



Agency for Toxic Substances and Disease Registry (ATSDR)

ATSDR's Substance Priority List

What is the Substance Priority List (SPL)?

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) section 104 (i), as amended by the Superfund Amendments and Reauthorization Act (SARA), requires ATSDR and the EPA to prepare a list, in order of priority, of substances that are most commonly found at facilities on the National Priorities List (NPL) and which are determined to pose the most significant potential threat to human health due to their known or suspected toxicity and potential for human exposure at these NPL sites. CERCLA also requires this list to be revised periodically to reflect additional information on hazardous substances. In CERCLA, it is called the priority list of hazardous substances that will be candidates for toxicological profiles.

This substance priority list is generally revised and published every two years, with an informal review and revision each year. Each substance on the list is a candidate to become the subject of a toxicological profile prepared by ATSDR. The listing algorithm prioritizes substances based on frequency of occurrence at NPL sites, toxicity, and potential for human exposure to the substances found at NPL sites.

It should be noted that this priority list is not a list of "most toxic" substances, but rather a prioritization of substances based on a combination of their frequency, toxicity, and potential for human exposure at NPL sites.

Thus, it is possible for substances with low toxicity but high NPL frequency of occurrence and exposure to be on this priority list. The objective of this priority list is to rank substances across all NPL hazardous waste sites to provide guidance in selecting which substances will be the subject of toxicological profiles prepared by ATSDR.

Where can I find more information on the Substance Priority List?

Substantial additional information can be found on the [SPL Resource](#) page, including:

- Past Substance Priority Lists
- A Support Document describing the algorithm in detail
- A comprehensive SPL spreadsheet with data for all current and past lists, including candidate substances that did not make the top of the list

The ATSDR 2022 Substance Priority List

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2022 Rank	Substance Name	Total Points	CAS RN
1	ARSENIC	1675	7440-38-2
2	LEAD	1531	7439-92-1
3	MERCURY	1455	7439-97-6
4	VINYL CHLORIDE	1355	75-01-4
5	POLYCHLORINATED BIPHENYLS	1342	1336-36-3

2022 Rank	Substance Name	Total Points	CAS RN
6	BENZENE	1328	71-43-2
7	CADMIUM	1317	7440-43-9
8	BENZO(A)PYRENE	1306	50-32-8
9	POLYCYCLIC AROMATIC HYDROCARBONS	1277	130498-29-2
10	BENZO(B)FLUORANTHENE	1255	205-99-2
11	CHLOROFORM	1202	67-66-3
12	AROCLOL 1260	1191	11096-82-5
13	DDT, P,P'-	1182	50-29-3
14	AROCLOL 1254	1172	11097-69-1
15	DIBENZO(A,H)ANTHRACENE	1163	53-70-3
16	TRICHLOROETHYLENE	1153	79-01-6
17	CHROMIUM, HEXAVALENT	1151	18540-29-9
18	DIELDRIN	1142	60-57-1
19	PHOSPHORUS, WHITE	1141	7723-14-0
20	AROCLOL 1242	1126	53469-21-9
21	DDE, P,P'-	1125	72-55-9
22	CHLORDANE	1125	57-74-9
23	COAL TAR CREOSOTE	1124	8001-58-9
24	HEXACHLOROBUTADIENE	1122	87-68-3
25	ALDRIN	1115	309-00-2
26	DDD, P,P'-	1113	72-54-8
27	AROCLOL 1248	1107	12672-29-6
28	HEPTACHLOR	1102	76-44-8
29	AROCLOL	1102	12767-79-2
30	BENZIDINE	1093	92-87-5
31	ACROLEIN	1090	107-02-8
32	TOXAPHENE	1089	8001-35-2

2022 Rank	Substance Name	Total Points	CAS RN
33	TETRACHLOROETHYLENE	1081	127-18-4
34	HEXACHLOROCYCLOHEXANE, GAMMA-	1074	58-89-9
35	CYANIDE	1068	57-12-5
36	HEXACHLOROCYCLOHEXANE, BETA-	1054	319-85-7
37	DISULFOTON	1049	298-04-4
38	BENZO(A)ANTHRACENE	1048	56-55-3
39	1,2-DIBROMOETHANE	1044	106-93-4
40	DIAZINON	1038	333-41-5
41	HEXACHLOROCYCLOHEXANE, DELTA-	1035	319-86-8
42	ENDRIN	1035	72-20-8
43	BERYLLIUM	1033	7440-41-7
44	AROCLOR 1221	1029	11104-28-2
45	1,2-DIBROMO-3-CHLOROPROPANE	1027	96-12-8
46	ENDOSULFAN	1022	115-29-7
47	ENDOSULFAN, ALPHA	1019	959-98-8
48	HEPTACHLOR EPOXIDE	1019	1024-57-3
49	CIS-CHLORDANE	1017	5103-71-9
50	CARBON TETRACHLORIDE	1015	56-23-5
51	COBALT	1015	7440-48-4
52	AROCLOR 1016	1013	12674-11-2
53	DDT, O,P'-	1010	789-02-6
54	PENTACHLOROPHENOL	1007	87-86-5
55	ENDOSULFAN SULFATE	1005	1031-07-8
56	METHOXYCHLOR	1004	72-43-5
57	NICKEL	994	7440-02-0
58	ENDRIN KETONE	994	53494-70-5
59	DI-N-BUTYL PHTHALATE	993	84-74-2

2022 Rank	Substance Name	Total Points	CAS RN
60	DIBROMOCHLOROPROPANE	985	67708-83-2
61	BENZO(K)FLUORANTHENE	975	207-08-9
62	TRANS-CHLORDANE	969	5103-74-2
63	ENDOSULFAN, BETA	969	33213-65-9
64	CHLORPYRIFOS	965	2921-88-2
65	XYLENES, TOTAL	962	1330-20-7
66	CHROMIUM(VI) TRIOXIDE	962	1333-82-0
67	AROCLOR 1232	959	11141-16-5
68	ENDRIN ALDEHYDE	959	7421-93-4
69	METHANE	952	74-82-8
70	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN	943	1746-01-6
71	3,3'-DICHLOROBENZIDINE	942	91-94-1
72	2-HEXANONE	940	591-78-6
73	BENZOFLUORANTHENE	937	56832-73-6
74	ZINC	916	7440-66-6
75	TOLUENE	912	108-88-3
76	PENTACHLOROBENZENE	907	608-93-5
77	DI(2-ETHYLHEXYL)PHTHALATE	903	117-81-7
78	CHROMIUM	892	7440-47-3
79	2,4,5-TRICHLOROPHENOL	892	95-95-4
80	AROCLOR 1240	890	71328-89-7
81	2,4,6-TRINITROTOLUENE	879	118-96-7
82	NAPHTHALENE	878	91-20-2
83	1,1-DICHLOROETHENE	873	75-35-4
84	BROMODICHLOROETHANE	868	683-53-4
85	DDD, O,P'-	868	53-19-0
86	BIS(2-CHLOROETHYL)ETHER	868	111-44-4

2022 Rank	Substance Name	Total Points	CAS RN
87	2,4,6-TRICHLOROPHENOL	867	88-06-2
88	HYDRAZINE	863	302-01-2
89	2,4-DINITROPHENOL	860	51-28-5
90	4,4'-METHYLENEBIS(2-CHLOROANILINE)	859	101-14-4
91	METHYLENE CHLORIDE	858	75-09-2
92	1,2-DICHLOROETHANE	854	107-06-2
93	N-NITROSODIMETHYLAMINE	849	62-75-9
94	THIOCYANATE	848	302-04-5
95	HEXACHLOROBENZENE	845	118-74-1
96	ASBESTOS	840	1332-21-4
97	RADIUM-226	834	13982-63-3
98	RDX (Cyclonite)	833	121-82-4
99	URANIUM	833	7440-61-1
100	2,4-DINITROTOLUENE	832	121-14-2
101	ETHION	832	563-12-2
102	4,6-DINITRO-O-CRESOL	829	534-52-1
103	RADIUM	827	7440-14-4
104	THORIUM	823	7440-29-1
105	DIMETHYLARSINIC ACID	823	75-60-5
106	CHLORINE	822	7782-50-5
107	1,3,5-TRINITROBENZENE	820	99-35-4
108	HEXACHLOROCYCLOPENTADIENE	820	77-47-4
109	RADON	818	10043-92-2
110	HEXACHLOROCYCLOHEXANE, ALPHA-	816	319-84-6
111	RADIUM-228	815	15262-20-1
112	THORIUM-230	814	14269-63-7
113	URANIUM-235	812	15117-96-1

2022 Rank	Substance Name	Total Points	CAS RN
114	THORIUM-228	810	14274-82-9
115	RADON-222	810	14859-67-7
116	URANIUM-234	809	13966-29-5
117	N-NITROSODI-N-PROPYLAMINE	809	621-64-7
118	METHYLMERCURY	808	22967-92-6
119	COAL TAR	808	8007-45-2
120	COPPER	807	7440-50-8
121	CHRYSTOTILE ASBESTOS	806	12001-29-5
122	PLUTONIUM-239	806	15117-48-3
123	POLONIUM-210	805	13981-52-7
124	PLUTONIUM-238	805	13981-16-3
125	LEAD-210	805	14255-04-0
126	1,1,1-TRICHLOROETHANE	804	71-55-6
127	AMOSITE ASBESTOS	804	12172-73-5
127	PLUTONIUM	804	7440-07-5
127	STRONTIUM-90	804	10098-97-2
130	RADON-220	804	22481-48-7
131	BARIUM	804	7440-39-3
132	AMERICIUM-241	804	86954-36-1
133	HYDROGEN CYANIDE	803	74-90-8
134	AZINPHOS-METHYL	802	86-50-0
134	CHLORDANE, TECHNICAL	802	12789-03-6
136	CHLORDEKONE	802	143-50-0
137	MERCURIC CHLORIDE	802	7487-94-7
137	NEPTUNIUM-237	802	13994-20-2
139	ACTINIUM-227	801	14952-40-0
139	PLUTONIUM-240	801	14119-33-6

2022 Rank	Substance Name	Total Points	CAS RN
141	CHLOROBENZENE	801	108-90-7
142	S,S,S-TRIBUTYL PHOSPHOTRITHIOATE	799	78-48-8
143	MANGANESE	799	7439-96-5
144	ETHYLBENZENE	798	100-41-4
145	FLUORANTHENE	797	206-44-0
146	CHRYSENE	794	218-01-9
147	PERFLUOROOCTANE SULFONIC ACID	790	1763-23-1
148	1,2,3-TRICHLOROBENZENE	786	87-61-6
149	POLYBROMINATED BIPHENYLS	786	67774-32-7
150	DICOFOL	785	115-32-2
151	SELENIUM	779	7782-49-2
152	1,3-BUTADIENE	778	106-99-0
153	1,1,2,2-TETRACHLOROETHANE	776	79-34-5
154	PARATHION	775	56-38-2
155	HEPTACHLORODIBENZO-P-DIOXIN	775	37871-00-4
156	HEXACHLOROCYCLOHEXANE, TECHNICAL GRADE	774	608-73-1
157	TRICHLOROFLUOROETHANE	774	27154-33-2
158	BROMINE	772	7726-95-6
159	AROCLOR 1268	766	11100-14-4
160	PERFLUOROOCTANOIC ACID	761	335-67-1
161	HEPTACHLORODIBENZOFURAN	756	38998-75-3
162	TRIFLURALIN	756	1582-09-8
163	PERFLUOROHXANESULFONIC ACID	750	355-46-4
164	1,2,3,4,6,7,8,9-OCTACHLORODIBENZOFURAN	744	39001-02-0
165	AMMONIA	742	7664-41-7
166	1,4-DICHLOROBENZENE	727	106-46-7
167	2-METHYLNAPHTHALENE	727	91-57-6

2022 Rank	Substance Name	Total Points	CAS RN
168	2,3,4,7,8-PENTACHLORODIBENZOFURAN	724	57117-31-4
169	NALED	722	300-76-5
170	1,1,2-TRICHLOROETHANE	719	79-00-5
171	1,2-DIPHENYLHYDRAZINE	719	122-66-7
172	1,1-DICHLOROETHANE	718	75-34-3
173	PHORATE	717	298-02-2
174	PERFLUORODECANOIC ACID	712	335-76-2
175	TRICHLOROETHANE	711	25323-89-1
176	ACENAPHTHENE	711	83-32-9
177	TETRACHLOROBIPHENYL	711	26914-33-0
178	PALLADIUM	707	7440-05-3
179	INDENO(1,2,3-CD)PYRENE	705	193-39-5
180	OXYCHLORDANE	705	27304-13-8
181	CRESOL, PARA-	703	106-44-5
182	GAMMA-CHLORDENE	702	56641-38-4
183	TETRACHLOROPHENOL	699	25167-83-3
184	1,2-DICHLOROBENZENE	696	95-50-1
185	1,2-DICHLOROETHENE, TRANS-	691	156-60-5
186	P-XYLENE	687	106-42-3
187	CHLOROETHANE	686	75-00-3
188	ALUMINUM	685	7429-90-5
189	CARBON MONOXIDE	684	630-08-0
190	PHENOL	682	108-95-2
191	CARBON DISULFIDE	681	75-15-0
192	2,4-DIMETHYLPHENOL	679	105-67-9
193	DIBENZOFURAN	676	132-64-9
194	PERFLUORONONANOIC ACID	671	375-95-1

2022 Rank	Substance Name	Total Points	CAS RN
195	PERFLUORODODECANOIC ACID	671	307-55-1
196	ACETONE	671	67-64-1
197	HEXACHLOROETHANE	671	67-72-1
198	BUTYL METHYL PHTHALATE	669	34006-76-3
199	PERFLUOROUNDECANOIC ACID	668	2058-94-8
200	CHLOROMETHANE	664	74-87-3
201	HEXACHLORODIBENZOFURAN	661	55684-94-1
202	HYDROGEN SULFIDE	658	7783-06-4
203	DICHLORVOS	657	62-73-7
204	MONOCHLORODIBENZOFURAN	654	42934-53-2
205	CRESOL, ORTHO-	652	95-48-7
206	HEXACHLORODIBENZO-P-DIOXIN	652	34465-46-8
207	BUTYL BENZYL PHTHALATE	650	85-68-7
208	VANADIUM	650	7440-62-2
209	1,2,4-TRICHLOROBENZENE	647	120-82-1
210	ETHOPROP	645	13194-48-4
211	TETRACHLORODIBENZO-P-DIOXIN	642	41903-57-5
212	BROMOFORM	635	75-25-2
213	PENTACHLORODIBENZOFURAN	632	30402-15-4
214	1,3-DICHLOROBENZENE	628	541-73-1
215	PENTACHLORODIBENZO-P-DIOXIN	626	36088-22-9
216	N-NITROSODIPHENYLAMINE	624	86-30-6
217	2,4-DICHLOROPHENOL	620	120-83-2
218	2,3-DIMETHYLNAPHTHALENE	620	581-40-8
219	2,3,7,8-TETRACHLORODIBENZOFURAN	618	51207-31-9
220	1,4-DIOXANE	617	123-91-1
221	FLUORINE	613	7782-41-4

2022 Rank	Substance Name	Total Points	CAS RN
222	NITRITE	611	14797-65-0
223	DIBROMOCHLOROMETHANE	611	124-48-1
224	CESIUM-137	610	10045-97-3
225	CHROMIC ACID	610	7738-94-5
226	POTASSIUM-40	608	13966-00-2
227	SILVER	608	7440-22-4
228	DINITROTOLUENE	607	25321-14-6
229	FORMALDEHYDE	607	50-00-0
230	COAL TAR PITCH	605	65996-93-2
231	1,2-DICHLOROETHYLENE	605	540-59-0
232	2-BUTANONE	605	78-93-3
233	THORIUM-227	605	15623-47-9
234	ARSENIC ACID	604	7778-39-4
235	NITRATE	604	14797-55-8
236	ANTIMONY	604	7440-36-0
237	ARSENIC TRIOXIDE	604	1327-53-3
238	BENZOPYRENE	603	73467-76-2
239	STROBANE	602	8001-50-1
240	4-AMINOBIIPHENYL	602	92-67-1
240	PYRETHRUM	602	8003-34-7
242	ARSINE	602	7784-42-1
242	DIMETHOATE	602	60-51-5
244	BIS(CHLOROMETHYL)ETHER	602	542-88-1
244	CARBOPHENOTHION	602	786-19-6
246	ALPHA-CHLORDENE	601	56534-02-2
246	IODINE-131	601	10043-66-0
246	SODIUM ARSENITE	601	7784-46-5

2022 Rank	Substance Name	Total Points	CAS RN
246	URANIUM-233	601	13968-55-3
250	CRESOLS	598	1319-77-3
251	2,4-D	596	94-75-7
252	DICHLOROBENZENE	596	25321-22-6
253	BUTYLATE	592	2008-41-5
254	2-CHLOROPHENOL	591	95-57-8
255	DIMETHYL FORMAMIDE	585	68-12-2
256	PHENANTHRENE	583	85-01-8
257	DIURON	580	330-54-1
258	4-NITROPHENOL	580	100-02-7
259	TETRACHLOROETHANE	578	25322-20-7
260	DICHLOROETHANE	568	1300-21-6
261	ETHYL ETHER	566	60-29-7
262	DIMETHYLANILINE	563	121-69-7
263	1,3-DICHLOROPROPENE, CIS-	562	10061-01-5
264	ACRYLONITRILE	560	107-13-1
265	1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN	560	35822-46-9
266	PYRENE	557	129-00-0
267	PHOSPHINE	557	7803-51-2
268	TRICHLOROBENZENE	556	12002-48-1
269	2,6-DINITROTOLUENE	555	606-20-2
270	FLUORIDE ION	550	16984-48-8
271	1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN	550	67562-39-4
272	PENTAERYTHRITOL TETRANITRATE	550	78-11-5
273	1,3-DICHLOROPROPENE, TRANS-	549	10061-02-6
274	BIS(2-ETHYLHEXYL)ADIPATE	544	103-23-1
275	CARBAZOLE	544	86-74-8

CAS RN = Chemical Abstracts Service Registry Number

Contact Information

Further information can be obtained by contacting the ATSDR Information Center at:

Agency for Toxic Substances and Disease Registry

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