



**STS FILTER** 

TO PREVENT HARM FROM HAZARDOUS SUBSTANCES, TO PEOPLE AND THE ENVIRONMENT

**SELECTION GUIDE** 



# **FILTER SELECTION GUIDE**

#### CAUTION

The efficacy of respiratory protection filters is dependent on the ambient atmosphere.

Do not use in the following environments or situations:

- ☑ Oxygen deficient atmosphere, i.e. < 19.5%. (STS definition. Individual countries may apply their own limits on oxygen deficiency)</p>
- ☑ Oxygen only or oxygen-enriched atmosphere.
- ☑ Type, properties, concentration and composition of the hazardous agent is unknown.
- ☑ Concentrations of contaminants are immediately dangerous to life or health (IDLH).
- ☑ Confined spaces or any closed chambers such as containers, due to poor ventilation,.
- Atmosphere with mixed chemical substances (except for multi-gas filter, e.g. ABEK1 filter)
- Filters that show signs of damage.
- Gases, vapours and particles which cannot be removed by filter
- ☑ Environment where there is a possibility of explosion.

When using a particle filter, no hazardous gases may be present in the ambient air, when using a gas filter no hazardous particles. In case of doubt a combined filter must be used.

If you are in doubt concerning any of the points mentioned above, or if you believe the composition of your atmosphere at work has changed, use respiratory device that operates independently of the ambient air (e.g. SCBA, airline devices).

The following extract of industrial gases and toxic substances will guide you in making the correct choice of respiratory device and filter. In any case, final choice and use of filtering devices remain the responsibility of the user.

Always read the instructions provided with every device before use.

#### HOW TO READ THIS GUIDE

In case there are two kinds of recommended filters:



indicates "Strongly Recommended"

indicates "Recommended"

In case there is only one kind of recommended filter:



only this is used.

Particle Filters which are intended to be used individually are marked with P3R or P2R. For those used in combination with a gas filter, they are marked with P3RC and P2RC.



		Recommended Filter						
Substance	CAS No.			Filter		Particle	Airline or	
		A	K		AX	Filter	SCBA	
Α						The	OODA	
1 Acetaldehyde	75-07-0		1	<u>г т</u>	0			
2 Acetamide	60-35-5				0	P3R		
3 Acetic acid	64-19-7	Ø		0		P2RC		
4 Acetic anhydride	108-24-7					FZRC		
5 Acetone	67-64-1	0			0			
	75-86-5	0		0	0			
6 Acetone cyanohydrine 7 Acetonitrile								
	75-05-8	O		0		ļ		
8 Acetylene	74-86-2						0	
9 Acetyl chloride	75-36-5			0		P2RC		
10 o-Acetylsalicylic acid	50-78-2					P2R		
11 Acrolein	107-02-8				0			
12 Acrylamide	79-06-1					P3R		
13 Acrylic acid	79-10-7	0		0		P2RC		
14 Acrylonitrile	107-13-1	O		0				
15 Aldrin	309-00-2					P3R		
16 Allyl alcohol	107-18-6	O		0				
17 Allylamine	107-11-9	O		0				
18 Allyl bromide	106-95-6	O		0				
19 Allyl chloride	107-05-1				0			
20 Allyl glycidyl ether	106-92-3	0		0				
21 Allyl isocyanate	1476-23-9	0		0		P2RC		
22 Allyl propyl disulfide	2179-59-1			Ō		P2RC		
23 Aluminium	7429-90-5					P2R		
24 Aluminium hydroxide	21645-51-2					P2R		
25 Aluminium oxide	1344-28-1					P2R		
26 Aluminium alkyl compounds	_	0				P2RC		
27 p-Aminoazobenzen	60-09-3					P3R		
28 o-Aminoazotoluene	97-56-3					P3R		
29 4-Aminodiphenyl	92-67-1					P3R		
30 3-Amino-9-ethylcarbazol	132-32-1					P2R		
31 2-Aminoethanol	141-43-5	0		0		P2RC		
32 2-Aminopyridine	504-29-0	0				P2RC P2R		
Amitrolo	504-29-0					F2R		
	61-82-5					P3R		
(3-Amino-1,2,4-triazole)	7004 44 7							
34 Ammonia	7664-41-7		0	0		000		
35 Ammonium chloride fume	12125-02-9					P2R		
36 Ammonium sulfamate	7773-06-0					P2R		
37 n-Amyl acetate	628-63-7	O						
(1-Pentyl acetate)		~	ļ					
38 sec-Amyl acetate	626-38-0	O		0				
(2-Pentyl acetate)								
39 Aniline	62-53-3	0		0				
40 Anisidine, o-isomer	90-04-0	0		0		P3RC		
41 Anisidine, p-isomer	104-94-9					P2R		
42 Anthracene	120-12-7					P2R		
43 Antimony and compounds, as Sb	7440-36-0					P3R		
44 Antimony penta chloride	7647-18-9			0		P3RC		
45 Antimony trioxide, as Sb	1309-64-4					P3R		
ANTU								
46 (α-Naphthylthiourea)	86-88-4					P2R		
47 p-Aramide, fibrous dust	26125-61-1					P2R		
48 Argon	7440-37-1						0	
	1-10-01-1		1			I	0	

#### ◎: Highly Recommended O: Recommended

# FILTER SELECTION GUIDE

			O:Highly Recommended O: Recommended Filter								
						ed Filte		Airline			
	Substance	CAS No.		Gas	Filter		Particle	or			
			Α	K	ABEK	AX	Filter	SCBA			
19	Arsenic and inorganic compounds	7440-38-2					P3R				
	(except arsine), as As										
	Arsenic acid and its salts, as As	7778-39-4					P3R				
	Arsenic pentoxide, as AS	1303-28-2					P3R				
	Arsenic trioxide, as AS	1327-53-3					P3R				
53	Arsenous acid and its salys, as As	13464-58-9					P3R				
54	Arsine	7784-42-1						0			
		1332-21-4									
		12001-28-4									
		12172-73-5									
55	Asbestos, all forms	7536-66-4					P3R				
	,	77536-67-5									
		77536-68-6									
		132207-32-0									
	Asphalt fume										
56	(Bitumen)	8052-42-4	Ô		0		P2RC				
57	Atrazine	1912-24-9					P2R				
	Auramine	492-80-8					P3R				
	Azinphos-methyl				+		1 51				
59	(Guthion®)	86-50-0					P2R				
	B				<u> </u>						
		7440.00.0		1			DOD				
	Barium and soluble compounds, as Ba						P2R				
	Barium chloride	10326-27-9					P3R				
	Benomyl	17804-35-2					P3R				
	Beechwood dust	-					P3R				
	Benzaldehyde	100-52-7	0		0						
	Benzene	71-43-2	Ô		0		P2RC				
	Benzidine	92-87-5					P3R				
	Benzo[a]pyrene	50-32-8					P3R				
68	Benzo[e]pyrene	192-97-2					P2R				
69	Benzoyl peroxide	94-36-0					P2R				
09	(Dibenzoyl peroxide)	94-30-0					FZR				
70	Benzylamine	100-46-9	Ô		0		P2RC				
71	Benzyl butyl phthalate	85-68-7	Ô		0						
72	Benzyl chloride	100-44-7			0						
	Berillium and compounds, as Be	7440-41-7						0			
	4,4'-Bis(dimethylamino)benzophenone	90-94-8					000				
1 <sup>4</sup>	(Micher's ketone)	90-94-0					P3R				
75	Binhonyl	00.50.4					DOD				
15	(Diphenyl)	92-52-4					P2R				
76	Bismuth telluride, Undoped	1304-82-1					P2R				
	Bismuth telluride, Se-doped, as $Bi_2Te_3$	1304-82-1			1 1		P2R				
<i>⊢</i> ′′	Borax				+		1 213				
78		1330-43-4					P2R				
70	(Sodium tetraborate)	10043-35-3			+ +		000				
	Boric acid						P2R				
	Boron oxide	1303-86-2			+ +		P2R				
	Boron tribromide	10294-33-4			+			0			
	Boron trifluoride	7637-07-2						0			
	Bromacil	314-40-9					P3R				
	2-Bromobutane	78-76-2	Ô		0						
	Bromine	7726-95-6			0						
	Bromine pentafluoride	7789-30-2						0			
87	Bromobenzene	108-86-1	Ô		0						

			Recommended Filter					
	Substance	CAS No.			Filter		Particle	Airline or
1	Cupotanoo		Α	K	ABEK	AX	Filter	SCBA
88	1-Bromo-2-chloroethane	107-04-0	<u> </u>				1 1101	
	Bromoethane							
89	(Ethyl bromide)	74-96-4				0		
90	Bromoethylene	593-60-2				0		
90	(Vinyl bromide)	595-00-2				0		
91	Bromoform	75-25-2	O		0		P2RC	
	(Tribromomethane)	10202					1 2110	
92	Bromomethane	74-83-9				0		
02	(Methyl bromide)	107-81-3	0		0			
	2-Bromopentane 1,3-Butadiene	106-99-0	0			0		
	n Putanal							
95	(Butyraldehyde)	123-72-8	O		0			
96	n-Butane	106-97-8				0		
	1,4-Butane sultone	1633-83-6	0		0		P2RC	
	2,4-Butane sultone	1121-03-5	0		0		P2RC	
99	1-Butanol	71-36-3	0		0			
- 33	(n-Butyl alcohol)	71-30-3	•					
100	2-Butanol	78-92-2	O		0			
	(sec-Butyl alcohol)	10 02 2	•					
101	2-Butanone	78-93-3	O		0			
	(Methyl ethyl ketone)		-		-			
102	2-Butanone peroxide (Methyl ethyl ketone peroxide)	1338-23-4					P2R	
	2 Butenal							
103	(Crotonaldehyde)	4170-30-3	O		0			
	2-Butoxyethanol							
104		111-76-2	O		0			
105	2-Butoxyethyl acetate	140.07.0	0					
		112-07-2	Ô		0			
106	n-Butyl acetate	123-86-4	Ø		0			
		123-00-4	0		0			
107	sec-Butyl acetate	105-46-4	O		0			
	(2-Bulyi acelale)							
	tert-Butyl acetate	540-88-5	0		0			
	n-Butyl acrylate n-Butylamine	141-32-2 109-73-9	0		00			
	sec-Butylamine	13952-84-6	0			0		
	tert-Butyl chromate, as $CrO_3$	1189-85-1					P2R	
							FZR	
113	Butyl formate n-Butyl glycidyl ether	592-84-7	Ô		0			
114	(BGE)	2426-08-6	O		0		P2RC	
115	tert-Butyl glycidyl ether	7665-72-7	0	+	0			
	tert-Butyl hydroperoxide	75-91-2			0			
	n-Butyl lactate	138-22-7	0	1	Ŏ		P2RC	
118	Dutul moreonton		-				_	
	(Butanethiol)	109-79-5			0			
	n-Butyl methacrylate	97-88-1	O		0		P2RC	
	tert-Butyl peroxyacetate	107-71-1			0		P2RC	
	o-sec-Butyl phenol	89-72-5	O		0		P2RC	
	p-tert-Butyl phenol	98-54-4					P2R	
	Butyl stearate	123-95-5	<u> </u>		0		P2RC	
124	p-tert-Butyltoluene	98-51-1	O		0			

#### ©:Highly Recommended O: Recommended

	O: Highly Recommended O: Recom									
		Recommended Filter								
Substance	CAS No.		Gas	Filter		Particle	or			
		А	K	ABEK	AX	Filter	SCBA			
С										
125 Cadmium and compounds, as Cd	7440-43-9			Τ		P3R				
126 Cadmium chloride, as Cd	10108-64-2					P3R				
127 Cadmium oxide, as Cd	1306-19-0					P3R				
128 Cadmium sulfate, as Cd	1306-23-6					P3R				
129 Calcium arsenate, as As	7778-44-1					P3R				
130 Calcium bisulfide solution	13780-03-5			0		P2RC				
131 Calcium carbonate	1317-65-3					P2R				
132 Calcium chromate, as Cr	13765-19-0					P3R				
133 Calcium cyanamide	156-62-7					P2R				
134 Calcium hydroxide	1305-62-0					P2R				
135 Calcium oxide	1305-78-8					P2R				
136 Camphor, synthetic	76-22-2					P2R				
137 Caprolactam	105-60-2					P2R				
138 Captafol	2425-06-1					P3R				
139 Captan	133-06-2					P3R				
140 Carbaryl (Sevin®)	63-25-2					P2R				
141 Carbofuran	1563-66-2					P3R				
142 Carbon black	1333-86-4					P3R				
143 Carbon dioxide	124-38-9						0			
144 Carbon disulfide	75-15-0			0						
145 Carbon monoxide	630-08-0						0			
146 Carbon tetrabromide	558-13-4					P2R				
147 Carbon tetrachloride	56-23-5	0		0						
148 Carbonyl fluoride	353-50-4			Ť			0			
149 Cellulose	9004-34-6					P2R				
150 Chlordane	57-74-9					P3R				
151 Chlordecone		0								
<sup>151</sup> (Kepone®)	143-50-0	O		0		P3RC				
152 Chlorine	7782-50-5			0						
153 Chlorine dioxide	10049-04-4			Ŏ						
154 Chlorine trifluoride	7790-91-2						0			
155 Chloroacotaldohyda	107-20-0	0		0						
2-Chloroacetophenone										
<sup>156</sup> (Phenacyl chloride) (CN)	532-27-4	O		0		P2RC				
157 Chloroacetyl chloride	79-04-9	0		0						
158 n-Chloroaniline	106-47-8					P3R				
159 (Manachlancheanna)		6								
	108-90-7	O		0						
o-Chlorobenzylidene malononitrile	2698-41-1					P3R				
	2030-41-1					FJR				
161 Chlorobromomethane	74-97-5	Ø		0						
(Bromochioromethane)										
162 Chlorodiphenyl, 42% chlorine	53469-21-9	O		0						
163 Chlorodiphenyl, 54% chlorine	11097-69-1	0		0		P3RC				
164 Chloroform	67-66-3				0					
(Thchloromethane)					0					
165 N-Chloroformyl-morpholine	15159-40-7	O		0		P2RC				
166 bis(Chlorometyl)ether	542-88-1			0						
167 Chloromethyl methyl ether (CMME ; Methyl chloromethyl ether)	107-30-2				0					
168 3-Chloro-2-methyl-1-propene	563-47-3	0		0						
	1000 11 0									

### ◎: Highly Recommended O: Recommended

	1 1	O: Highly Recommended O: Recom     Recommended Filter							
		Recommended Filter							
Substance	CAS No.		Gas	Filter		Particle	or		
		Α	ĸ	ABEK	AX	Filter	SCBA		
169 1-Chloronaphthaline	90-13-1	0		0					
170 1-Chloro-1-nitropropane	600-25-9			0		P2RC			
1711-Chloropentane	543-59-9	0		0					
172 Chloropicrin	70.00.0								
[ '' - ]/Trichloropitoromothopo)	76-06-2	Ô		0					
$\beta$ -Chloroprene 173 (2 Chlorop 1.2 hutediane)	100.00.0				0				
<sup>173</sup> (2-Chloro-1.3-butadiene)	126-99-8				0				
174 1-Chrolopropane	540-54-5				0				
2-Chrolopropane	1								
175 (Isopropyl chloride)	75-29-6				0				
176 o-Chlorostyrene	2039-87-4	0		0					
177 o-Chlorotoluene	95-49-8			Ŏ					
178 4-Chloro-o-toluidine	95-69-2	0		Ŏ		P3RC			
179 5-Chloro-o-toluidine	95-79-4	0		ĬŎ		P2RC			
180 Chlorpyrifos	2921-88-2	0		Ŏ		P3RC			
181 Chromic acid and chromates, as Cr	7738-94-5			+		P3R			
182 Chromite, as Cr	_					P2R			
$(\Pi)$ increases compounds									
as Cr	7440-47-3					P2R			
Chromium (JII) inorganic compounds									
<sup>184</sup> water-soluble, as Cr	-					P3R			
Chromium (VII) inorganic compounds									
Chromium (VI) inorganic compounds, insoluble, as Cr	-					P3R			
186 Chromium carbonyl	13007-92-6						0		
187 Chromium (Ⅲ) oxide	1308-38-9					P2R	0		
188 Chromium oxychloride	14977-61-8			0		F2R			
189 Citric acid	77-92-9					P2R			
	-								
190 Coal dust, anthracite						P2R P2R			
191 Coal dust, bituminous or lignite	-					P2R			
	65996-93-2	O				P3RC			
soluble aerosol	7440 40 4			-					
193 Cobalt and compounds	7440-48-4					P3R			
194 Cobalt (II) acetate tetrahydrate	6147-53-1					P2R			
195 Coconut oil	-					P2R			
196 Copper, dusts and mists, as Cu	7440-50-8					P2R			
197 Copper, fume, as Cu	7440-50-8					P2R			
198 Copper (II) chloride	7447-39-4					P2R			
199 Copper (II) sulfate	7758-98-7					P2R			
200 Cotton dust, raw, untreated	-   (0) (0) == (1)	-				P3R			
201 Cresol, all isomers	1319-77-3	0		0		P2RC			
202 Cumene	98-82-8	O		0					
203 Cumene hydroperoxide	80-15-9			0					
204 Cyanamide	420-04-2			0		P2RC			
205 Cyanides, as CN	-			0		P3RC			
206 Cyanogen	460-19-5						0		
207 Cyanogen bromide	506-68-3			0		P3RC			
208 Cyanogen chloride	506-77-4						0		
209 Cyanuric chloride	108-77-0			0		P2RC			
210 Cyclohexane	110-82-7	0		Ō		P2RC			
211 Cyclohexanol	108-93-0	Õ		Ŏ		P2RC			
212 Cyclohexanone	108-94-1	0		Ŏ					
213 Cyclohexene	110-83-8	0		Ŏ					
214 Cyclohexylamine	108-91-8	0		ĬŎ					
	100 01 0	U	I						

#### ©: Highly Recommended O: Recommended

Recommended Filter         Arrited State         Arrited State         Arrited State         Arrited State         State<				©∶High	nly Recom	mended	O: Recor	nmended
$ \begin{array}{ c c c c c c } \hline  c c c c c c c c c c c c c c c c c c $				Reco	mmende	ed Filte	er	Airline
$ \begin{array}{ c c c c c c } \hline  c c c c c c c c c c c c c c c c c c $	Substance	CAS No.		Gas	Filter		Particle	or
2116 [1.3-Cyclopentatione         542-92-7         O         O           217 Cyclopentanone         120-92-3         O         O           217 Cyclopentanone         120-92-3         O         P           218 [2.4-D         120-92-3         P         P           12 (2.4-Dichlorophenoxyacetic acid)         94-75-7         P2R         P2R           220 Decaborane         17702-41-9         P         O         O           221 I-Decanol         112-30-1         O         P2RC         O           222 I-Decanol         112-30-1         O         P2RC         O           223 Decatone alcohol         123-42-2         O         O         P2RC           226 Diacetyl peroxide         110-22-5         O         P2RC         P2R           227 3.3-Diaminobenzidine         91-95-2         P2R         P2R         P2R           228 J.4-Diaminobenzidine         91-95-2         P2R			Α			AX	- 1	
216 1.3-Cyclopentalene       542-92-7       O       O         D       D       O       D         217 Cyclopentanone       120-92-3       O       O         218 2.4-D       2.4-D       94-75-7       P3R       P3R         210 Docaborane       127.1702-41-9       P3R       O       O         220 Decaborane       124-18-5       O       O       P2RC         221 n-Decane       124-18-5       O       O       P2RC         223 Demeton       8065-48-3       O       P3RC       O         224 Diacetone alcohol       112-30-1       O       P2RC       O         225 Diacetyl peroxide       110-22-5       O       P2RC       P2RC         226 4.4-Diaminoanisole       615-05-4       P3R       P3R       P2R         227 3.3-Diaminobenzidine       7141-49-5       P2R       P3R       P3R         230 2.4-Diaminoanisole       615-05-4       P3R       P3R       P3R         231 3-Diacetyl peroxide       714-14-9-5       P3R       P3R       P3R         232 4.4-Diaminoanisole       615-05-4       P3R       P3R       O       P3R         231 Diacetyl peroxide       17411-49-5       P3R       P3	215 (RDX)	121-82-4					P2R	
217 Cyclopentanone         120-92-3         0         0         1           B         2         4         0         1         P2R           218         (2,4-D)         94-75-7         1         P3R         P3R           DDT         50-29-3         1         P3R         0           DDT         50-29-3         0         P3R         0           220 becaborane         17702-41-9         0         P         0           221 h-Decanol         112-30-1         0         0         P3RC           30 periton         8065-48-3         0         0         P3RC           24         Liextone alcohol         123-42-2         0         P         P2R           24         Diactone alcohol         113-22-5         O         P2R         P3R           23         Joinminobenzidine         91-95-2         P2R         P3R         P3R           24.4-Diaminobenzidine         91-95-2         P2R         P3R         P3R           24.4-Diaminobenzidine         91-95-2         P3R         P3R         P3R           24.4-Diaminobenzidine         91-95-2         P3R         P3R         P3R           24.1-Diaminobenzidine		542-92-7			1 1	0		
D         94-75-7         P2R           218 $2.4$ -Dichlorophenoxyacetic acid)         94-75-7         P2R           219         DDT         50-29-3         P3R           220         Decaborane         17702-41-9         O           221         n-Decane         124-18-5         O         O           222         Decaborane         124-18-5         O         O           221         Decanol         112-30-1         O         P3RC         O           223         Demeton         8065-48-3         O         O         P3RC           224         Diacetone alcohol         123-42-2         O         O         P2RC           225         Diacetyl peroxide         110-22-5         O         P2R         P2R           23.3 -Diaminobenzidine         91-95-2         P3R         P3R         P2R           233.3 -Diaminobenzidine         91-95-2         P3R         P3R         P3R           230         2.4-Diaminobanzidine         9439-28-8         P2R         P3R           231         Diatomaceous earth, ucalcinated         9439-28-8         P2R         O           232         Diatomaceous earth, ucalcinated         133-48-3         <			0			0		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		120 02 0						
Let-Dublic Horologie Hovace Lador         50-29-3         P3R           219         Dichorodiphenyltrichloro-ethane)         50-29-3         P3R           220         Decaborane         1270-241-9         O         O           221         Decaborane         124-18-5         ©         O         P2RC           221         Decaborane         124-18-5         ©         O         P3RC           222         1-Decanol         112-30-1         ©         O         P3RC           224         Idectore alcohol         123-42-2         ©         O         P3RC           225         Diacetone alcohol         123-42-2         ©         O         P2RC           226         2.4-Diaminoanisole         615-05-4         P3R         P3R           23.3-Diaminobenzidine         7141-49-5         P2R         P3R           2.4-Diamino-3.3-         838-88-0         P3R         P3R           2.4-Diaminobenzidine         9439-28-8         P2R         P3R           231         Diatomaceous earth, calcinated         61790-53-2         P3R           233         Diazinon®         333-41-5         ©         O         P3R           234         Diazomethane         <					1 1		1 1	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		94-75-7					P2R	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	219 (Dichlorodiphenyltrichloro-ethane)						P3R	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	220 Decaborane							0
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	221 n-Decane	124-18-5	O		0			
Clystol.08         Construction           224         Diacetone alcohol         123-42-2         ©         O         P2R           225         Diacetyl peroxide         110-22-5         O         P2R           226         Z4-Diaminoanisole         615-05-4         P3R         P2R           227         33-Diaminobenzidine         91-95-2         P2R         P2R           228         32-Diaminobenzidine         7411-49-5         P2R         P3R           229         4.4-Diaminotoluene         95-80-7         P3R         P3R           30         Diatomaceous earth, calcinated         99439-28-8         P2R         P3R           231         Diatomaceous earth, uncalcinated         91439-28-8         P3R         O           233         Diazion®         334-15         ©         O         P3R           232         Diatomaceous earth, uncalcinated         9439-28-8         O         P3R         O           234         Diazomethane         334-88-3         O         O         P3R         O           235         Diazonelylether         103-50-4         ©         O         P2R         O           236         Diborane         19287-45-7         O </td <td>222 1-Decanol</td> <td>112-30-1</td> <td>0</td> <td></td> <td>0</td> <td></td> <td>P2RC</td> <td></td>	222 1-Decanol	112-30-1	0		0		P2RC	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	223 Demeton (Systox®)	8065-48-3	Ø		0		P3RC	
Instant       Instant       Instant       Instant       Instant         222       3.3-Diaminobenzidine       91-95-2       P2R         223       3.3-Diaminobenzidine       7411-49-5       P2R         228       3.3-Diaminobenzidine       7411-49-5       P3R         228       3.3-Diaminobenzidine       7411-49-5       P3R         228       3.3-Diaminobenzidine       94.39-28-8       P3R         232       Diatomaceous earth, calcinated       99439-28-8       P2R         232       Diatomaceous earth, uncalcinated       61790-53-2       P3R         233       Diazomethane       334-88-3       O       O         236       Diazomethane       334-88-3       O       O         236       Dibenzylamine       103-49-1       O       O       O         236       Dibenzylamine       103-49-1       O       O       P2RC         237       Dibornane       19287-45-7       O       O       P3R         239       1.2-Dibromo-3-chloropropane       96-12-8       O       P3RC       O         239       1.2-Dibromothane       106-93-4       O       P3RC       O       P3R         231       Diachlorob		123-42-2	Ø		0			
Instant       Instant       Instant       Instant       Instant         222       3.3-Diaminobenzidine       91-95-2       P2R         223       3.3-Diaminobenzidine       7411-49-5       P2R         228       3.3-Diaminobenzidine       7411-49-5       P3R         228       3.3-Diaminobenzidine       7411-49-5       P3R         228       3.3-Diaminobenzidine       94.39-28-8       P3R         232       Diatomaceous earth, calcinated       99439-28-8       P2R         232       Diatomaceous earth, uncalcinated       61790-53-2       P3R         233       Diazomethane       334-88-3       O       O         236       Diazomethane       334-88-3       O       O         236       Dibenzylamine       103-49-1       O       O       O         236       Dibenzylamine       103-49-1       O       O       P2RC         237       Dibornane       19287-45-7       O       O       P3R         239       1.2-Dibromo-3-chloropropane       96-12-8       O       P3RC       O         239       1.2-Dibromothane       106-93-4       O       P3RC       O       P3R         231       Diachlorob		110 22 5			+ $ +$		DODC	
227       3.3°-Diaminobenzidine       91-95-2       P2R         228       3.3°-Diamino-3.3°-       838-88-0       P2R         230       2,4-Diamino-3.3°-       838-88-0       P3R         230       2,4-Diamino-3.3°-       838-88-0       P3R         230       2,4-Diamino-3.3°-       838-88-0       P3R         231       Diatomaceous earth, calcinated       99439-28-8       P2R         232       Diatomaceous earth, calcinated       61790-53-2       P3R         234       Diazomethane       333-41-5       O       P3R         235       Dibenzylamine       103-49-1       O       O       P2R         236       Dibenzylether       103-50-4       O       O       P2RC         237       Diborone       19287-45-7       O       O       P3RC         238       [DBCP)       96-12-8       O       P3RC       O         239       1.2-Dibromoethane       106-93-4       O       P3RC       O         239       1.2-Dibromoethane       106-93-4       O       P2RC       O       P2R         241       Dibutyl phosphate       107-66-4       O       O       P2R         242       Dibut								
228         3,3*-Diaminobenzidine         7411-49-5         P2R           229         4,4*-Diaminoroluene         95-80-7         P3R           24-Diaminotoluene         95-80-7         P3R           231         Diatomaceous earth, calcinated         99439-28-8         P2R           232         Diatomaceous earth, calcinated         99439-28-8         P3R           231         Diatomaceous earth, uncalcinated         61790-53-2         P3R           234         Diatomaceous earth, uncalcinated         103-49-1         O         O           235         Dibenzylether         103-49-1         O         O         P2R           237         Diborane         19287-45-7         O         P3RC         O           238         Diacomethane         106-93-4         O         O         P3RC           239         1,2-Dibromo-3-chloropropane         96-12-8         O         P3RC         O           240         2-N-Dibutylaminoethanol         102-81-8         O         O         P2RC           241         Dibutyl ether         142-96-1         O         O         P2RC           242         Dibutyl phthalate         84-74-2         O         O         P2RC <tr< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr<>								
229       4,4'-Diamino-3,3'-       838-88-0       P3R         230       2,4-Diaminotoluene (Toluene-2,4-diamine)       95-80-7       P3R         231       Diatomaceous earth, calcinated       99439-28-8       P2R         233       Diaziona       937       P3R         231       Diatomaceous earth, uncalcinated       61790-53-2       P3R         231       Diazione       333-41-5       O       P3R         232       Diazione       334-48-3       O       P3R         236       Dibenzylamine       103-49-1       O       O       P2RC         236       Diborane       19287-45-7       O       P3RC       O         237       Diborane       19287-45-7       O       P3RC       O         238       1,2-Dibromo-3-chloropropane (DBCP)       96-12-8       O       P3RC       O         231       1,2-Dibromoethane       106-93-4       O       P3RC       O       P3RC         240       2-N-Dibutylaminoethanol       102-81-8       O       P3RC       O       P3R         243       Dibutyl phosphate       107-66-4       O       O       O       P3R         244       Dichlorobenzene       95-50-1<								
230       2,4-Diaminotoluene (Toluene-2,4-diamine)       95-80-7       P3R         231       Diatomaceous earth, calcinated       99439-28-8       P2R         232       Diatomaceous earth, uncalcinated       61790-53-2       P3R         233       Diatomaceous earth, uncalcinated       61790-53-2       P3R         234       Diazomethane       334-15       O       P3R         235       Dibenzylether       103-49-1       O       O         236       Dibenzylether       103-50-4       O       P2RC         237       Diborane       19287-45-7       O       P3RC         238       Dibenzylether       106-93-4       O       P3RC         239       1.2-Dibromo-3-chloropropane       96-12-8       O       P3RC         240       2-N-Dibutylaminoethanol       102-81-8       O       P3RC         241       Dibutyl ether       142-96-1       O       O       P2RC         243       Dibutyl phosphate       107-66-4       O       O       P3RC         243       Dibutyl phosphate       106-46-7       O       O       P3RC         244       Dichlorobenzene       54-50-1       O       P3RC       P3RC <t< td=""><td></td><td></td><td></td><td></td><td>   </td><td></td><td></td><td></td></t<>								
231 Diatomaceous earth, calcinated       99439-28-8       P2R         232 Diatomaceous earth, uncalcinated       61790-53-2       P3R         233 Diazinon®       333-41-5       ©       O         234 Diazomethane       334-48-3       O       P3RC         235 Dibenzylamine       103-49-1       ©       O       P2RC         236 Dibenzylamine       103-49-1       ©       O       P2RC         236 Dibenzylamine       103-50-4       ©       O       P2RC         237 Diborane       19287-45-7       O       O       P3RC         239 1,2-Dibromo-3-chloropropane       96-12-8       ©       O       P3RC         239 1,2-Dibromoethane       106-93-4       ©       O       P3RC         240 2-N-Dibutylaminoethanol       102-81-8       ©       O       P2RC         241 Dibutyl phosphate       107-66-4       ©       O       P2RC         243 Dibutyl phthalate       84-74-2       ©       O       P2RC         244 Dichlorobenzene       95-50-1       ©       O       P3RC         244 m-Dichlorobenzene       91-94-1       P3R       P3RC         244 m-Dichlorobenzene       106-46-7       O       P3RC	229 4,4'-Diamino-3,3'-	838-88-0					P3R	
231 Diatomaceous earth, calcinated       99439-28-8       P2R         232 Diatomaceous earth, uncalcinated       61790-53-2       P3R         233 Diazinon®       333-41-5       ©       O         234 Diazomethane       334-48-3       O       P3RC         235 Dibenzylamine       103-49-1       ©       O       P2RC         236 Dibenzylamine       103-49-1       ©       O       P2RC         236 Dibenzylamine       103-50-4       ©       O       P2RC         237 Diborane       19287-45-7       O       O       P3RC         239 1,2-Dibromo-3-chloropropane       96-12-8       ©       O       P3RC         239 1,2-Dibromoethane       106-93-4       ©       O       P3RC         240 2-N-Dibutylaminoethanol       102-81-8       ©       O       P2RC         241 Dibutyl phosphate       107-66-4       ©       O       P2RC         243 Dibutyl phthalate       84-74-2       ©       O       P2RC         244 Dichlorobenzene       95-50-1       ©       O       P3RC         244 m-Dichlorobenzene       91-94-1       P3R       P3RC         244 m-Dichlorobenzene       106-46-7       O       P3RC	230 (Toluene-2,4-diamine)	95-80-7					P3R	
232         Diatomaceous earth, uncalcinated         61790-53-2         P3R           233         Diazinon®         333-41-5         ©         O         P3RC           234         Diazomethane         334-88-3         O         O         O           235         Dibenzylether         103-49-1         ©         O         P2RC           236         Dibenzylether         103-50-4         ©         O         P2RC           237         Diborane         19287-45-7          O         P3RC           238         1,2-Dibromo-3-chloropropane         96-12-8         ©         O         P3RC           239         1,2-Dibromoethane         106-93.4         ©         O         P3RC           240         2-N-Dibutylaminoethanol         102-81-8         ©         O         P3RC           241         Dibutyl phosphate         107-66-4         ©         O         Image: Comment and	231 Diatomaceous earth, calcinated	99439-28-8					P2R	
233         Diazinon®         333-41-5         ©         O         P3RC           234         Diazomethane         334-88-3         O         O         O           235         Dibenzylamine         103-49-1         ©         O         P2RC           236         Dibenzylether         103-50-4         ©         O         P2RC           237         Diborane         19287-45-7         O         P3RC           238         I,2-Dibromo-3-chloropropane         96-12-8         ©         P3RC           239         1,2-Dibromo-thane         106-93-4         ©         O         P3RC           240         2-N-Dibutylaminoethanol         102-81-8         ©         O         P3RC           241         Dibutyl ether         142-96-1         ©         O         P2RC           241         Dibutyl phthalate         84-74-2         ©         O         C           243         Dibutyl phthalate         84-74-2         ©         O         C           244         Dichlorobenzene         95-50-1         ©         O         C           244         Dichlorobenzene         106-46-7         ©         O         P3RC           243<		61790-53-2					P3R	
234       Diazomethane $334-88-3$ Image: constraint of the system of th			0		0			
235         Dibenzylamine         103-49-1         ©         O         P2RC           236         Diborane         19287-45-7         O         P2RC           237         Diborane         19287-45-7         O         P3RC           238         1,2-Dibromo-3-chloropropane (DBCP)         96-12-8         ©         O         P3RC           239         1,2-Dibromoethane         106-93-4         ©         O         P3RC           240         2-N-Dibutylaminoethanol         102-81-8         ©         O         P3RC           241         Dibutyl ether         142-96-1         ©         O         P2RC           242         Dibutyl physphate         107-66-4         ©         O         P2RC           244         Dichloroacetylene         7572-29-4         O         O         P3RC           244         Dichlorobenzene         95-50-1         ©         O         P3RC           244         m-Dichlorobenzene         541-73-1         ©         O         P3RC           244         m-Dichlorobenzene         106-46-7         ©         O         P3RC           247         p-Dichlorobenzidine         91-94-1         P3R         P3RC <tr< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0</td></tr<>								0
236         Dibenzylether         103-50-4         ©         O         P2RC           237         Diborane         19287-45-7          O         O           238         1,2-Dibromo-3-chloropropane (DBCP)         96-12-8         ©         O         P3RC           239         1,2-Dibromoethane         106-93-4         ©         O         P3RC           240         2-N-Dibutylaminoethanol         102-81-8         ©         O         P2RC           241         Dibutyl ether         142-96-1         ©         O         P2RC           242         Dibutyl phosphate         107-66-4         ©         O         P2RC           244         Dichloroacetylene         7572-29-4         O          P2RC           244         Dichlorobenzene         95-50-1         ©         O          P2RC           245         o-Dichlorobenzene         541-73-1         ©         O          P3RC           244         Bichorobenzene         106-46-7         ©         O         P3RC           244         J.4-Dichlorobenzidine         91-94-1         P3R         P3R           249         J.4-Dichloroditisopropyl ether         108-			0					
237         Diborane         19287-45-7         Image: Constraint of the system         O           238         1,2-Dibromo-3-chloropropane (DBCP)         96-12-8         Image: Constraint of the system         O         P3RC           239         1,2-Dibromo-thane         106-93-4         Image: Constraint of the system         O         P3RC           240         2-N-Dibutylaminoethanol         102-81-8         Image: Constraint of the system         O         P2RC           241         Dibutyl ether         142-96-1         Image: Constraint of the system         O         P2RC           242         Dibutyl phosphate         107-66-4         Image: Constraint of the system         O         Image: Constraint of the system           244         Dichloroacetylene         7572-29-4         Image: Constraint of the system         O         Image: Constraint of the system           244         Dichloroacetylene         7572-29-4         Image: Constraint of the system         O         Image: Constraint of the system           244         Dichlorobenzene         541-73-1         Image: Constraint of the system         O         Image: Constraint of the system           247         p-Dichlorobenzene         106-46-7         Image: Constraint of the system         O         P3RC           244							P2RC	
1,2-Dibromo-3-chloropropane (DBCP)       96-12-8       Image: Constraint of the system of the	227 Diboropo				$+ \checkmark$		12110	0
(DBCP)         Image: Constraint of the second	1 2-Dibromo-3-chloropropane				+ +			0
240       2-N-Dibutylaminoethanol       102-81-8       Image: Constraint of the system of the syst								
241       Dibutyl ether       142-96-1       ©       O       Image: constraint of the system o								
242       Dibutyl phosphate       107-66-4       ©       O       Image: constraint of the system of the syst							P2RC	
243       Dibutyl phthalate       84-74-2       Image: Constraint of the system of t								
244       Dichloroacetylene       7572-29-4       O       O         245       o-Dichlorobenzene       95-50-1       O       O       O         246       m-Dichlorobenzene       541-73-1       O       O       P3RC         247       p-Dichlorobenzene       106-46-7       O       P3RC         248       3,3'-Dichlorobenzidine       91-94-1       P3R       P3RC         249       1,4-Dichloro-2-butene       764-41-0       O       O       P3RC         250       2,2'-Dichlorodiethyl ether       111-44-4       O       O       P3RC         251       Dichlorodimethyl ether       108-60-1       O       O       P2RC         252       Dichlorodimethyl ether       4885-02-3       O       P2RC       P2RC         253       1,3-Dichloro-5,5-dimethyl hydantoin       118-52-5       P2R       P2R         254       1,1-Dichloroethane       75-34-3       O       O       P2RC         255       1,2-Dichloroethane       107-06-2       O       O       Image: P2R         256       1,1-Dichloroethene       75-35-4       O       Image: P2R       Image: P2R         258       trans-1,2-Dichloroethene       156-60-5	242 Dibutyl phosphate	107-66-4	O					
245       o-Dichlorobenzene       95-50-1       Image: Constraint of the second seco	243 Dibutyl phthalate	84-74-2	O		0			
245       o-Dichlorobenzene       95-50-1       Image: Constraint of the state of the stat	244 Dichloroacetylene	7572-29-4				0		
246       m-Dichlorobenzene       541-73-1       Image: Constraint of the system of	245 o-Dichlorobenzene	95-50-1	0		0			
247       p-Dichlorobenzene       106-46-7       O       P3RC         248       3,3'-Dichlorobenzidine       91-94-1       P3R         249       1,4-Dichloro-2-butene       764-41-0       O       P3RC         250       2,2'-Dichlorodiethyl ether       111-44-4       O       O       P3RC         251       Dichlorodiisopropyl ether       108-60-1       O       O       P2RC         252       Dichlorodimethyl ether       4885-02-3       O       P2RC         253       1,3-Dichloro-5,5-dimethyl hydantoin       118-52-5       P2R       P2R         254       1,1-Dichloroethane       75-34-3       O       P2R         255       1,2-Dichloroethane       107-06-2       O       O       Image: Construction of the construction of				1	T Õ			
248       3,3'-Dichlorobenzidine       91-94-1       P3R         249       1,4-Dichloro-2-butene       764-41-0       O       P3RC         250       2,2'-Dichlorodiethyl ether       111-44-4       O       O       P3RC         251       Dichlorodiisopropyl ether       108-60-1       O       O       P2RC         252       Dichlorodimethyl ether       4885-02-3       O       P2RC         253       1,3-Dichloro-5,5-dimethyl hydantoin       118-52-5       P2R         254       1,1-Dichloroethane       75-34-3       O       P2R         255       1,2-Dichloroethane       107-06-2       O       O       Image: Construction of the state of t							P3RC	
249       1,4-Dichloro-2-butene       764-41-0       Image: Constraint of the system				<u> </u>	+			
250       2,2'-Dichlorodiethyl ether       111-44-4       Image: Constraint of the system of the s			$\bigcirc$					
251       Dichlorodiisopropyl ether       108-60-1       Image: Constraint of the system of the sy								
252       Dichlorodimethyl ether       4885-02-3       Image: Constraint of the system of the syst								
253       1,3-Dichloro-5,5-dimethyl hydantoin       118-52-5       O       P2R         254       1,1-Dichloroethane       75-34-3       O       O         255       1,2-Dichloroethane       107-06-2       O       O       O         256       1,1-Dichloroethene       75-35-4       O       O       O         257       cis-1,2-Dichloroethene       156-59-2       O       O       O         258       trans-1,2-Dichloroethene       156-60-5       O       O       O					$+ \times$		0000	
254       1,1-Dichloroethane       75-34-3       O       Image: Constraint of the state of the			U		$+ \cup$			
255       1,2-Dichloroethane       107-06-2       Image: Constraint of the const							P2R	
256       1,1-Dichloroethene       75-35-4       O       Image: Constraint of the state of the						0	ļ	
257         cis-1,2-Dichloroethene         156-59-2         O         O           258         trans-1,2-Dichloroethene         156-60-5         O         O         O			0					
258 trans-1,2-Dichloroethene 156-60-5 O O								
258 trans-1,2-Dichloroethene 156-60-5 O O	257 cis-1,2-Dichloroethene	156-59-2				0		

Bubstance         Recommeded Filter         Arrice filter			O: Highly Recommended O: Recommended								
A         K         ABEK         AX         Filtor         SCBA           260         1.2-Dichlorenthowsthane         41683-62-9         Image: Constraint of the second secon		Recommended Filter									
	Substance	CAS No.	Gas Filter Particle								
2801 1.2-Dichloromethoxyethane         41683-62-9         ©         O         P2RC           281 1.1-Dichloro-1-nitroethane         594-72-9         ©         O         P2RC           281 1.2-Dichloropropane         778-87-5         ©         O         P2RC           283 1.3-Dichloropropane         562-75-6         ©         O         P2RC           284 1.3-Dichloropropene         542-75-6         ©         O         P2RC           284 1.3-Dichloropropene         5573-8         ©         O         P2RC           286 (DDVP)         62-73-7         ©         O         P3RC           272 2.4-Dichlorotoluene         95-73-8         ©         O         P3RC           286 (DDVP)         62-73-7         ©         O         P3RC           270 Dicyclohexyl methane-4.4'-         5124-30-1         ©         O         P3RC           270 Dicyclohexyl perioxide         175-66-18         ©         O         P2RC           271 Dicyclohexyl perioxide         176-66-18         ©         O         P2RC           272 Dicyclopentadiene         77.73-6         ©         O         P2RC           272 Dicyclopentadiene         172-56-5         P2R         P2RC         P2RC			Δ			ΔΧ	-	SCBA			
2811 1-Dichloro-1-nitroeithane       594-72-9       ©       O       P2RC         281 12-Dichloropropane       78-87-5       ©       O       P         281 13-Dichloropropane       542-75-6       ©       O       P         284 1,3-Dichloropropane       542-75-6       ©       O       P         285 2,2-Dichloropropinic acid       75-99-0       ©       O       P2RC         286 Dichlorotertafluoroethane       76-14-2       O       P         287 2,4-Dichlorotol.1.2,2-       0       O       P3RC         287 2,4-Dichlorotol.1.2,2-       0       O       P3RC         288 Dicklorovs       62-73-7       ©       O       P3RC         290 Dicyclohexyl perxide       1758-61-8       ©       O       P3RC         270 Dicyclohexyl perxide       1758-61-8       ©       O       P2RC         271 Dicyclohexyl perxide       1758-61-8       ©       O       P2RC         272 Dicyclohexyl perxide       60-57-1       P2R       P2R       P2R         272 Dicyclopentadiene       77-73-6       ©       O       P3R       P2R         275 Diesel fuel       68347-30-2       P2R       P2R       P2R       P2R       P2R	260 1 2-Dichloromethoxyethane	41683-62-9						002/1			
222 12-Dichloropropane         78-87-5         ©         O         Image: Constraint of the second secon											
283         1.3-Dichloro-2-propanol         96-23-1         ©         O         P           264         1.3-Dichloropropene         542-75-6         ©         O         P2RC           265         Dichloroctraflucorethane         76-99-0         ©         O         P2RC           266         Dichloroctraflucorethane         76-14-2         O         O         P3RC           267         2.4-Dichloroctulene         95-73-8         ©         O         P3RC           267         Dichloroctulene         95-73-8         ©         O         P3RC           260         Dicyclohexyl peroxide         1524-30-1         ©         O         P3RC           270         Dicyclohexyl peroxide         1758-61-8         ©         O         P2RC           271         Dicyclopentadleney         77-73-6         ©         O         P2RC           272         Dicyclopentadleney         68476-30-2         P3R         P2R         P2RC           275         Diesel fuel         68476-30-2         P3RC         P3R         P3R         P3R           275         Diethanolamine         111-42-2         ©         O         P3RC         P2R           276							FZRG				
244 1.3-Dichloropropene         542-75-6         Image: Constraint of the second											
265         22-Dichloropropipic acid         75-99-0         ©         O         P2RC           266         Dichlorotetrafluoroethane         76-14-2         O         O           267         24-Dichlorot-1,1,2,2-         O         O         P3RC           267         24-Dichlorotoluene         95-73-8         ©         O         P3RC           266         Dichloros         62-73-7         ©         O         P3RC           267         24-Dichlorotoluene         95-73-8         ©         O         P3RC           260         Dicclohexyl peroxide         1758-61-8         ©         O         P2RC           271         Dicyclopentadiene         77-73-6         ©         O         P2RC           272         Dicyclopentadienyl iron, as Fe         102-54-5         P2R         P2R           274         Dieldrin         60-57-1         P3R         P3R           275         Diesel fuel         683476-30-2         ©         O         P3RC           275         Diesel fuel         104-86-8         ©         O         I           276         Diethanolamine         111-42-2         ©         O         I           279         <											
2e         Dichlorotetrafluoroethane         76-14-2         O           287         2.4-Dichlorotoluene         95-73-8         ©         O         P3RC           280         Dichlorose         62-73-7         ©         O         P3RC           280         Dicyclohexylmethane-4.4'-         5124-30-1         ©         O         P3RC           270         Dicyclohexyl pervalde         178-61-8         ©         O         P2RC           271         Dicyclopentadienel iron, as Fe         102-54-5         P2R         P2RC           274         Dieddrin         60-57-1         P2R         P2RC           275         Diesel fuel         6834-30-5         ©         O         P3RC           276         Diethylamine         109-89-7         O         P3RC           276         Diethylamine         109-89-7         O         P3RC           277         Diethylamine         101-40-0         O         P3RC <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>											
266       (12-Dichlore-11,1,2,2-       // 0       0       0         267       2.4-Dichlorotoluene       95-73-8       ©       0       P3RC         268       Dichloros       62-73-7       ©       0       P3RC         269       Dicclohexyl peroxide       1758-61-8       ©       0       P3RC         270       Dicclohexyl peroxide       1758-61-8       ©       0       P2RC         271       Dicyclopentadiene       77-73-6       ©       0       P2RC         272       Dicyclopentadienel       77-73-6       ©       0       P2RC         274       Dicklopentadienyl iron, as Fe       102-54-5       P2R       P2R         275       Diesel fuel       6834-63-2       P3R       P3R         276       Diethanolamine       111-42-2       ©       0       P3RC         277       Diethylamine       100-37-8       0       1       1         270       Diethylamine       111-46-6       0       1       1         271       Diethylamine       111-46-6       0       1       1         276       Diethylamine       111-46-6       0       1       1       1		75-99-0	0				P2RC				
11.2-Dichloro-1,1.2.2-         11.0         0         0         0           27         24-Dichlorotoluene         95.73.8         0         0         P3RC           280         Dicklorvos         62.73.7         0         0         P3RC           280         Dicyclohexyl peroxide         1758.61.8         0         0         P3RC           270         Dicyclohexyl peroxide         1758.61.8         0         0         P2RC           271         Dicyclopentadienyl iron, as Fe         10.254.5         0         P2R           271         Dicyclopentadienyl iron, as Fe         10.254.5         P2R         P3R           274         Dieklorin         68.476.30.2         0         P3RC           274         Dieklopentadienyl iron, as Fe         102.54.5         0         0           275         Diesel fuel         68.334.30.5         0         0         P3RC           277         Diethylamine         109.98.7         0         P3RC         0           277         Diethylene triamine         111.42.2         0         0         1           280         Diethylene triamine         111.40.0         0         0         1           281		76-14-2				$\cap$					
28         Dichlorvos $62.73.7$ $\odot$ O         P3RC           269         Dicyclohexylmethane-4,4'-         5124-30-1 $\odot$ O         P3RC           270         Dicyclohexyl peroxide         1758-61-8 $\odot$ O         P2R           271         Dicyclopentadiene         77-73-6 $\odot$ O         P2R           272         Dicyclopentadienyl iron, as Fe         102-54-5         P2R         P2R           274         Diedrin         60-57-1         P3R         P3R           275         Diesel fuel         68476-34-6         O         P3R           276         Diethanolamine         111-42-2 $\odot$ O         P3RC           276         Diethyleme glycol         111-42-2 $\odot$ O         P3RC           277         Diethylene glycol         111-40-0 $\odot$ O         P3RC           280         Diethylene glycol         111-40-6 $\odot$ O         P3RC           281         Diethylene glycol         111-40-6 $\odot$ O         P3RC           282         Diethyl hydroxylamine $0$ O         P2RC         P3RC <td>[](1,2-Dichloro-1,1,2,2-</td> <td></td> <td></td> <td></td> <td></td> <td>0</td> <td></td> <td></td>	[](1,2-Dichloro-1,1,2,2-					0					
269         Dicyclohexyl peroxide         178-86-18         ©         O         P3RC           270         Dicyclohexyl peroxide         1758-661-8         ©         O         P2RC           271         Dicyclopentadienyl iron, as Fe         102-54-5         O         P2R           273         Dicyclopentadienyl iron, as Fe         102-54-5         P2R         P2R           274         Dicyclopentadienyl iron, as Fe         102-54-5         P3R         P3R           274         Dicyclopentadienyl iron, as Fe         102-54-5         P3R         P3R           275         Diesel fuel         68476-30-2         P3R         P3R           275         Diesel fuel         68476-34-6         O         P3R           276         Diethylamine         101-42-2         ©         O         P3RC           276         Diethylamine         100-37-8         O         P3RC           277         Diethylamine         100-37-8         O         P3R           280         Diethyloratronate         105-58-8         ©         O         P3R           281         Diethyloratramine         111-46-6         ©         O         P3R           282         Diethyl hydroxylamine<	267 2,4-Dichlorotoluene	95-73-8	O		0						
269         Dicyclohexyl peroxide         178-86-18         ©         O         P3RC           270         Dicyclohexyl peroxide         1758-661-8         ©         O         P2RC           271         Dicyclopentadienyl iron, as Fe         102-54-5         O         P2R           273         Dicyclopentadienyl iron, as Fe         102-54-5         P2R         P2R           274         Dicyclopentadienyl iron, as Fe         102-54-5         P3R         P3R           274         Dicyclopentadienyl iron, as Fe         102-54-5         P3R         P3R           275         Diesel fuel         68476-30-2         P3R         P3R           275         Diesel fuel         68476-34-6         O         P3R           276         Diethylamine         101-42-2         ©         O         P3RC           276         Diethylamine         100-37-8         O         P3RC           277         Diethylamine         100-37-8         O         P3R           280         Diethyloratronate         105-58-8         ©         O         P3R           281         Diethyloratramine         111-46-6         ©         O         P3R           282         Diethyl hydroxylamine<	Dichlorvos	60 70 7					0200				
269         Dicyclohexyl peroxide         178-86-18         ©         O         P3RC           270         Dicyclohexyl peroxide         1758-661-8         ©         O         P2RC           271         Dicyclopentadienyl iron, as Fe         102-54-5         O         P2R           273         Dicyclopentadienyl iron, as Fe         102-54-5         P2R         P2R           274         Dicyclopentadienyl iron, as Fe         102-54-5         P3R         P3R           274         Dicyclopentadienyl iron, as Fe         102-54-5         P3R         P3R           275         Diesel fuel         68476-30-2         P3R         P3R           275         Diesel fuel         68476-34-6         O         P3R           276         Diethylamine         101-42-2         ©         O         P3RC           276         Diethylamine         100-37-8         O         P3RC           277         Diethylamine         100-37-8         O         P3R           280         Diethyloratronate         105-58-8         ©         O         P3R           281         Diethyloratramine         111-46-6         ©         O         P3R           282         Diethyl hydroxylamine<	<sup>208</sup> (DDVP)	62-73-7	O				PSRC				
270         Dicyclohexyl peroxide         1758-61-8         ©         O         P2RC           271         Dicyclopentadiene         77.73-6         ©         O         P2RC           273         Dicyclopentadiene         77.73-6         ©         O         P2RC           273         Dicyclopentadiene         77.73-6         ©         O         P2RC           274         Dieldrin         60-57-1         P3R         P3R           275         Diesel fuel         68376-30-2         O         P3RC           276         Diethanolamine         111-42-2         ©         O         P3RC           276         Diethylamine         109-89-7         O         P3RC           277         Diethylamine         105-58-8         ©         O         P2RC           270         Diethylene triamine         111-46-6         ©         O         P2RC           280         Diethylene triamine         111-46-6         ©         O         P2RC           282         Diethylene triamine         111-46-6         ©         O         P2RC           281         Diethylene triamine         111-46-7         ©         O         P2RC           282	269 Dicyclohexylmethane-4 4'-	5124-30-1	0				P3RC				
271         Dicyclopentadiene         P2R           272         Dicyclopentadienyl iron, as Fe         77-73-6         ©         O         P2R           273         Dicyclopentadienyl iron, as Fe         102-54-5         P2R         P2R           274         Dicyclopentadienyl iron, as Fe         102-54-5         P3R         P3R           274         Diedrin         68476-30-2         P3R         P3R           275         Diesel fuel         68334-30-5         ©         O         P3R           275         Diesthanolamine         111-42-2         ©         O         P3RC           276         Diethylamine         109-89-7         O         O         P3RC           276         Diethylene glycol         111-46-6         ©         O         P3RC           278         Diethylene glycol         111-40-0         ©         O         P2R           280         Diethylene glycol         111-40-0         ©         O         P2R           281         Diethylopentadiene         3710-84-7         ©         O         P2RC           282         Diethyl dither         60-29-7         O         P2RC         28           284         Diethyl oxalat											
272         Dicyclopentadiene         77-73-6         ©         O         P2RC           273         Dicyclopentadienyl iron, as Fe         102-54-5         P2R         P2R           274         Dieldrin         60-57-1         P3R         P3R           275         Diesel fuel         68376-33-5         ©         O         P3R           275         Diesel fuel         68376-34-6         O         P3R           276         Diethylaminoethanol         100-37-8         O         P3RC           277         Diethylaminoethanol         100-37-8         O         P3RC           277         Diethylaminoethanol         100-37-8         O         P3RC           278         Diethylaminoethanol         101-37-8         O         P3RC           280         Diethylere glycol         111-46-6         ©         O         P3RC           281         Diethylere triamine         111-40-0         ©         O         P2RC           283         N-N-Diethylhydroxylamine         3710-84-7         ©         O         P2RC           284         Diethyl ether         60-29-7         O         O         P2RC           284         Diethyl sulfate         84					+						
273       Dicýclopentadienyl iron, as Fe       102-54-5       P2R         274       Dieldrin       60-57-1       P3R         275       Diesel fuel       68476-30-2       68476-30-2         68476-30-2       68476-34-6       O       P3R         275       Diesel fuel       68476-34-6       O       P3R         276       Diethanolamine       111-42-2       O       P3RC         277       Diethylarmine       109-89-7       O       O         278       Diethylarmine       105-58-8       O       O         279       Diethyl carbonate       105-58-8       O       O       O         280       Diethyl carbonate       105-58-8       O       O       O         281       Diethyl earbonate       105-58-8       O       O       O         282       Diethyl englycol       111-46-6       O       O       O       P2RC         283       Diethyl ether       60-29-7       O       O       P2RC         284       Diethyl pytalate       84-66-2       O       O       P2RC         285       Diethyl suffate       64-67-5       O       O       P2RC         285			6								
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Dicyclopentadienyl iron as Ee		9		$+ \checkmark +$						
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	273 (Correspond)	102-54-5					P2R				
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		00.57.4									
275         Diesel fuel         68334-30-5 (88476-34-6) 77650-28-3         O         P3RC           276         Diethanolamine         111-42-2         O         O         P3RC           277         Diethylamine         109-89-7         O         O         O           278         2-Diethylaminoethanol         100-37-8         O         O         O           278         2-Diethylaminoethanol         105-58-8         O         O         O         O           280         Diethylene glycol         111-46-6         O         O         O         O           281         Diethylene triamine         111-40-0         O         O         O         O           282         Diethyl ether         60-29-7         O         O         P2RC           284         Diethyl oxalate         95-92-1         O         O         P2RC           286         Diethyl sulfate         64-67-5         O         O         P2RC           286         Diethyl sulfate         64-67-5         O         O         P2RC           286         Diethyl sulfate         64-67-5         O         O         P2RC           286         Diethyl sulfate         64-67-5 </td <td>274 Dieldrin</td> <td>60-57-1</td> <td></td> <td></td> <td></td> <td></td> <td>P3R</td> <td></td>	274 Dieldrin	60-57-1					P3R				
275         Diesei ruei         68476-34-6 77650-28-3         ©         O         P3RC           276         Diethylamine         111-42-2         ©         O         P3RC           277         Diethylaminoethanol         100-37-8         O         O         P3RC           277         Diethylaminoethanol         100-37-8         O         O         P3RC           279         Diethylene glycol         111-46-6         ©         O         P3RC           280         Diethylene glycol         111-40-0         ©         O         P3RC           281         Diethylene glycol         111-40-0         ©         O         P3RC           282         Diethylene glycol         111-40-0         ©         O         P3RC           283         Diethylene glycol         101-84-7         ©         O         P2RC           284         Diethyl phtalate         84-66-2         O         O         P2RC           285         Diethyl phtalate         64-67-5         ©         O         P2RC           285         Diethyl sulfate         64-67-5         ©         O         P2RC           280         Difluorodibromomethane         1511-62-2         O <td></td> <td> I</td> <td></td> <td></td> <td>   </td> <td></td> <td></td> <td></td>		I									
77650-28-3       0       P3RC         276       Diethylamine       109-89-7       0         277       Diethylamine       109-89-7       0         278       Diethylaminoethanol       100-37-8       0         279       Diethylaminoethanol       100-37-8       0         279       Diethylene triaminoethanol       105-58-8       0       0         280       Diethylene triamine       111-46-6       0       0         281       Diethylene triamine       111-40-0       0       0       0         282       Diethylene triamine       111-40-0       0       0       0         283       Diethyl enteriamine       60-29-7       0       0       2         284       Diethyl phydroxylamine (DEHA)       3710-84-7       0       0       2         285       Diethyl sebacate       110-40-7       0       0       2         285       Diethyl sebacate       110-40-7       0       0       2         286       Diethyl sebacate       110-40-7       0       0       2         285       Diethyl sebacate       110-40-7       0       0       2         286       Diethyl sulfate <td>275 Diesel fuel</td> <td></td> <td>0</td> <td></td> <td></td> <td></td> <td></td> <td></td>	275 Diesel fuel		0								
276         Diethylamine         11142-2         Image: Constraint of the system of the syst		68476-34-6	•								
276         Diethylamine         11142-2         Image: Constraint of the system of the syst		77650-28-3									
278       2-Diethylaminoethanol       100-37-8       O       Image: constraint of the straint of the st	276 Diethanolamine		0		0		P3RC				
278       2-Diethylaminoethanol       100-37-8       O       Image: constraint of the straint of the st	277 Diethylamine	109-89-7				0					
279       Diethyl carbonate       105-58-8       Image: Constraint of the second se											
280         Diethylene glycol         111-46-6         ©         O         Image: Constraint of the stress of the st			0								
281       Diethylene triamine       111-40-0       ©       O       Image: constraint of the stress of the s											
Diethyl ether (Ethyl ether)         60-29-7         O         P2RC           283         N.N-Diethylhydroxylamine (DEHA)         3710-84-7         ©         O         P2RC           284         Diethyl oxalate         95-92-1         ©         O         P2RC           285         Diethyl phtalate         84-66-2         ©         O         P2RC           286         Diethyl sebacate         110-40-7         ©         O         P2RC           286         Diethyl sulfate         64-67-5         ©         O         P2RC           287         Diethyl sulfate         352-93-2         O         O         P2RC           289         Difluorobromomethane         1511-62-2         O         O         P2RC           290         Difluorodibromomethane         75-61-6         O         O         P2RC           291         Diglycidyl ether (DGE)         2238-07-5         ©         O         P2RC           292         1,2-Dihydroxybenzene (Resorcinol)         108-46-3         P2R         P3R           293         1,3-Dihydroxybenzene (Hydroquinone)         108-46-3         P2R         P3R           294         1,4-Dihydroxybenzene (Hydroquinone)         108-83-8         O	281 Diothylono triamino										
(Effyrender)       1       <	Diethyl ether				$+ \checkmark$						
283         N.N-Diethylhydroxylamine (DEHA)         3710-84-7         Image: Constraint of the system of t		60-29-7				0					
(DEFA)         95-92-1 $\bigcirc$ $>$	N N Diothylbydroxylamino										
(DEFA)         95-92-1 $\bigcirc$ $>$		3710-84-7	O				P2RC				
285         Diethyl phtalate         84-66-2         Image: Constraint of the system of the		05.00.4									
286         Diethyl sebacate         110-40-7         ©         O         P2RC           287         Diethyl sulfate         64-67-5         ©         O             288         Diethyl sulfide         352-93-2         O               289         Difluorobromomethane         1511-62-2         O         O											
287         Diethyl sulfate         64-67-5         ©         O         Image: constraint of the system           288         Diethyl sulfide         352-93-2         O         O         Image: constraint of the system         Image											
288       Diethyl sulfide       352-93-2       O       O         289       Difluorobromomethane       1511-62-2       O       O         290       Difluorodibromomethane       75-61-6       O       O         291       Diglycidyl ether (DGE)       2238-07-5       ©       O       P2RC         292       1,2-Dihydroxybenzene (Catechol)       120-80-9       O       P3R         293       1,3-Dihydroxybenzene (Resorcinol)       108-46-3       P2R       P2R         294       1,4-Dihydroxybenzene (Hydroquinone)       108-46-3       P3R       P3R         295       Diisobutyl ketone       108-83-8       ©       O       P3R         295       Diisopropylamine       108-18-9       ©       O       P2RC         296       Diisopropylamine       105-74-8       ©       O       P2RC         298       3,3'-Dimethoxybenzidine       119-90-4       P3R       P3R							P2RC				
289Difluorobromomethane1511-62-2OO290Difluorodibromomethane75-61-6OO291Diglycidyl ether (DGE)2238-07-5Image: Constraint of the second	287 Diethyl sulfate	64-67-5	0		0						
290       Difluorodibromomethane       75-61-6       O       O         291       Diglycidyl ether (DGE)       2238-07-5       O       P2RC         292       1,2-Dihydroxybenzene (Catechol)       120-80-9       P3R       P3R         293       1,3-Dihydroxybenzene (Resorcinol)       108-46-3       P2R       P2R         294       1,4-Dihydroxybenzene (Hydroquinone)       123-31-9       P3R       P3R         295       Diisobutyl ketone       108-83-8       O       O       P3R         295       Diisopropylamine       108-18-9       O       P2RC         297       Dilauroyl peroxide       105-74-8       O       P2RC         298       3,3'-Dimethoxybenzidine       119-90-4       P3R       P3R											
290Difluorodibromomethane75-61-6OO291Diglycidyl ether (DGE)2238-07-5Image: Constraint of the state	289 Difluorobromomethane	1511-62-2				0					
291       Diglycidyl ether (DGE)       2238-07-5       Image: Constraint of the system of the syst	290 Difluorodibromomethane	75-61-6				0					
Image: constraint of the constra	Diglycidyl ether		6				0000				
2921,2-Dihydroxybenzene (Zatechol)120-80-9Image: Second seco		2238-07-5	Ø				P2RC				
1,3-Dihydroxybenzene (Resorcinol)       108-46-3       P2R         293       1,4-Dihydroxybenzene (Hydroquinone)       123-31-9       P3R         295       Diisobutyl ketone       108-83-8       O       O         296       Diisopropylamine       108-18-9       O       P2R         297       Dilauroyl peroxide       105-74-8       O       P2R         298       3,3'-Dimethoxybenzidine       119-90-4       P3R         299       1,1-Dimethoxyethane       534-15-6       O       O	1.2-Dihydroxybenzene										
293       1,3-Dihydroxybenzene (Resorcinol)       108-46-3       Image: Second Secon		120-80-9					P3R				
InterpretationInterpretationInterpretationInterpretation2941,4-Dihydroxybenzene (Hydroquinone)123-31-9InterpretationP3R295Diisobutyl ketone108-83-8InterpretationP3R296Diisopropylamine108-18-9InterpretationInterpretation297Dilauroyl peroxide105-74-8InterpretationP2RC2983,3'-Dimethoxybenzidine119-90-4InterpretationP3R2991,1-Dimethoxyethane534-15-6InterpretationInterpretation	1 3-Dihydroxybenzene				+						
InterpretationInterpretationInterpretationInterpretation2941,4-Dihydroxybenzene (Hydroquinone)123-31-9InterpretationP3R295Diisobutyl ketone108-83-8InterpretationP3R296Diisopropylamine108-18-9InterpretationInterpretation297Dilauroyl peroxide105-74-8InterpretationP2RC2983,3'-Dimethoxybenzidine119-90-4InterpretationP3R2991,1-Dimethoxyethane534-15-6InterpretationInterpretation	293 (Pasarcinal)	108-46-3					P2R				
234       (Hydroquinone)       123-31-9       Image: Constraint of the second											
Image: Instant Structure       Image: I		123-31-9					P3R				
296         Diisopropylamine         108-18-9         O         O         Image: Constraint of the state o											
297         Dilauroyi peroxide         105-74-8         O         P2RC           298         3,3'-Dimethoxybenzidine         119-90-4         P3R           299         1,1-Dimethoxyethane         534-15-6         O											
298         3,3'-Dimethoxybenzidine         119-90-4         P3R           299         1,1-Dimethoxyethane         534-15-6         O         O											
299 1,1-Dimethoxyethane 534-15-6 O O			0		0						
299 1,1-Dimethoxyethane 534-15-6 O	298 3,3'-Dimethoxybenzidine	119-90-4					P3R				
	299 1,1-Dimethoxyethane	534-15-6				0					
	300 1,2-Dimethoxyethane	110-71-4	0		0						

#### ©: Highly Recommended O: Recommended

		◎ : Highly Recommended O : Recon						
			Reco	mmend	ed Filte	r	Airline	
Substance	CAS No.		Gas	Filter		Particle	or	
		Α	K	ABEK	AX	Filter	SCBA	
301 Dimethoxymethane	109-87-5				0			
302 N,N-Dimethylacetamide	127-19-5	0		0				
303 Dimethylamine	124-40-3				0			
304 1-Dimethylamino-2-propanol	108-16-7	0		0				
205 N N Dimothylaniling	121-69-7	0		Ŏ		P2RC		
306 (T-lidine)				Ť				
(Tolidine)	119-93-7					P3R		
307 2,2-Dimethylbutane	75-83-2				0			
308 2,3-Dimethylbutane	79-29-8				Ö			
309 1,3-Dimethylbutyl acetate	108-84-9	0		0		P2RC		
310 Dimethylcarbamoyl chloride	79-44-7					12110		
311 N,N-Dimethylcyclohexylamine	98-94-2	0						
	624-92-0	0						
312 Dimethyl disulfide				00				
313 N,N-Dimethylethanolamine	108-01-0	Ô						
314 Dimethyl ether	115-10-6				0			
315 N,N-Dimethylethylamine	598-56-1				0			
316 N,N-Dimethyformamide	68-12-2	Ô		0				
317 1,1-Dimethylhydrazine	57-14-7		0	0				
318 1,2-Dimethylhydrazine	540-73-8		O	0				
319 Dimethyl hydrogen phosphite	868-85-9	Ô		0				
320 N,N-Dimethylisopropylamine	996-35-0	O		0		P2RC		
321 Dimethyl phthalate	131-11-3	0		0		P2RC		
322 2,2-Dimethyl propane	402 02 4				0			
<sup>322</sup> (Neopentane)	463-82-1				0			
323 Dimethyl sulfate	77-78-1	0		0				
324 Dimethyl sulfide	75-18-3	0		Ō				
325 1,2-Dinitrobenzene	528-29-0					P2R		
326 1,3-Dinitrobenzene	99-65-0					P2R		
327 1,4-Dinitrobenzene	100-25-4					P2R		
328 4,6-Dinitro-o-cresol	534-52-1					P3R		
329 1,5-Dinitronaphthalene	605-71-0			1		P2R		
330 2,6-Dinitronaphthalene	24824-26-8	0		0		P2RC		
331 Dinitropyrene	78432-19-6			+		P2R		
332 2,3-Dinitrotoluene	602-01-7					P2R		
333 2,4-Dinitrotoluene	121-14-2					P3R		
334 2,5-Dinitrotoluene	619-15-8					P2R		
335 2,6-Dinitrotoluene	606-20-2					P3R		
336 3,4-Dinitrotoluene	610-39-9					P2R		
337 3,5-Dinitrotoluene	618-85-9	6				P2R		
338 1,4-Dioxane	123-91-1	Ô	ļ	0	-	P3RC		
339 Dioxathion	78-34-2		ļ		0			
340 1,3-Dioxolane	646-06-0	0		0				
341 Dipentene	138-86-3	Ô		0				
342 Diphenylamine	122-39-4					P2R		
343 Diphenyl ether	101-84-8	O		0		P2RC		
344 Diphenylmethane diisocyanate	101-68-8	O		0		P3RC		
	101-00-0							
345 Dipropylamine	142-84-7	0		0				
346 Dipropylene glycol methyl ether	34590-94-8	Ô		Ō				
347 Dipropyl ether	111-43-3	Ô		Ō				
348 Diquat dibromide	85-00-7		1			P3R		
349 Disulfoton	298-04-4		1	0		P3RC		

							O: Recor	
					mmend	ed Filte		Airline
	Substance	CAS No.		Gas	Filter	-	Particle	or
			Α	K	ABEK	AX	Filter	SCBA
350	Disulfur dichloride	10025-67-9			0			
	(Sultur monochioride)							
351	Di-sec-octyl phthalate	117-81-7	O		0			
	Disulfiram	97-77-8					P2R	
	2,6-Di-tert-butyl-p-cresol Di-tert-butyl peroxide	128-37-0 110-05-4	0		0		P2R	
	Diuron	330-54-1					P2R	
	1,2-Divinylbenzene	91-14-5	Ø		0		FZIX	
	1,3-Divinylbenzene	108-57-6	0		0			
	Dodecylbenzene	123-01-3	0		Ŏ			
	E	120 01 0						
359	Emery	1302-74-5					P2R	
360	Endosulfan	115-29-7					P3R	
	Endrin	72-20-8					P3R	
362	Enflurane	13838-16-9				0	P2RC	
002	Epichlorohydrin		6		6			
363	(1-Chloro-2,3-epoxypropane)	106-89-8	O		0			
	EPN	1						
364	(O-Ethyl O-4-nitrophenyl phenyl	2104-64-5	O		0		P3RC	
	phosphonothioate)		Ŭ		Ŭ			
365	1,2-Epoxybutane	106-88-7				0		
366	Ethanol	64-17-5	0		0			
207	2-Ethoxyethanol	110 00 5						
		110-80-5	O		0			
260	2-Ethoxyethyl acetate	111-15-9	0		0			
	(EGEEA; Cellosolve acetate)							
369	Ethyl acetate	141-78-6	0		0			
370	Ethyl acrylate	140-88-5	O		0			
	Ethyl acrylate (Acrylic acid)							
		75-04-7				0		
372	Ethyl amyl ketone	541-85-5	O		0			
272	(5-Methyl-3-heptanone)	100-41-4	0		0			
	Ethyl benzene Ethyl carbamate							
374	(Urethane)	51-79-6	O		0		P3RC	
	Ethyl chloride							
375	(Chloroethane)	75-00-3				0		
376	Ethyl chloroacetate	105-39-5	0		0			
	Ethylene chlorohydrin							
377	(2-Chloroethanol)	107-07-3	O		0			
	Ethylenediamine	107.17.0	6					
378	(1,2-Diaminoethane)	107-15-3	O		0		P2RC	
070	Ethyleneimine	454 50 4						
379	(Aziridine)	151-56-4		O	0			
380	Ethylene glycol	107-21-1	O		0			
381	Ethylene glycol dinitrate	628-96-6	0		0			
	(EGDN)							
	Ethylene glycol monoisopropyl ether	109-59-1	O		0			
383	Ethylene oxide	75-21-8				0		
384	Ethyl formate (Formic acid ethyl ester)	109-94-4				0		
385	2-Ethyl-1-hexanol	104-76-7	O		0			

				nly Recomi mmende		O: Recor	nmendec Airline
Substance	CAS No.		Gas	Filter		Particle	or
		Α	K	ABEK	AX	Filter	SCBA
386 Ethyl mercaptane (Ethanethiol)	75-08-1				0		
387 4-Ethylmorpholine	100-74-3	0		0			
388 Ethyl propionate	105-37-3	0					
Ethyl silicate							
389 Ethyl silicate (Silicic acid tetraethyl ester)	78-10-4	Ø		0			
F							
390 Fenchlorophos	299-84-3	O		0		P2RC	
391 Fention	55-38-9	Ô		0		P3RC	
392 Ferbam	14484-64-1					P2R	
393 Ferrocene	102-54-5					P2R	
394 Ferrovanadium dust	12604-58-9					P2R	
395 Flour dust	—					P2R	
396 Fluorides, as F	—			0		P2RC	
397 Fluorine	7782-41-4			0			
398 Fluorobenzene	462-06-6	0		0			
399 Formaldehyde	50-00-0			0			
400 Formamide	75-12-7	0		0		P2RC	
401 Formic acid	64-18-6			Ō		P2RC	
402 Fuel oils	_	0		Ō		P2RC	
403 Furan	110-00-9				0		
404 Furfural	98-01-1	0		0			
405 Furfuryl alcohol	98-00-0	0		Ŏ			
G		Ŭ					
406 Gasoline	86290-81-5	Ø					
406 Gasoline	8006-61-9	0		0			
407 Gelatin	9000-70-8			1 1		P2R	
408 Germanium tetrahydride	7782-65-2						0
409 Glass, fibrous or dust	—					P3R	
410 Glutaraldehyde	111-30-8	0		0			
411 Glycerine	56-81-5	0		Ŏ		P2RC	
Glycidol		-					
412 Glycidol (2,3-Epoxy-1-propanol)	556-52-5	O		0			
413 Glycidyl isopropyl ether	4016-14-2	0		0		P2RC	
414 Glyoxal	107-22-2			+	0	P3RC	
415 Graphite, natural	7782-42-5			1 1		P2R	
H			1	-		1 210	
416 Hafnium and compunds, as Hf	7440-58-6					P2R	
417 Helium	7440-59-7			1 1			0
418 (2 Brome 2 objers 1 1 1							
418 (2-Bromo-2-chloro-1,1,1-	151-67-7				0		
419 Heptachlor	76-44-8			+ +		P3R	
420 n-Heptane	142-82-5	0		0			
420 11-Heptanoe	110-43-0	 ©					
422 3-Heptanone	106-35-4	0		0			
123 1-Hentanone	123-19-3	 	-				
				$+ \lor +$			
424 (HCB)	118-74-1					P3R	
425 Hexachlorocyclopentadiene	77-47-4	0		0			
426 Hexachloroethane	67-72-1	Ô		Ō		P3RC	
427 Hexamethylenediamine	124-09-4	0		Ŏ		P2RC	
428 Hexamethylene diisocyanate	822-06-0	<u> </u>		Ŏ			
429 Hexamethylenetetramine	100-97-0		1	Ŏ		P2RC	

		© : Highly Recommended O : Reco Recommended Filter Gas Filter Particle						
Substance	CAS No.		or					
		Α	K	ABEK	AX	Filter	SCBA	
430 Hexamethylphosphoramide	680-31-9	0		0		P3RC		
431 n-Hexane	110-54-3	Õ		Ŏ				
432 n-Hexanol	111-27-3	0		Ŏ				
433 2-Hexanone	591-78-6	0		Ŏ				
434 1-Hexene	592-41-6				0			
435 cis-2-Hexene	7688-21-3	0		0				
436 trans-2-Hexene	4050-45-7	Õ		Ŏ				
437 Hexylamine	111-26-2	0		Ŏ				
438 Hexylene glycol	107-41-5	0		Ō				
439 Hydrazine	302-01-2		0	Ŏ		P3RC		
440 Hydrazobenzene								
440 (1,2-Diphenylhydrazine)	122-66-7					P2R		
441 Hydrazoic acid	7782-79-8			0				
442 Hydrogenated terphenyls	61788-32-7	0		Ŏ				
443 Hydrogen bromide	10035-10-6	<u> </u>	1	Ŏ				
444 Hydrogen chloride	7647-01-0			ŏ				
445 Hydrogen cyanide	74-90-8			ŏ				
446 Hydrogen fluoride, as F	7664-39-3			Ŏ				
447 Hydrogen peroxide	7722-84-1			Ŏ		1		
448 Hydrogen selenide	7783-07-5			Ŏ				
449 Hydrogen sulfide	7783-06-4			ŏ		1		
450 Hydroxylamine	7803-49-8			Ŏ				
451 2-Hydroxypropyl acrylate	999-61-1	0		Ŏ				
	000-01-1		I					
450 Indone			T			1		
452 Indene	95-13-6 7440-74-6	O		0		P3R		
453 Indium and compounds, as In	/440-/4-0							
454 Inorganic fiber						P3R		
455 lodine	7553-56-2	<u> </u>		0		P3RC		
456 lodoform	75-47-8	O		0		P2RC		
457 (Mathud indial)	74-88-4				0			
	7750.04.0							
458 Iron(II) chloride	7758-94-3					P2R		
459 Iron(III) chloride	7705-08-0					P2R		
460 Iron(II) oxide	1345-25-1					P2R		
461 Iron(Ⅲ) oxide	1309-37-1					P2R		
462 Iron pentacarbonyl	13463-40-6	Ô		0				
463 Iron(II) sulfide	1317-37-9					P2R		
464 Iron(Ⅲ) sulfide	12063-27-3					P2R		
465 Iron salts, solubule, as Fe	—					P2R		
466 Isoamyl acetate	123-92-2	0		0				
467 Isoamyl alcohol	123-51-3	0		0				
468 Isobutane	75-28-5				0			
469 Isobutanol	78-83-1	O		0				
(Isobutyl alcohol)								
470 Isobutyl acetate	110-19-0	0		0				
471 Isobutylamine	78-81-9	0		0				
472 Isobutylformate	542-55-2	O		0				
473 Isobutyraldehyde	78-84-2				0			
474 Isoflurane	26675-46-7				0	P2RC		
475 Isooctane	540-84-1	O		0				
(2,2,4-1 rimethylpentane)		_						
476 Isophorone	78-59-1	0		0				
477 Isophorone diisocyanate	4098-71-9	Ô		0				

				nly Recomr			
				ommende	ed Filte		Airline
Substance	CAS No.			Filter		Particle	or
		Α	ĸ	ABEK	AX	Filter	SCBA
478 Isopropyl acetate	108-21-4	Ô		0			
479 Isopropylamine	75-31-0				0		
480 N-Isopropylaniline	768-52-5				0		
481 Isopropyl ether	108-20-3	Ô		0			
482 Isopropyl nitrate	1712-64-7	Ô		0		P2RC	
483 Isopropyl oil	-	0		0		P2RC	
J							
484 Jet fuel	—	0		0		P2RC	
K							
485 Kerosene	—	0				P2RC	
L							
486 Lactic acid	50-21-5					P2RC	
487 Lead and inorganic compounds, as Pl				+ Ŭ		P3R	
	75-74-1						
488 Lead alkyls	78-00-2	Ô				P3RC	
489 Lead(II) acetate trihydrate	6080-56-4					P2R	
490 Lead arsenate	3687-31-8			1 1		P3R	
491 Lead chromate	7758-97-6			1 1		P3R	
492 Linseed oil	_	0				P2RC	
493 (Indane				+			
<sup>493</sup> (y-Hexachlorocyclohexane)	58-89-9					P3RC	
494 Lithium hydride	7580-67-8			+ +		P3R	
495 Lithium hydroxide	1310-65-2			+ +		P2R	
M				1 1		1 210	
496 Magnesium chloride	7786-30-3			1 1		P2R	
497 Magnesium hydroxide	1309-42-8			+ +		P2R	
498 Magnesium oxide	1309-48-4			+ +		P2R	
499 Magnesium sulfate	7487-88-9			+ +		P2R	
500 Malathion	121-75-5	0				P2RC	
501 Maleic acid	110-16-7			$+ \checkmark +$		P2R	
502 Malaia anhydrida	108-31-6	0		0		P3RC	
Manganese and inorganic		•		$+ \lor +$			
503 compounds,	7439-96-5					P2R	
504 Manganese, fume, as Mn	7439-96-5			+ +		P2R	
Manganese cyclopentadienyl				+			
505 Manganese cyclopentadienyl tricarbonyl,	12079-65-1					P3R	
506 Manganese(IV) oxide	1313-13-9			+ +		P2R	
507 2-Mercaptoethanol	60-24-2					1 213	
508 Mercury and compounds, as Hg	7439-97-6			+			0
509 Mesityl oxide	141-79-7	0		0			
510 Methacrylic acid	79-41-4	0				P2RC	
511 Methacrylonitrile	126-98-7	0					
512 Methane	74-82-8			$+ \checkmark +$			0
513 (Methalolophal)				+ +			
513 (Methyl alcohol)	67-56-1				0		
514 Methomyl	16752-77-5			+		P3R	
515 Mothowychlor	72-43-5			+ +		P2R	
2-Methoxyethanol 516							
	109-86-4	Ô		0			
2-Methoxyethyl acetate		~					
5171	110-49-6	Ô					
(EGMEA)							

						O: Recor	
		Recommended Filter					Airline
Substance	CAS No.		Particle	or			
		Α	K	ABEK	AX	Filter	SCBA
519 2-Methoxy-1-propanol	1589-47-5	0		0			
520 1-Methoxy-2-propanol acetate	108-65-6	0		0			
521 2-Methoxy-1-propanol acetate	70657-70-4	Õ		Ō			
522 Methyl acetate	79-20-9				0		
523 Methyl acrylate	96-33-3	0		0			
524 Methylamine	74-89-5		0	Ō			
525 N-Methylaniline	100-61-8	0		Ō			
526 2-Methylbutane	78-78-4				0		
527 Methyl-tert-butyl ether	1634-04-4				Õ		
Mothul oblaratorm		0					
<sup>528</sup> (1,1,1-Trichloroethane)	71-55-6	O		0			
529 Methyl-2-cyanoacrylate	137-05-3			0			
530 Methylcyclohexane	108-87-2	0		Ŏ			
531 Methylcyclohexanol	25639-42-3	0		Ŏ			
532 2 Methylcyclohexanone	583-60-8	0		Ŏ			
533 (Dependence resolution)		-					
<sup>533</sup> (Demeton-methyl)	8022-00-2	O		0		P3RC	
1 1' Methylene bis(2 chlorophiline)							
534 (MPOCA)	101-14-4					P3R	
4,4'-Methylene dianiline							
<sup>535</sup> (4,4'-Diaminodiphenyl-methane)	101-77-9					P3R	
536 Methyl ethyl ketone peroxide	1338-23-4	0		0			
537 Methyl formate	107-31-3				0		
538 Methyl hydrazine	60-34-4			0			
539 (5 Methyl isoamyl ketone							
539 (5-Methyl-2-hexanone)	110-12-3	O		0			
Mothyl isobutyl carbinal							
[540] (4-Methyl-2-pentanol)	108-11-2	O		0			
Mathyliachutylkatona							
541 (4-Methyl-2-pentanone)	108-10-1	O		0			
5/2 Methyl isocyanate	624-83-9				0		
543 (Mathemathia)							
<sup>543</sup> (Methanethiol)	74-93-1				0		
544 Methyl mercury	22967-92-6						0
545 Methyl methacrylate	80-62-6	0		0			0
546 Methyl parthion	298-00-0	0		- O		P3RC	
547 2-Methylpentane	107-83-5	0			0	FSINC	
548 3-Methylpentane	96-14-0				0		
549 4-Methylpent-3-en-2-on	141-79-7	0		0	0		
2-Methyl-2-propanol		0					
550 (test Butul clockel)	75-65-0	O		0		P2RC	
(tert-Butyl alcohol)	+			+			
551 (2-Pentanone)	107-87-9	O		0			
552 2-Methyl-2-propanethiol	75-66-1				0		
	554-12-1	0			0		
553 Methyl propionate	872-50-4	 ©		0			
554 N-Methyl-2-pyrrolidone	681-84-5	 ©					
555 Methyl silicate				0			
556 α-Methyl styrene	98-83-9	Ô		0			
557 (Phandrian)	7786-34-7	O		0		P3RC	
(Phosarin®)		-					
558 Mineral wool fiber	-					P2R	
559 Molybdenum and compounds, as Mo	7439-98-7					P3R	
560 Monochloroacetic acid	79-11-8					P2R	

[			O: Recor e <b>r</b>	nmended Airline			
Substance	CAS No.		Particle	or			
		Α	K	Filter ABEK	AX	Filter	SCBA
561 Morpholine	110-91-8	0		0	700		
562 Motor oils used	_	0		Ŏ		P2RC	
563 Mustard gas							
<sup>563</sup> (2,2'-Dichlorodiethyl sulfide)	505-60-2			0		P3RC	
N							
Naled			<u> </u>				
564 (Dibrom)	300-76-5	Ô		0		P3RC	
565 Nanhtha Benzin	8030-30-6	0		0		P2RC	
Naphtha (petroleum),							
566 Hydrotreated heavy	64742-48-9	O		0		P2RC	
567 Naphthalana	91-20-3	0		0		P3RC	
568 1,5-Naphthalene diisocyanate				Ť			
	3173-72-6					P2R	
α-Naphthylamine	404 00 7						
	134-32-7					P2R	
570 β-Naphthylamine	04 50 0					DOD	
270 (2-Naphthylamine)	91-59-8					P3R	
571 Neon	7440-01-9						0
572 Nickel	7440-02-0					P3R	
573 Nickel carbonate	3333-67-3					P3R	
574 Nickel chloride	7718-54-9					P3R	
575 Nickel oxide	1313-99-1			1 1		P3R	
576 Nickel sulfide	16812-54-7					P3R	
577 Nicotine	54-11-5	0		0			
578 Nitrapyrin (2-Chloro-6-(trichloromethyl)pyridine)	1929-82-4					P2R	
579 Nitric acid	7697-37-2			0			
580 5-Nitroacenaphthene	602-87-9			+ Ŭ		P3R	
581 2-Nitro-4-aminophenol	119-34-6					P2R	
582 4-Nitroaniline	100-01-6					P2R	
583 Nitrobenzene	98-95-3	0		0		P3RC	
584 4-Nitrobiphenyl	92-93-3					P3R	
585 Nitroethane	79-24-3	0		0		1 011	
586 Nitrogen dioxide	10102-44-0			Ŏ			
587 Nitrogen monoxide	10102-43-9						0
588 Nitrogen trifluoride	7783-54-2						Õ
Nitroglycerin		-				-	
<sup>589</sup> (Glyceryl trinitrate)	55-63-0	Ô		0		P2RC	
590 Nitromethane	75-52-5	0		0			
591 1-Nitronaphthalene	86-57-7					P2R	
592 2-Nitronaphthalene	581-89-5					P2R	
593 5-Nitro-o-toluidine	99-55-8					P3R	
594 2-Nitro-1,4-phenylenediamine	5307-14-2					P2R	
595 1-Nitropropane	108-03-2	0		0			
596 2-Nitropropane	79-46-9	0		ŏ			
597 1-Nitropyrene	5522-43-0		1			P3R	
598 2-Nitropyrene	789-07-1					P2R	
599 4-Nitropyrene	57835-92-4		1			P3R	
N Nitrosodiothanolomino							
	1116-54-7					P3R	
601 (NDEA) (NDEA)	55-18-5	Ø		0		P3RC	
602 N-Nitrosodiisopropylamine	601-77-4					P2R	
						1 211	

						O: Recor	
		Recommended Filter					Airline
Substance	CAS No.					Particle	or
		Α	K	ABEK	AX	Filter	SCBA
603 N-Nitrosodimethylamine	62-75-9	O		0		P2RC	
604 N-Nitrosodi-n-butylamine (DBN)	924-16-3	O		0		P3RC	
(DBN)	524-10-5	•				1 5110	
605 N-Nitrosodi-n-propylamine	621-64-7	O		0		P3RC	
605 N-Nitrosodi-n-propylamine		•		Ŭ			
looght-hillosoethyphenylannine	612-64-6		ļ			P2R	
607 N-Nitrosomethylethylamine	10595-95-6	0		0		P3RC	
608 N-Nitrosomethylphenylamine	614-00-6	O		0		P2RC	
609 N-Nitrosomorpholine (NMOR)	59-89-2	O				P3RC	
(NMOR)		-					
610 (NDICR)	100-75-4	O		0		P3RC	
611 (NPYR)	930-55-2	O		0		P3RC	
612 2-Nitrotoluene	88-72-2	0		0			
613 3-Nitrotoluene	99-08-1	0				P3RC	
614 4-Nitrotoluene	99-99-0	0				P2R	
615 Nonane	111-84-2	0		0		FZIN	
0	111-04-2						
	1 1		1	1 1			
616 Oakwood dust	-					P3R P3R	
617 Octachloronaphthalene 618 n-Octane	2234-13-1 111-65-9	0				PJR	
619 1-Octanol	111-65-9	0		0			
620 1-Octene	111-66-0	0					
621 Oil mist, mineral	8012-95-1	 				P2RC	
622 Osmium tetroxide	20816-12-0	0				P3RC	
623 Oxalic acid	144-62-7			$+$ $\vee$ $+$		P2R	
624 4,4'-Oxydianiline	101-80-4					P3R	
625 Oxygen difluoride	7783-41-7						0
626 Ozone	10028-15-6				0		
P	10020 10 0			· · · · · ·			
627 Palmitic acid	57-10-3		1			P2R	
628 Paraffin wax fume	8002-74-2	0		0		P2RC	
629 Paraldehyde	123-63-7	0				P2RC	
630 Paraguat dichloride	1910-42-5	0				P3R	
631 Parathion	56-38-2	0		0		P3RC	
632 Pentaborane	19624-22-7					1 51(0	0
633 Pentachloroethane	76-01-7	0		0			0
634 Pentachloronaphthalene	1321-64-8					P2R	
635 Pentachlorophenol	87-86-5					P3R	
636 Pentane	109-66-0				0		
637 n-Pentanol	71-41-0	0		0			
638 Peracetic acid	79-21-0			Ö		P2RC	
639 Perchloromethyl mercaptan	594-42-3	0		Ŏ		P2RC	
640 Perchloryl fluoride	7616-94-6	J		ŏ			
641 Permethrin	52645-53-1	0		ŏ		P2RC	
642 Phenol	108-95-2	0		ŏ		P2RC	
643 Phenolphthalein dissolved in ethanol	77-09-8	0		ŏ		P3RC	
644 Phenyl acetate	122-79-2	0	1	Ŏ		P2RC	
645 p-Phenylenediamine	106-50-3		1			P3R	
646 Phenyl ether	101-84-8	0		0		P2RC	
647 Phenyl ether/biphenyl mixture	8004-13-5	0		Ŏ		P2RC	

			mmendec Airline				
Substance	CAS No.						
Substance	CAS NO.	•	Gas	Filter		Particle Filter	or SCBA
648 Phenyl glycidyl ether		A	<u> </u>	ABEK	AX		JUDA
648 (PGE)	122-60-1	O		0		P2RC	
649 Phenylhydrazine	100-63-0	0		0		P3RC	
650 Phenyl isocyanate	103-71-9			Ŏ			
651 Phenyl mercaptan	108-98-5			Ŏ		P2RC	
652 N-Phenyl-β-naphthylamine	135-88-6					P2R	
653 Phenylphosphine	638-21-1						0
654 Phorate	298-02-2	0		0			
655 (Carbonyl chloride)	75-44-5			0			
(Carbonyl chloride)							
656 Phosphine	7803-51-2						0
657 Phosphoric acid	7664-38-2			0		P2RC	
658 Phosphorous acid	13598-36-2					P2R	
659 Phosphorus, Yellow	12185-10-3			0		P3RC	
660 Phosphorus oxychloride	10025-87-3			0		P2RC	
661 Phosphorus pentachloride	10026-13-8		ļ	0		P2RC	
662 Phosphorus pentasulfide	1314-80-3			0		P2RC	
663 Phosphorus pentoxide	1314-56-3		ļ	0		P2RC	
664 Phthalic anhydride	85-44-9	0		0		P2RC	
665 Picloram	1918-02-1					P2R	
666 Picric acid	88-89-1					P3R	
667 Platinum, soluble salts, as Pt	7440-06-4					P2R	
668 (PCBs)	1336-36-3					P3R	
669 (PVC)	9002-86-2					P2R	
670 Portland cement	65997-15-1					P2R	
671 Potassium chloride	7447-40-7					P2R	
672 Potassium chromate	7789-00-6					P3R	
673 Potassium cyanide, as CN	151-50-8					P3R	
674 Potassium hydroxide	1310-58-3					P2R	
675 Potassium sulfate	7778-80-5					P2R	
676 1,3-Propane sultone	1120-71-4	O		0		P3RC	
677 2-Propanethiol	75-33-2				0		
678 (n-Propyl alcohol)	71-23-8	Ø		0			
<sub>679</sub> 2-Propanol	67-63-0	Ø		0			
(Isopropyl alconol)							
680 Propargyl alcohol	107-19-7	0		0			
681 β-Propiolactone	57-57-8	Ô		0			
682 (Propanal)	123-38-6				0		
683 Propionic acid	79-09-4			0			
684 Propoxur	114-26-1					P3R	
685 n-Propyl acetate	109-60-4	O		0			
686 Propylamine	107-10-8		0	0			_
687 Propylene	115-07-1						0
688 Propylene glycol	57-55-6	O		0			
689 Propylene glycol dinitrate (PGDN)	6423-43-4	$\bigcirc$		0		P2RC	
690 (1,2-Epoxypropane)	75-56-9				0		
691 Propyleneimine	75-55-8	0		0		P3RC	
	10-00-0	9	1				

-			© : High	ly Recomr	nended	O: Recor	nmendeo
			Airline				
Substance	CAS No.	Gas Filter P					or
		Α	K	ABEK	AX	Filter	SCBA
692 Propyl formate	110-74-7	0		0	,		
693 n-Propyl mercaptan	107-03-9			Ŏ			
694 Pyrethrum	8003-34-7	0		Ŏ		P2RC	
695 Pyridine	110-86-1	0		Ŏ		1 2110	
Q							
Quinone			1				
696 (p-Benzoguinone)	106-51-4	O				P2RC	
R							
	7440-16-6		1	1 1		P2R	
697 Rodium, elemental 698 Rotenone, commercial	83-79-4	0				P2R P2RC	
	03-79-4	0				P2RU	
S			1	1 1		DOD	
699 Salicylic acid	69-72-7					P2R	
700 Sarin (GB)	107-44-8	O				P3RC	
(GB)		~					
701 Selenium compounds, as Se	7782-49-2					P3R	
702 Silica, amorphous, fused	60676-86-0					P2R	
703 Silica, amorphous, silica fume	69012-64-2					P2R	
704 Silica, crystalline, cristobalite	14464-46-1					P3R	
705 Silica, crystalline, α-quartz	14808-60-7					P3R	
706 Silicon carbide, fibrous dust	409-21-2					P3R	
707 Silicon carbide, nonfibrous	409-21-2					P2R	
708 Silver, metal	7440-22-4					P3R	
709 Silver, soluble compounds, as Ag	7440-22-4					P3R	
710 Soap solution						P2R	
711 Sodium azide	26628-22-8					P2R	
712 Sodium benzoate	532-32-1					P2R	
713 Sodium bisulfite	7631-90-5					P2R	
714 Sodium chlorate	7775-09-9					P2R	
715 Sodium chloride	7647-14-5					P2R	
716 Sodium chromate	7775-11-3					P2R	
717 Sodium cyanide, as CN	143-33-9			0		P3RC	
718 Sodium fluoroacetate	62-74-8			0		P3RC	
719 Sodium hydrogen carbonate	144-55-8					P2R	
720 Sodium hydroxide	1310-73-2					P2R	
721 Sodium metabisulfite	7681-57-4					P2R	
722 Sodium silicate	6834-92-0					P2R	
723 Sodium sulfate	7757-82-6					P2R	
724 Sodium thiosulfate	7772-98-7			0		P2RC	
725 Soman	96-64-0	O		0		P3RC	
		•					
726 Stearic acid	57-11-4					P2R	
727 Stibine	7803-52-3						0
728 Stoddard solvent	8052-41-3	0		0		P2RC	
729 Strontium chromate, as Cr	7789-06-2					P3R	
730 Strychnine	57-24-9					P3R	
731 Styrene, monomer	100-42-5	O		0			
732 Subtilisin	1395-21-7					P3R	
733 Sulfotep (TEDP)	3689-24-5			0		P3RC	
						I SILO	
734 Sulfur dichloride	10545-99-0			0			
735 Sulfur dioxide	7446-09-5			0			
736 Sulfuric acid	7664-93-9			0		P3RC	
737 Sulfur pentafluoride	5714-22-7			0			

		nmende Airline					
Substance	CAS No.		Gas		Particle	or	
		Α	K	ABEK	AX	Filter	SCBA
738 Sulfur tetrafluoride	7783-60-0	100 100			6 - 504 0E - 30 A		0
739 Sulfur trioxide	7446-11-9			0		P2RC	•
740 Sulfuryl chloride	7791-25-5			Ŏ			
741 Sulfuryl difluoride	2699-79-8						0
т				1 1			
742 2,4,5-T (2,4,5-T)				1 1		1	
<sup>742</sup> (2,4,5-Trichlorophenoxy acetic acid)	93-76-5					P2R	
				+ +			
743 Tabun (GA)	77-81-6	Ô				P3RC	
744 Talc, containing no asbestos fibers	14807-96-6					P2R	
745 Tannic acid and tannins	1401-55-4			+ +		P2R	
746 Tantalum, metal	7440-25-7					P2R	
747 Tar fumes						P2R	
748 Tartaric acid	526-83-0		+			P2R	
749 Tellurium and compounds, as Te	13494-80-9			+ +		P3R	
750 Tellurium hexafluoride, as Te	7783-80-4			++		FJN	
750 Tenunum nexanuonde, as Te	1703-00-4	0	+	0		+	0
751 Terphenyls	26140-60-3	0		$+$ $\vee$ $+$		P2R	
753 1,1,2,2-Tetrabromoethane	79-27-6	0				P2R	
753 1,1,2,2-Tetraplomoethane	19-21-0	0					
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6					P3R	
				++			
755 (FC 112-)	76-11-9	O				P2RC	
(FC-112a)		-					
1,1,2,2-Tetrachloro-1,2-difluoroethane	76-12-0	O		0		P2RC	
(FU-11Z)							
757 1,1,2,2-Tetrachloroethane	79-34-5	Ô		0			
758 Tetrachloroethylene (Perchloroethylene)	127-18-4	O		0			
(Perchloroethylene)							
759 Tetrachloronaphthalene	1335-88-2					P2R	
760 Tetraethyl lead	78-00-2	O		0			
Tetraethyl pyrophosphate	107-49-3	O				P3RC	
762 Tetraethyl silicate	78-10-4	0		0			
763 Tetrahydrofuran	109-99-9	Ô		0			
Tetrahydrothiophene	110-01-0			0			
				U U			
765 1,2,4,5-Tetramethylbenzene	95-93-2					P2R	
766 Tetramethyl lead	75-74-1	Ô		0			
767 Tetramethyl succinonitrile	3333-52-6	0		0		P3RC	
768 Tetranitromethane	509-14-8			0		P3RC	
769 1,3,6,8-Tetranitropyrene	28767-61-5					P2R	
770 Tetrasodium pyrophosphate	7722-88-5					P2R	
771 Tetryl	479-45-8					P2R	
(N-Methyl-N,2,4,6-tetranitroaniline)							
772 Thallium and soluble compounds, as	7440-28-0					P3R	
773 4,4'-Thiobis(6-tert-butyl-m-cresol)	96-69-5					P2R	
774 4,4'-Thiodianiline	139-65-1					P3R	
775 Thioglycolic acid	68-11-1			0			
776 Thionyl chloride	7719-09-7			Ŏ			
777 Thiourea	62-56-6		1			P2R	
778 Thiram	137-26-8		1			P3R	
779 Tin(IV) chloride	7646-78-8			0			
780 Titanium dioxide	13463-67-7					P3R	

						O: Recor	
			Airline				
Substance	CAS No.	Recommended Filter Gas Filter Particle					or
_		Α	K	ABEK	AX	Filter	SCBA
781 Toluene	108-88-3	0		0			
(Toluol)							
782 Toluene-2,4-diisocyanate	584-84-9	0		0		P3RC	
783 Toluene-2,6-diisocyanate	91-08-7	0		0		P3RC	
784 p-Toluidine	106-49-0	0		0		P3RC	
785 Tributyl phosphate	126-73-8	0		0			
786 Tri-n-butyltin benzoate	4342-36-3	Ô		0		P2RC	
787 Tri-n-butyltin chloride	1461-22-9			0		DOD	
788 Tri-n-butyltin fluoride	1983-10-4					P3R	
789 Tri-n-butyltin linoleate	24124-25-2	0		00		P2RC	
790 Tri-n-butyltin methacrylate	2155-70-6	0		0		P2RC	
791 Tri-n-butyltin naphthenate	85409-17-2	Ô		0			
792 Trichloroacetic acid	76-03-9					P3R	
793 1,2,4-Trichlorobenzene 794 2,3,4-Trichloro-1-butene	120-82-1 2431-50-7	0		0		P2RC	
795 1,1,2-Trichloroethane	79-00-5	0		0			
796 Trichloroethylene	79-00-5	0		0			
797 Trichloronaphthalene	1321-65-9	0				P2R	
798 1,2,3-Trichloropropane	96-18-4	0		0		F2R	
799 Tricyclohexyltin hydroxide	13121-70-5	0				P3R	
800 Tridymite	15468-32-3					P3R	
801 Triethanolamine	102-71-6	0		0		P2RC	
802 Triethylamine	121-44-8	0		0		FZING	
803 Triethylene tetramine	112-24-3	0		Ö			
804 Trimanganese tetraoxide	1317-35-7					P2R	
805 Trimellitic anhydride	552-30-7					P3R	
806 Trimethylamine	75-50-3				0		
807 2,4,5-Trimethylaniline	137-17-7					P2R	
808 1,2,3-Trimethyl benzene	526-73-8	0		0		1 213	
809 1,2,4-Trimethyl benzene	95-63-6	0		Ŏ			
125 Trimothyl bonzono							
810 (Mesitylene)	108-67-8	Ô		0			
811 2,4,4-Trimethyl-1-pentene	107-39-1	0		0			
812 Trimethyl phosphate	512-56-1	Õ		Õ			
813 Trimethyl phosphite	121-45-9	Õ		Õ			
81/ 2 / 7 Trinitrofluorenone	129-79-3	0		0		P2RC	
815 (TNT)	118-96-7						
<sup>815</sup> (TNT)	118-96-7					P3R	
816 1,3,6-Trinitropyrene	75321-19-6					P2R	
817 Tri-o-tolyl phosphate	78-30-8	0		0			
818 Tri-p-tolyl phosphate	78-32-0					P2R	
819 Triphenyl amine	603-34-9					P2R	
820 Triphenyl phosphate	115-86-6	Ô		0		P2RC	
821 Tungsten and insoluble compounds, as						P2R	
822 Turpentine	8006-64-2	0		0			
U							
823 n-Undecane	1120-21-4	0		0			
Uranium, natural, soluble and	7440-61-1					P3R	
<sup>824</sup> insoluble	1440-01-1					r or	
V							
825 Vanadium pentoxide, as V	1314-62-1					P3R	
826 Vinyl acetate	108-05-4	0		0			
		0					

_				©∶High	ly Recom	mended	O: Recor	nmendeo
			Recommended Filter					
	Substance	CAS No.		Particle	or			
			А	K	ABEK	AX	Filter	SCBA
827	Vinyl chloride	75-01-4				0		
	(Chioroethylene)					0		
	Vinyl toluene	25013-15-4	O		0			
829	VM & P naphtha	8032-32-4	O		0			
830	VX (nerve agent)	50782-69-9	O		0		P3RC	
					Ŭ			
	W			1				
	Warfarin	81-81-2	O		0		P3RC	
	Welding fumes						P3R	
	White spirit		O		0			
834	Wood oil						P2R	
	X		-					
	o-Xylene	95-47-6	0		0			
	m-Xylene	108-38-3	0		0			
837	p-Xylene	106-42-3	Ô		0		P2RC	
838	2,6-Xylenol	576-26-1					P2R	
		0.0 20 1						
839	2,5-Xylenol	95-87-4	O		0		P2RC	
					-			
840	2,4-Xylenol	105-67-9					P2R	
841	2,3-Xylenol	526-75-0					P2R	
<u> </u>	(2,3-Dimethyl phenol)							
842	(3,4-Xylenol (3,4-Dimethyl phenol)	95-65-8	O		0		P2RC	
├──	(3,4-Dimethyl phenol) 3,5-Xylenol (2,5 Dimethyl phenol)							
843	(3,5-Dimethyl phenol)	108-68-9					P2R	
	2,3-Xylidine	87-59-2	0		0		P3RC	
	2,4-Xylidine	95-68-1	0		ŏ		P2RC	
	2,5-Xylidine	95-78-3	0		Ö		P2RC	
	2,6-Xylidine	87-62-7	0		ŏ		P3RC	
	3,4-Xylidine	95-64-7	0		Ŏ		P3RC	
	3,5-Xylidine	108-69-0	0		ŏ		P3RC	
	Y							
850	Yttrium and compounds, as Y	7440-65-5					P2R	
000	Z	1,110,00,0					1 211	
851	Zinc chloride, fume	7646-85-7					P2R	
	Zinc chromates, as Cr	13530-65-9					P3R	
	Zinc oxide, fume	1314-13-2					P2R	
	Zinc sulfate	7733-02-0					P2R	
	Zirconium compounds, as Zr	7440-67-7					P2R	

Types of filter used was decided by the working environment and characteristics of substance, as shown in table 1

Table 1.	
Characteristics of Substance	Type of Filter
Substances with melting point over 50°C	Particle Filter
Substances with melting point between 0°C to 50°C, or Substances which may sublime	Particle and Gas Filter
Substances with melting point below 0°C	Gas Filter
Substances which has no recommended filter or Substance without test data	Airline or SCBA

### Classes of filter used was decided by the hazardous substance, as shown in table 2 Table 2.

Hazardous Substance	Filter(s) Classifications
Carcinogenic substances <sup>(1)</sup>	P3
Substances which are listed in Poisonous and	22
Deleterious Substances Control Law of Japan	P3
Substance of which TLV-TWA (Threshold Limit Values -	P3
Time-weighted average) is equal to or below 0.1mg / $m^3$	P3
Substances other than the above	P2

<sup>(1)</sup> *Guide to Occupational Exposure Value* classified Carcinogenic substances into A1~A3 (ACGIH Guide to Occupational Exposure Values 2012) and/or 1~2B (IARC Monographs 2011)

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#### Dalton International Limited

Physical Address: Unit 6, 23 Ash Road, Wiri, Auckland, 2104 Postal Address: PO Box 259041, Botany, Auckland, 2163 Tel: 0800 323 223 or +64 09 263 3142 | Web: www.daltoninternational.co.nz | Email: sales@dilnz.co.nz