 in x 144 ft	42	EACH	1 roll
HP-500	38 in x 144 ft	73	EACH	1 roll
Minibooms				
P-200	3 in x 4 ft	12	CASE	12 booms
P-208	3 in x 8 ft	12	CASE	6 booms
P-212	3 in x 12 ft	12	CASE	4 booms
Pillows				
P-300	7 in x 15 in	8	CASE	16 pillows
Particulate				
P-500	12 pounds	14	BAG	1 bag
Spill Response Kits				
C-SKFL5	3 Chemrolls; one poly bag.	15	CASE	3 kits
C-SKFL31	2 Chemical Sorbent Folded Rolls, 30 pads, 3 poly bags, 1 20-gallon plastic drum w/lid and closure ring.	31	EACH	1 kit
SRP-CHEM	3 Chemical Sorbent mini-booms, 10 Chemical Sorbent pads, one poly bag.	10.5	CASE	3 packs

Typical Liquids Absorbed
Chemical sorbents are suitable for absorbing a very wide range of liquids. The following list has been compiled based upon 3M tests as an indication of absorbency with major chemical groups. This is by no means exhaustive, and 3M recommends that a sample of sorbents should be tested with any liquid not listed.

Limitations of Use

Do not use 3M™ Chemical Sorbents with the following concentrated chemicals as there is a risk of degradation: Oleum, Chlorosulphonic acid, Liquid bromine, Fuming nitric acid, Chromic acid, Sulphuric acid and Hydrogen peroxide. 3M recommends that a compatibility test be carried out prior to using the absorbent with the liquid concerned. For use in temperatures over 60°C it is essential that such a compatibility test is made prior to use.

Precautions

3M™ Chemical Sorbents are not in themselves hazardous products, however, they take on the characteristics of the liquids they absorb. Adequate precautions should be taken when handling or storing hazardous/inflammable materials and appropriate personal protective equipment should be worn. Users should be informed of the risks incurred in use, storage and disposal of used sorbents.

Disposal

Dispose of used sorbents only in accordance with local and national regulations.
Disposal companies should be consulted for their recommendations depending upon the chemical sorbed.

Waste Minimization

3M recommends that waste streams should wherever possible be minimized.
Sorbents by 3M promote minimization by only being a small part of the total waste.
In addition, where laws allow, 3M™ Chemical Sorbents can be disposed of by incineration yielding less than 0.02% ash (ASTM D-482). The high energy value of the sorbents (46,000 KJ / Kg) is also favorable for incineration and waste-to-fuel systems. Furthermore, sorbents by 3M may be wrung out and reused (90% recovery using mechanical wringing according to ASTM F726-81). The recovered liquid may itself then be reused or disposed of.

Flammability

3M™ Sorbents have been tested by an independent test house for flammability characteristics. Tests were carried out on long-term storage, heat build-up and ignition from three sources: spark, flame and cigarette using oil and diesel at 0%, 50% and 100% saturation levels. Tests were compared to testing on clay granules and sawdust. The results which are available in a full report can be summarized: 3M™ Sorbents take on the properties of the liquid absorbed and do not present a greatly increased flammability hazard over other common absorbents. No heat build-up occurs in long-term storage.

CHEMICAL	SORBENCY
Acids	
Acetic acid (glacial)	10
Hydrofluoric 48%	12
Phosphoric 86%	17
Sulphuric 50%	14
Nitric (concentrated)	12
Nitric (diluted)	11
Hydrochloric 15%	14
Hydrocarbons/Oils	
Fuel oil number 2	9
Oil SAE 20W-50	10
Mineral Oil	8
Peanut Oil	9
Ketones	
Acetone	8
Methy Ethyl Ketone	12
Alcohols	
Ethanol	8
Alkalis	
Sodium hydroxide 1N 40g/l	10
Sodium hydroxide 7N	6
Sodium hydroxide 10N	2
Ammonium hydroxide 35% NH3	15
Aromatic	
Toluene	10
Benzene	11
Ethylbenzene	12
Styrene	13
Chlorinated Solvents	
Carbon tetrachloride	18
Methylene chloride	13
1.1.1. Trichloroethane	11
Trichlortrifluoroethane	13
Trichloroethylene	13
Tetrachloroethylene	15
Glycols	
Dipropylene glycol	11
Propylene glycol	11
Diethylene glycol	2
Polyglycol E200	3
Polyglycol E300	3
Polyglycol E400	3
Others	
Hydrazine	10
Hydrogen Peroxide 6%	9
Ethyl Acetate	7
Antifreeze	10
Water	10
Cutting Fluid	10
Machine Coolant	10

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