



FLAME RETARDANT REFERENCE MATERIAL

Edition 3



Website: www.chiron.no



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SPECIALTIES INC.**

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FLAME RETARDANTS

Flame retardants, such as polybrominated diphenyl ethers (PBDEs), are abundant in modern society- from clothing and carpets to couches and computers - they are added to a wide range of every day products in an attempt to reduce flammability or delay combustion. The name implies that they convey safety, but to the contrary they have been associated with numerous adverse and bio-accumulative health effects, including endocrine disruption, infertility, birth defects, lowered IQs, behavioral problems, and cancers. Ironically, when alight the toxic soup of burning chemicals and byproducts released, such as dioxins, furans and formaldehyde, can be more hazardous than the fire itself.

Additionally, flame retardants persist in the environment – in water and soil – build up in wildlife, enter the food chain and are now global persistent organic pollutants (POPs) of concern. Despite of the environmental and toxicological concerns, they are, and will for some time remain abundant in many consumer goods. Since disclosure of their use is unregulated many consumers remain unaware of their existence or the hazards they pose.

Halogenated flame retardants, and particularly the brominated ones has been used for decades, but only after around year 2000 the concern was raised. The number of commercial flame retardants has been rather limited, under 100 in total. New flame retardants containing various phosphor-containing compounds have been introduced after the concern of the halogenated ones appeared. Also, flame retardants bonded to various inorganic or insoluble or polymeric organic entities has entered market during the past years.

Nomenclature used in this catalogue:

The nomenclature and the various abbreviations used in the literature has been rather confusing and partly misleading over the years. Therefore, a new and common nomenclature rule was proposed a few years back by Bergmann et al.¹ and which is adapted here:

- **FR:** Flame retardants
- **BFRs:** Brominated flame retardants, including those containing bromine and chlorine or bromine and phosphorous or all three
- **CFR:** Chlorinated Flame Retardants, including those with chlorine and phosphorous
- **PFR:** Phosphorous containing flame retardant. Those also containing bromine or chlorine are listed under BFRs or CFRs respectively.

Bergmann further proposed "Practical Abbreviations" (PRABS) to be used as the common abbreviated form of known FRs, and those are the ones being referred to here.

1) Åke Bergman, Andreas Rydén, Robin J. Law, Jacob de Boer, Adrian Covaci, Mehran Alaei, Linda Birnbaum, Myrto Petreas, Martin Rose, Shinichi Sakai, Neie van den Ende, Ike van der Veen. Environmental International 40 (2012) 57-82.

The scope of this catalogue:

All most common flame retardants are listed. Chiron offers both technical products (techn.), purified or specifically synthesized ones with purity normally above 98 %, and specific mixes according to international methods or customized for the clients.

Please enquire for custom mixes and custom synthesis or new compounds.

Internal standards:

Chiron offers both deuterated standards, ¹³C labelled, as well as the monofluorinated PBDEs which was developed by Chiron AS.

The Chiron technology for producing monofluorinated PCBs and PBDEs is protected by US patent. 8,481,327 B2 from July 9th, 2013.

Further reading:

Please consult the following issues of the Chiron BMFs (Biomarker Focus) which can be found on the Chiron webpage (www.chiron.no):

- **BMF 10:** PCAs
- **BMF 15:** PBDEs
- **BMF 69:** The RoHS directive
- **BMF 79:** Trixylyl phosphate



CONTENTS



Introduction

Single components

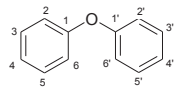
- PBDEs	3
- Natives	3
- 13C12 PBDEs	6
- F-PBDEs	6
- PBBs, Native + Internal standards	8
- BFRs: Brominated flame retardants other than PBDEs and PBBs	9
- Phenyl, benzyl ethers	9
- Phenylethans, PAHs	9
- Phenols	9
- Benzene-derivatives	9
- Cycloalkanes	10
- Bisphenols	10
- Indanes/Bornanes	10
- Phthalates	12
- Triazines	12
- Phosphates	12
- CFRs: Chlorinated flame retardants (other than PCAs)	13
- Phosphates	13
- Bornanes	13
- Bisphenols	13
- Other CFRs	14
- PFRs: Phosphor-phosphate-based flame retardants	15
- Labelled Phosphor-Phosphate based flame retardants	18
- Melamine/triazine) based PFRs	18
- Relevant phosphor containing compounds (native + 13C)	18
- PCAs: Polychlorinated paraffines, SCCPs, MCCPs, LCCPs	21

Mixes

- Phosphor-containing flame retardant mixes	23
- PBB Mixes	23
- PBDE Mixes and Kits, Lake Michigan Study (LMS)	27
- PBDE Mixes, ISO method 22032	28
- PBDE Mixes, EPA methods 1614 and 527	29
- Other PBDE Mixes, Customized Solutions with 2-8 compounds	30
- Other PBDE Mixes, Customized with 9+ compounds	32
- F-PBDE® Mixes, Internal standard mixes	36
- The RoHS directive, PBB- and PBDE mixes	37
- Mixes of PBBs and PBDEs	38
- PCA (SCCP) Mixes	39

Flame Retardant Single Compounds

PBDEs, Polybrominated Diphenyl Ethers



Catalogue No.	Structure	Description	Abbreviation	CAS No.	Conc.	Solvent	Quantity
Native PBDEs:							
8948.12-100-IO		Phenyl ether	Diphenyl ether, "BDE-0"	101-84-8	100 µg/mL	isooctane	1 mL
9124.12-50-IO		2-Bromodiphenyl ether	BDE-1	7025-06-1	50 µg/mL	isooctane	1 mL
8747.12-50-IO		3-Bromodiphenyl ether	BDE-2	6876-00-2	50 µg/mL	isooctane	1 mL
8748.12-50-IO		4-Bromodiphenyl ether	BDE-3	101-55-3	50 µg/mL	isooctane	1 mL
9246.12-50-IO		2,4-Dibromodiphenyl ether	BDE-7	171977-44-9	50 µg/mL	isooctane	1 mL
8749.12-50-IO		3,4'-Dibromodiphenyl ether	BDE-13	83694-71-7	50 µg/mL	isooctane	1 mL
8750.12-50-IO		4,4'-Dibromodiphenyl ether	BDE-15	2050-47-7	50 µg/mL	isooctane	1 mL
8742.12-50-IO		2,2',4-Tribromodiphenyl ether	BDE-17	147217-75-2	50 µg/mL	isooctane	1 mL
1960.12-50-IO		2,3',4-Tribromodiphenyl ether	BDE-25	147217-77-4	50 µg/mL	isooctane	1 mL
1961.12-50-IO		2,4,4'-Tribromodiphenyl ether	BDE-28	41318-75-6	50 µg/mL	isooctane	1 mL
10267.12-50-IO		2',3,4-Tribromodiphenyl ether	BDE-33	147217-78-5	50 µg/mL	isooctane	1 mL
2116.12-50-IO		3,3',4-Tribromodiphenyl ether	BDE-35	147217-80-9	50 µg/mL	isooctane	1 mL
1962.12-50-IO		2,2',4,4'-Tetrabromodiphenyl ether	BDE-47	5436-43-1	50 µg/mL	isooctane	1 mL
1962.12-50-IOx10		2,2',4,4'-Tetrabromodiphenyl ether	BDE-47	5436-43-1	50 µg/mL	isooctane	10 x 1 mL
1962.12-50-IOx20		2,2',4,4'-Tetrabromodiphenyl ether	BDE-47	5436-43-1	50 µg/mL	isooctane	20 x 1 mL
1963.12-50-IO		2,2',4,5'-Tetrabromodiphenyl ether	BDE-49	243982-82-3	50 µg/mL	isooctane	1 mL
1964.12-50-IO		2,3',4,4'-Tetrabromodiphenyl ether	BDE-66	189084-61-5	50 µg/mL	isooctane	1 mL
1965.12-50-IO		2,3',4',6-Tetrabromodiphenyl ether	BDE-71	189084-62-6	50 µg/mL	isooctane	1 mL
1990.12-50-IO		2,4,4',6-Tetrabromodiphenyl ether	BDE-75	189084-63-7	50 µg/mL	isooctane	1 mL
1991.12-50-IO		3,3',4,4'-Tetrabromodiphenyl ether	BDE-77	93703-48-1	50 µg/mL	isooctane	1 mL
1966.12-50-IO		2,2',3,4,4'-Pentabromodiphenyl ether	BDE-85	182346-21-0	50 µg/mL	isooctane	1 mL
1967.12-50-IO		2,2',4,4',5-Pentabromodiphenyl ether	BDE-99	60348-60-9	50 µg/mL	isooctane	1 mL
1968.12-50-IO		2,2',4,4',6-Pentabromodiphenyl ether	BDE-100	189084-64-8	50 µg/mL	isooctane	1 mL
2867.12-50-IO		2,3',4,4',5-Pentachlorodiphenyl ether	BDE-118	446254-80-4	50 µg/mL	isooctane	1 mL
1969.12-50-IO		2,3',4,4',6-Pentabromodiphenyl ether	BDE-119	189084-66-0	50 µg/mL	isooctane	1 mL
1970.12-50-IO		2,2',3,4,4',5-Hexabromodiphenyl ether	BDE-138	182677-30-1	50 µg/mL	isooctane	1 mL
1971.12-50-IO		2,2',4,4',5,5'-Hexabromodiphenyl ether	BDE-153	68631-49-2	50 µg/mL	isooctane	1 mL
1972.12-50-IO		2,2',4,4',5,6'-Hexabromodiphenyl ether	BDE-154	207122-15-4	50 µg/mL	isooctane	1 mL
2652.12-50-IO		2,2',3,4,4',5,6-Heptabromodiphenyl ether	BDE-181	189084-67-1	50 µg/mL	isooctane	1 mL
1973.12-50-IO		2,2',3,4,4',6,6'-Heptabromodiphenyl ether	BDE-183	207122-16-5	50 µg/mL	isooctane	1 mL
11398.12-50-IO		2,2',3,4,4',5',6-Heptabromodiphenyl ether	BDE-184	117948-63-7	50 µg/mL	isooctane	1 mL
1992.12-50-IO		2,3,3',4,4',5,6-Heptabromodiphenyl ether	BDE-190	189084-68-2	50 µg/mL	isooctane	1 mL
11399.12-50-IO		2,3,3',4,4',5',6-Heptabromodiphenyl ether	BDE-191	445255-30-7	50 µg/mL	isooctane	1 mL
12557.12-50-NN	NEW	2,2',3,3',4,4',5,5'-Octabromodiphenyl ether	BDE-194	85446-17-9	50 µg/mL	n-nonane	1 mL
2486.12-50-IO		2,2',3,3',4,4',5,6-Octabromodiphenyl ether	BDE-195	446255-38-5	50 µg/mL	isooctane	1 mL
9135.12-50-IO		2,2',3,3',4,4',5,6'-Octabromodiphenyl ether	BDE-196	446255-39-6	50 µg/mL	isooctane	1 mL
9136.12-50-IO	NEW	2,2',3,3',4,4',6,6'-Octabromodiphenyl ether	BDE-197	117964-21-3	50 µg/mL	isooctane	1 mL
1975.12-50-IO		2,2',3,4,4',5,5',6-Octabromodiphenyl ether	BDE-203	337513-72-1	50 µg/mL	isooctane	1 mL
2647.12-50-IO		2,3,3',4,4',5,5',6-Octabromodiphenyl ether	BDE-205	446255-56-7	50 µg/mL	isooctane	1 mL
10298.12-10MG		Octabromodiphenyl ether, techn.		32536-52-0	neat	neat	10 mg
9033.12-50-IO		2,2',3,3',4,4',5,5',6-Nonabromodiphenyl ether	BDE-206	63387-28-0	50 µg/mL	isooctane	1 mL
9034.12-50-IO		2,2',3,3',4,4',5,6,6'-Nonabromodiphenyl ether	BDE-207	437701-79-6	50 µg/mL	isooctane	1 mL
9035.12-50-IO		2,2',3,3',4,4',5,5',6,6'-Nonabromodiphenyl ether	BDE-208	437701-78-5	50 µg/mL	isooctane	1 mL
1811.12-50-T		Decabromodiphenyl ether	BDE-209	1163-19-5	50 µg/mL	toluene	1 mL
1811.12-5MG		Decabromodiphenyl ether	BDE-209	1163-19-5	neat	neat	5 mg

Flame Retardant Single Compounds

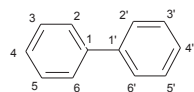
Catalogue No.	Structure	Description	Abbreviation	CAS No.	Conc.	Solvent	Quantity
2653.9-KIT		Lake Michigan Study' PBDE Kit (Including 1961.12-50-IO, 1962.12-50-IO, 1964.12-50-IO, 1966.12-50-IO, 1967.12-50-IO, 1968.12-50-IO, 1970.12-50-IO, 1971.12-50-IO, 1972.12-50-IO)			50 µg/mL	isooctane	kit
8573.8-KIT		ISO 22032 PBDE Kit (Including 1811.12-50-T, 2647.12-50-IO, 1973.12-50-IO, 1971.12-50-IO, 1968.12-50-IO, 1967.12-50-IO, 1962.12-50-IO)			50 µg/mL	assorted	kit
8575.8-KIT		EPA 1614 PBDE Kit (Including 1961.12-50-IO, 1962.12-50-IO, 1967.12-50-IO, 1968.12-50-IO, 1971.12-50-IO, 1972.12-50-IO, 1973.12-50-IO, 1811.12-50-T)			50 µg/mL	assorted	kit
13C12 PBDEs:							
9374.12-50-NN	NEW	2,4,4'-Tribromo[13C12]diphenyl ether	13C12 BDE-28	488710-19-6	50 µg/mL	n-nonane	1.2 mL
9373.12-50-NN	NEW	2,2',4,4'-Tetrabromo[13C12]diphenyl ether	13C12 BDE-47	488710-20-9	50 µg/mL	n-nonane	1.2 mL
12420.12-50-NN	NEW Under dev.	2,3',4,4'-Tetrabromo[13C12]diphenyl ether	13C12 BDE-66	N/A	50 µg/mL	n-nonane	1.2 mL
12421.12-50-NN	NEW Under dev.	2,2',3,4,4'-Pentabromo[13C12]diphenyl ether	13C12 BDE-85	N/A	50 µg/mL	n-nonane	1.2 mL
9372.12-50-NN	NEW Under dev.	2,2',4,4',5-Pentabromo[13C12]diphenyl ether	13C12 BDE-99	488710-21-0	50 µg/mL	n-nonane	1.2 mL
12422.12-50-NN	NEW Under dev.	2,2',4,4',6-Pentabromo[13C12]diphenyl ether	13C12 BDE-100	678997-41-6	50 µg/mL	n-nonane	1.2 mL
12423.12-50-NN	NEW Under dev.	2,2',3,4,4',5-Hexabromo[13C12]diphenyl ether	13C12 BDE-138	1401355-57-4	50 µg/mL	n-nonane	1.2 mL
9371.12-50-NN	NEW Under dev.	2,2',4,4',5,5'-Hexabromo[13C12]diphenyl ether	13C12 BDE-153	488710-22-1	50 µg/mL	n-nonane	1.2 mL
12424.12-50-NN	NEW Under dev.	2,2',4,4',5,6'-Hexabromo[13C12]diphenyl ether	13C12 BDE-154	488710-23-2	50 µg/mL	n-nonane	1.2 mL
9370.12-50-NN	NEW Under dev.	2,2',3,4,4',5',6'-Heptabromo[13C12]diphenyl ether	13C12 BDE-183	488710-24-5	50 µg/mL	n-nonane	1.2 mL
8879.12-50-NN	NEW Under dev.	Decabromo[13C12]diphenyl ether	13C12 BDE-209	562099-68-7	50 µg/mL	n-nonane	1.2 mL
12604.12-50-NN	NEW	4,4'-Dibromo[13C12]diphenyl ether	13C12 BDE-15	488710-17-4	50 µg/mL	n-nonane	1.2 mL
F-PBDE® Internal Standards:							
1604.12-50-IO		2-Fluorodiphenyl ether	2-F-BDE-0	124330-20-7	50 µg/mL	isooctane	1 mL
1605.12-50-IO		4-Fluorodiphenyl ether	4-F-BDE-0	330-84-7	50 µg/mL	isooctane	1 mL
2178.12-K-IO		2,4'-Difluorodiphenyl ether	2,4'-F2-BDE-0	863315-03-1	1000 µg/mL	isooctane	1 mL
3620.12-K-IO		3,3'-Difluorodiphenyl ether	3,3'-F2-BDE-0	1800-48-2	1000 µg/mL	isooctane	1 mL
1608.12-50-IO		3-Bromo-4'-fluorodiphenyl ether	3-F-BDE-2	50904-38-6	50 µg/mL	isooctane	1 mL
2258.12-50-IO		3'-Fluoro-2,4-dibromodiphenyl ether	3'-F-BDE-7	N/A	50 µg/mL	isooctane	1 mL
2257.12-50-IO		3'-Fluoro-3,4-dibromodiphenyl ether	3'-F-BDE-12	N/A	50 µg/mL	isooctane	1 mL
1926.12-50-IO		4'-Fluoro-2,3',4-tribromodiphenyl ether	4'-F-BDE-25	863314-85-6	50 µg/mL	isooctane	1 mL
1927.12-50-IO		4'-Fluoro-2,3',6-tribromodiphenyl ether	4'-F-BDE-27	863314-86-7	50 µg/mL	isooctane	1 mL
2160.12-50-T		2'-Fluoro-2,4,4'-tribromodiphenyl ether	2'-F-BDE-28	876310-22-4	50 µg/mL	toluene	1 mL
2160.12-50-IO		2'-Fluoro-2,4,4'-tribromodiphenyl ether	2'-F-BDE-28	876310-22-4	50 µg/mL	isooctane	1 mL
2161.12-50-T		6-Fluoro-2,2',4,4'-tetrabromodiphenyl ether	6-F-BDE-47	876310-23-4	50 µg/mL	toluene	1 mL
2161.12-50-IO		6-Fluoro-2,2',4,4'-tetrabromodiphenyl ether	6-F-BDE-47	876310-23-4	50 µg/mL	isooctane	1 mL
2506.12-50-T		5,5'-Difluoro-2,2',4,4'-tetrabromodiphenyl ether (2,2',4,4'-Tetrabromo-5,5'-difluorodiphenyl ether)	5,5'-F2-BDE-47	886748-32-9	50 µg/mL	toluene	1 mL
2506.12-50-IO		5,5'-Difluoro-2,2',4,4'-tetrabromodiphenyl ether (2,2',4,4'-Tetrabromo-5,5'-difluorodiphenyl ether)	5,5'-F2-BDE-47	886748-32-9	50 µg/mL	isooctane	1 mL
2162.12-50-IO		6-Fluoro-2,3',4,4'-tetrabromodiphenyl ether	6-F-BDE-66	87310-24-6	50 µg/mL	isooctane	1 mL
1928.12-50-IO		4'-Fluoro-2,3',4,6-tetrabromodiphenyl ether	4'-F-BDE-69	863314-87-8	50 µg/mL	isooctane	1 mL
2503.12-50-IO		5,6-Difluoro-2,2',3,4,4'-pentabromodiphenyl ether (2,2',3,4,4'-Pentabromo-5,6-difluorodiphenyl ether)	5,6-F2-BDE-85	886748-33-0	50 µg/mL	isooctane	1 mL
2505.12-50-IO		3,6-Difluoro-2,2',4,4',5-pentabromodiphenyl ether (2,2',4,4',5-Pentabromo-3,6-difluorodiphenyl ether)	3,6-F2-BDE-99	886748-34-1	50 µg/mL	isooctane	1 mL
2163.12-50-T		3-Fluoro-2,2',4,4',6-pentabromodiphenyl ether	3-F-BDE-100	887401-80-1	50 µg/mL	toluene	1 mL

Flame Retardant Single Compounds

Catalogue No.	Structure	Description	Abbreviation	CAS No.	Conc.	Solvent	Quantity
2163.12-50-IO		3-Fluoro-2,2',4,4',6-pentabromodiphenyl ether	3-F-BDE-100	887401-80-1	50 µg/mL	isooctane	1 mL
2164.12-50-IO		3-Fluoro-2,3',4,4',6-pentabromodiphenyl ether	3-F-BDE-119	876310-26-8	50 µg/mL	isooctane	1 mL
2504.12-50-IO		3,5-Difluoro-2,3',4,4',6-pentabromodiphenyl ether (2,3',4,4',6-Pentabromo-3,5-difluorodiphenyl ether)	3,5-F2-BDE-119	886748-35-2	50 µg/mL	isooctane	1 mL
1929.12-50-T		4'-Fluoro-2,3,3',4,5,6-hexabromodiphenyl ether	4'-F-BDE-160	863314-88-9	50 µg/mL	toluene	1 mL
1929.12-50-IO		4'-Fluoro-2,3,3',4,5,6-hexabromodiphenyl ether	4'-F-BDE-160	863314-88-9	50 µg/mL	isooctane	1 mL
2166.12-50-T		3-Fluoro-2,2',4,4',5,5',6-heptabromodiphenyl ether	3-F-BDE-183	876310-28-0	50 µg/mL	toluene	1 mL
2167.12-50-T		4',6-Difluoro-2,2',3,3',4,5,5',6'-octabromodiphenyl ether	4',6-F2-BDE-199	863314-96-9	50 µg/mL	toluene	1 mL
2168.12-50-IO		4'-Fluoro-2,2',3,3',4,5,5',6'-nonabromodiphenyl ether	4'-F-BDE-208	876310-29-1	50 µg/mL	isooctane	1 mL
2168.12-50-T		4'-Fluoro-2,2',3,3',4,5,5',6'-nonabromodiphenyl ether	4'-F-BDE-208	876310-29-1	50 µg/mL	toluene	1 mL
9751.7-KIT		Lake Michigan Study F-PBDEs® Kit (including 2160.12-50-T, 2161.12-50-T, 2162.12-50-IO, 2503.12-50-IO, 2505.12-50-IO, 2163.12-50-T, 1926.12-50-T)			50 µg/mL	assorted	kit
8574.8-KIT		ISO 22032 F-PBDE® Kit (Including: 2160.12-50-T, 2161.12-50-IO, 2505.12-50-IO, 2163.12-50-T, 1929.12-50-T, 2166.12-50-T, 2167.12-50-T, 2168.12-50-T)			50 µg/mL	assorted	kit
Other:							
2764.12-100-AN		4,4'-Diaminodiphenyl ether		101-80-4	100 µg/mL	acetonitrile	1 mL
2764.12-1ML		4,4'-Diaminodiphenyl ether		101-80-4	neat	neat	1 mL

Flame Retardant Single Compounds

PBBs, Polybrominated Biphenyls



Catalogue No.	Structure	Description	Abbreviation	CAS No.	Conc.	Solvent	Quantity
Native PBBs (Polybromobiphenyls):							
3089.12-50-IO		2-Bromobiphenyl	BB-1	2052-07-5	50 µg/mL	isooctane	1 mL
3090.12-50-IO		3-Bromobiphenyl	BB-2	2113-57-7	50 µg/mL	isooctane	1 mL
3091.12-50-IO		4-Bromobiphenyl	BB-3	92-66-0	50 µg/mL	isooctane	1 mL
3092.12-50-IO		2,2'-Dibromobiphenyl	BB-4	13029-09-9	50 µg/mL	isooctane	1 mL
3093.12-50-IO		2,4-Dibromobiphenyl	BB-7	53592-10-2	50 µg/mL	isooctane	1 mL
3094.12-50-IO		2,5-Dibromobiphenyl	BB-9	57422-77-2	50 µg/mL	isooctane	1 mL
3095.12-50-IO		2,6-Dibromobiphenyl	BB-10	59080-32-9	50 µg/mL	isooctane	1 mL
3096.12-50-IO		4,4'-Dibromobiphenyl	BB-15	92-86-4	50 µg/mL	isooctane	1 mL
3097.12-50-IO		2,2',5-Tribromobiphenyl	BB-18	59080-34-1	50 µg/mL	isooctane	1 mL
3098.12-50-IO		2,3',5-Tribromobiphenyl	BB-26	59080-35-2	50 µg/mL	isooctane	1 mL
2664.12-50-IO		2,4,5-Tribromobiphenyl	BB-29	115245-07-3	50 µg/mL	isooctane	1 mL
2744.12-35-IO		2,4,6-Tribromobiphenyl	BB-30	59080-33-0	35µg/mL	isooctane	1 mL
2744.12-50-IO		2,4,6-Tribromobiphenyl	BB-30	59080-33-0	50 µg/mL	isooctane	1 mL
3099.12-50-IO		2,4',5-Tribromobiphenyl	BB-31	59080-36-3	50 µg/mL	isooctane	1 mL
3101.12-50-IO		3,4,5-Tribromobiphenyl	BB-38	115245-08-4	50 µg/mL	isooctane	1 mL
3102.12-50-IO		2,2',4,5'-Tetrabromobiphenyl	BB-49	60044-24-8	50 µg/mL	isooctane	1 mL
3103.12-50-IO		2,2',5,5'-Tetrabromobiphenyl	BB-52	59080-37-4	50 µg/mL	isooctane	1 mL
3104.12-50-IO		2,2',5,6'-Tetrabromobiphenyl	BB-56	60044-25-9	50 µg/mL	isooctane	1 mL
10266.12-50-IO		3,3',4,4'-Tetrabromobiphenyl	BB-77	77102-82-0	50 µg/mL	isooctane	1 mL
3105.12-50-IO		3,3',5,5'-Tetrabromobiphenyl	BB-80	16400-50-3	50 µg/mL	isooctane	1 mL
3106.12-50-IO		2,2',4,5,5'-Pentabromobiphenyl	BB-101	67888-96-4	50 µg/mL	isooctane	1 mL
3107.12-50-IO		2,2',4,5',6-Pentabromobiphenyl	BB-103	59080-39-6	50 µg/mL	isooctane	1 mL
10123.12-50-IO		3,3',4,5,5'-Pentabromobiphenyl	BB-126	81902-33-2	50 µg/mL	isooctane	1 mL
3108.12-50-HX		2,2',4,4',5,5'-Hexabromobiphenyl	BB-153	59080-40-9	50 µg/mL	n-hexane	1 mL
3110.12-50-IO		2,2',4,4',6,6'-Hexabromobiphenyl	BB-155	59261-08-4	50 µg/mL	isooctane	1 mL
3109.12-10-CY		3,3',4,4',5,5'-Hexabromobiphenyl	BB-169	60044-26-0	10 µg/mL	cyclohexane	1 mL
3109.12-10-ME		3,3',4,4',5,5'-Hexabromobiphenyl	BB-169	60044-26-0	10 µg/mL	methanol with 1% DCM	1 mL
10174.12-10-IO		2,2',3,4,4',5,5'-Heptabromobiphenyl	BB-180	67733-52-2	10 µg/mL	isooctane	1 mL
9534.12-50-IO		2,3,3',4,4',5,5'-Heptabromobiphenyl	BB-189	88700-06-5	50 µg/mL	isooctane	1 mL
9716.12-50-IO		2,2',3,3',4,4',5,5'-Octabromobiphenyl	BB-194	67889-00-3	50 µg/mL	isooctane	1 mL
2679.12-50-IO		Octabromobiphenyl, techn. (hepta+octa+nona)	BB-mix	27858-07-7	50 µg/mL	isooctane	1 mL
9536.12-50-IO		2,2',3,3',4,4',5,5',6-Nonabromobiphenyl	BB-206	69278-62-2	50 µg/mL	isooctane	1 mL
2677.12-50-IO		Decabromobiphenyl	BB-209	13654-09-6	50 µg/mL	isooctane	1 mL
2677.12-100MG					neat	neat	100 mg
Deuterated BBs (Internal Standards):							
12032.12-100-IO	NEW	4,4'-Dibromobiphenyl-d8	BB-15-d8	80523-79-1	100 µg/mL	isooctane	1 mL
12032.12-100-IOx5					100 µg/mL	isooctane	5 x 1 mL
F-PBBs (Fluorinated Bromobiphenyl Internal Standards):							
2891.12-100-IO		4,4'-Dibromooctafluorobiphenyl	F-BB, DBOFB	10386-84-2	100 µg/mL	isooctane	1 mL
2891.12-2K-DC					2000µg/mL	dichloromethane	1 mL

Flame Retardant Single Compounds

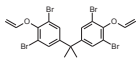
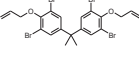
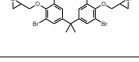
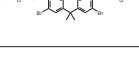
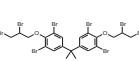
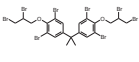
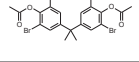
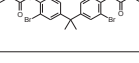
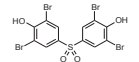
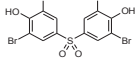
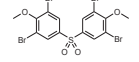
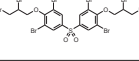
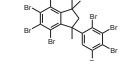
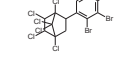
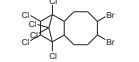
Brominated Flame Retardants (BFRs) other than PBDEs and PBBs

Catalogue No.	Structure	Description	Abbreviation	CAS No.	Conc.	Solvent	Quantity
Phenyl-, Benzyl Ethers:							
8882.9-50-IO		2,4,6-Tribromophenylallyl ether	TBP-AE	3278-89-5	50 µg/mL	isooctane	1 mL
11105.9-50-IO		Pentabromophenylallyl ether	PBP-AE	3555-11-1	50 µg/mL	isooctane	1 mL
8883.9		2,3-Dibromopropyl-2,4,6-tribromophenyl ether	TBP-DBPE	35109-60-5	1000 µg/mL	methanol	1 mL
10776.9		2-Bromoallyl-2,4,6-tribromophenyl ether	BATE	99717-56-3	50 µg/mL	isooctane	1 mL
1812.18-50-CY		Tetradecabromo-1,4-diphenoxybenzene	4'-PeBPOBDE208	58965-66-5	50 µg/mL	cyclohexane	1 mL
11106.14		Decabromodibenzyl ether	DBDBE, BDBE-209	497107-13-8	Please enquire		
8757.14-50-T		1,2-Bis(2,4,6-tribromophenoxy)ethane	BTBPE	37853-59-1	50 µg/mL	toluene	1 mL
Phenylethanes, PAHs:							
2670.14-50-CB		Decabromodiphenylethane	DBDPE; BDPE-209	84852-53-9	50 µg/mL	chlorobenzene	1 mL
11351.16-10MG		1,3,6,8-Tetrabromopyrene		128-63-2	neat	neat	10 mg
Phenols:							
2061.6-K-IP		2,4-Dibromophenol	DBP	615-58-7	1000 µg/mL	isopropanol	1 mL
2060.6-K-IP		2,4,6-Tribromophenol	TBP	118-79-6	1000 µg/mL	isopropanol	1 mL
2672.6-50-IO		2,3,4,5,6-Pentabromophenol	PBP	608-71-9	50 µg/mL	isopropanol	1 mL
Alcohols:							
2671.5-50-IP		2,2-Bis(bromomethyl)-1,3-propanediol; Dibromoneopentylglycol	DBNPG	3296-90-0	50 µg/mL	isopropanol	1 mL
11107.5-50-T		3-Bromo-2,2-bis(bromomethyl)-1-propanol	TBNPA	1522-92-5	50 µg/mL	toluene	1 mL
Benzene-Derivatives:							
10777.8		Dibromostyrene (unspecified bromination)	DBS	31780-26-4	Please enquire		
10778.8		2,2-Dibromostyrene		7436-90-0	1000 µg/mL	isooctane	1 mL
10779.8-K-IO		1,2-Dibromoethylbenzene		93-52-7	1000 µg/mL	isooctane	1 mL
11108.7-50-ME		1,2,3,4-Tetrabromo-5-chloro-6-methylbenzene	TBCT	39569-21-6	50 µg/mL	methanol	1 mL
10449.8-50-ME		1,2,4,5-Tetrabromo-3,6-dimethylbenzene	TBX	23488-38-2	50 µg/mL	methanol	1 mL
2673.7-50-IO		Pentabromotoluene	PBT	87-83-2	50 µg/mL	isooctane	1 mL

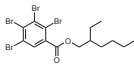
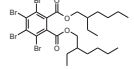
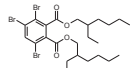
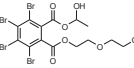
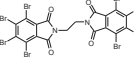
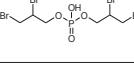
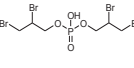
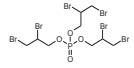
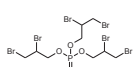
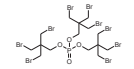
Flame Retardant Single Compounds

Catalogue No.	Structure	Description	Abbreviation	CAS No.	Conc.	Solvent	Quantity
Benzene-Derivatives (continued):							
8881.8-50-IO		Pentabromoethylbenzene	PBEB	85-22-3	50 µg/mL	isooctane	1 mL
11109.7		Pentabromobenzylchloride	PBBC	58495-09-3	neat	neat	100 mg in sealed ampoule
11138.6-50-ME		1,2,3,4,5-Pentabromobenzene	PBBZ	608-90-2	50 µg/mL	methanol	1 mL
2678.6-50-IO		Hexabromobenzene	HBB	87-82-1	50 µg/mL	isooctane	1 mL
11110.7-100MG		Pentabromobenzylbromide	PBBB	38521-51-6	neat	neat	100 mg in sealed ampoule
11111.10-50-ME		Pentabromobenzyl acrylate	PBB-Acr	59447-55-1	50 µg/mL	methanol	1 mL
11112.21		2,4,6-Tribromo-3-(tetrabromopentadecyl) phenol	TBPD-TBP	168434-45-5	Please enquire		
Cycloalkanes:							
1894.6-50-IO		1,2,3,4,5,6-Hexabromocyclohexane	HBCH	1837-91-8	50 µg/mL	isooctane	1 mL
11113.8-50-ME		1,2-Dibromo-4-(1,2-dibromomethyl) cyclohexane	DBE-DBCH	3322-93-8	50 µg/mL	methanol	1 mL
11114.8-50-ME		1,2,5,6-Tetrabromocyclooctane	TBCD	3194-57-8	50 µg/mL	methanol	1 mL
1893.12-K-T		1,2,5,6,9,10-Hexabromocyclododecane, isomer mixture	HBCDD, Isomer mixture	3194-55-6	1000 µg/mL	toluene	1 mL
10018.12-50-T		α-Hexabromocyclododecane, please enquire	α-HBCDD	134237-50-6	50 µg/mL	toluene	1 mL
11149.12-50-T		β-Hexabromocyclododecane, please enquire	β-HBCDD	134237-51-7	50 µg/mL	toluene	1 mL
11150.12-50-T		γ-Hexabromocyclododecane, please enquire	γ-HBCDD	134237-52-8	50 µg/mL	toluene	1 mL
11151.12-50-T		δ-Hexabromocyclododecane, please enquire	δ-HBCDD	65701-47-5	50 µg/mL	toluene	1 mL
Bisphenols:							
2674.15-50-IO		3,3',5,5'-Tetrabromobisphenol A	TBBPA	79-94-7	50 µg/mL	isooctane	1 mL
12548.12-50-T		3,3',5,5'-Tetrabromobisphenol A-d4	TBBPA-d4	N/A	50 µg/mL	toluene	1 mL
12549.12-50-T		3,3',5,5'-Tetrabromobisphenol A-13C12	TBBPA-13C12	1352876-39-1	50 µg/mL	toluene	1 mL
2675.17-50-IO		3,3',5,5'-Tetrabromobisphenol A dimethyl ether	TBBPA-BME	37853-61-5	50 µg/mL	isooctane	1 mL
8772.19-50-IO		3,3',5,5'-Tetrabromobisphenol A bis(2-hydroxyethyl) ether	TBBPA-BHEE	4162-45-2	50 µg/mL	isooctane	1 mL

Flame Retardant Single Compounds

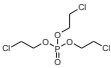
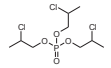
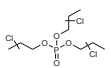
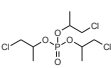
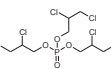
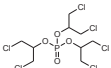
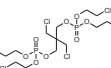
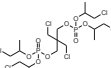
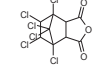
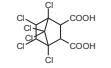
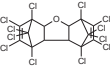
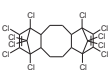
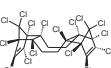
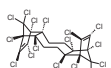
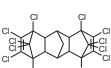
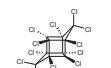
Catalogue No.	Structure	Description	Abbreviation	CAS No.	Conc.	Solvent	Quantity
Bisphenols (continued):							
8887.21-50-T		3,3',5,5'-Tetrabromobisphenol A diallyl ether	TBBPA-BAE	25327-89-3	50 µg/mL	toluene	1 mL
11116.21-50-T		3,3',5,5'-Tetrabromobisphenol A bisacrylate	TBPPA-BA	55205-38-4	50 µg/mL	toluene	1 mL
10589.21-50-T		3,3',5,5'-Tetrabromobisphenol A diglycidyl ether	TBBPA-BGE	3072-84-2	50 µg/mL	toluene	1 mL
11117.25-50-T		3,3',5,5'-Tetrabromobisphenol A bis(2-hydroxyethyl) ether bisacrylate	TBBPA-BHEEBA	66710-97-2	50 µg/mL	toluene	1 mL
8751.21-50-T		2,2-Bis[3,5-dibromo-4-(2,3-dibromopropoxy)phenyl]propane, purified	BDBPT; Tetrabromobisphenol A Bis(2,3-dibromopropyl) ether	21850-44-2	50 µg/mL	toluene	1 mL
8751.21-K-T		2,2-Bis[3,5-dibromo-4-(2,3-dibromopropoxy)phenyl]propane	BDBPT; Tetrabromobisphenol A Bis(2,3-dibromopropyl) ether	21850-44-2	1000 µg/mL	toluene	1 mL
10454.21-100MG		2,2-Bis[3,5-dibromo-4-(2,3-dibromopropoxy)phenyl]propane, techn.	BDBPT; Tetrabromobisphenol A Bis(2,3-dibromopropyl) ether	21850-44-2	neat	neat	100 mg
11118.19		3,3',5,5'-Tetrabromobisphenol A diacetate	TBBPA-BOAc	33798-02-6	Please enquire		
11119.21		3,3',5,5'-Tetrabromobisphenol A bispropionate	TBBPA-BP	37419-42-4	Please enquire		
8768.X-1G		2,4,6-Tribromophenylterminated tetrabromobisphenol-A carbonate oligomer		71342-77-3	neat	neat	1 g
8767.22-1G		Phenoxyterminated carbonate oligomer of tetrabromobisphenol A		94334-64-2	neat	neat	1 g
10481.12-50-T		3,3',5,5'-Tetrabromobisphenol S, 98%	TBBPS; 4,4'-Sulfonylbis(2,6-dibromophenol)	39635-79-5	50 µg/mL	toluene	1 mL
10457.12-K-T		3,3',5,5'-Tetrabromobisphenol S, techn.	TBBPS; 4,4'-Sulfonylbis(2,6-dibromophenol)	39635-79-5	1000 µg/mL	toluene	1 mL
10457.12-10MG		3,3',5,5'-Tetrabromobisphenol S, techn.	TBBPS; 4,4'-Sulfonylbis(2,6-dibromophenol)	39635-79-5	neat	neat	1 mL
10590.14-50-T		3,3',5,5'-Tetrabromobisphenol S dimethyl ether	TBBPS-BME	70156-79-5	50 µg/mL	toluene	1 mL
10451.18-100MG		3,3',5,5'-Tetrabromobisphenol S bis(2,3-dibromopropyl ether)	TBBPS-BDBPE	42757-55-1	neat	neat	100 mg
Indanes/Bornanes:							
11120.18-50-T		Octabromotrimethylphenylindane	OBTMPI	1084889-51-9	50 µg/mL	toluene	1 mL
10081.13-50-T		1,2,3,4,7,7-Hexachloro-5-(tetrabromophenyl)-2-bornane	HCTBPH	34571-16-9	50 µg/mL	toluene	1 mL
11121.14		7,8-Dibromo-1,2,3,4,11,11-hexachloro-1,4a,5,6,7,8,9,10,10a-decahydro-1,4-methanobenzocyclooctane	DBHCTD	51936-55-1	Please enquire		

Flame Retardant Single Compounds

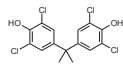
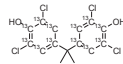
Catalogue No.	Structure	Description	Abbreviation	CAS No.	Conc.	Solvent	Quantity
Phthalates:							
8886.15-K-T		2-Ethylhexyl-2,3,4,5-tetrabromobenzoate	EH-TBB	183658-27-7	1000 µg/mL	toluene	1 mL
2676.8-50-IO		3,4,5,6-Tetrabromophthalic anhydride	TEBP-Anh	632-79-1	50 µg/mL	isooctane	1 mL
2676.8-10MG					neat	neat	10 mg
2676.8-100MG					neat	neat	100 mg
2676.8-250MG					neat	neat	250 mg
10450.8-10MG		3,4,5,6-Tetrabromophthalic acid	TEBP	13810-83-8	neat	neat	10 mg
10450.8-100MG					neat	neat	100 mg
10450.8-250MG					neat	neat	250 mg
8885.24-10MG		Bis(2-ethylhexyl)tetrabromo phthalate	BEH-TEBP	26040-51-7	neat	neat	10 mg
8885.24-100MG					neat	neat	100 mg
10775.24		Bis(2-ethylhexyl)-3,4,6-tribromo phthalate	BEH-TBP	122857-50-5	Please enquire		
11122.14		2-(2-Hydroxyethoxy)ethyl 2-hydroxypropyl-tetrabromo phthalate	HEEMP-TEBP	20566-35-2	Please enquire		
8884.18-10MG		N,N'-Ethylene bis(tetrabromophthalimide)	EBTEBPI	32588-76-4	neat	neat	10 mg
Triazines:							
11123.24-50-T		2,4,6-Tris(2,4,6-tribromophenoxy)-1,3,5-triazine	TTBP-TAZ	25713-60-4	50 µg/mL	toluene	1 mL
11124.12-50-T		1-(2,3-Dibromopropyl)-3,5-di-2-propene-1-yl-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione	DBP-TAZTO	57829-89-7	50 µg/mL	toluene	1 mL
11125.12		1,3-Bis(2,3-dibromopropyl)-5-(2-propene-1-yl)-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione	BDBP-TATZO	75795-16-3	Please enquire		
11126.12-50-T		1,3,5-Tris(2,3-dibromopropyl)-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione	TDBP-TATZO	52434-90-9	50 µg/mL	toluene	1 mL
Phosphates:							
8764.6-50-IO		Bis(2,3-dibromopropyl) phosphate, techn.	BDBPP	5412-25-9	50 µg/mL	isooctane	1 mL
8764.6-10MG					neat	neat	10 mg
10108.6-50-IO		Bis(2,3-dibromopropyl) phosphate, 99% (purified)	BDBPP	5412-25-9	50 µg/mL	isooctane	1 mL
10108.6-10MG					neat	neat	10 mg
10107.9-50-ME		Tris(2,3-dibromopropyl) phosphate, 98%	TDBPP	126-72-7	50 µg/mL	methanol	1 mL
10107.9-10MG					neat	neat	10 mg
8586.9-50-ME		Tris(2,3-dibromopropyl) phosphate, techn.	TDBPP	126-72-7	50 µg/mL	methanol	1 mL
8586.9-100MG					neat	neat	100 mg
8586.9-1G					neat	neat	1 g
11127.15		3-Bromo-2,2-bis(bromomethyl)-1-propanol 1,1',1''-phosphate	TTBNPP	N/A	Please enquire		

Flame Retardant Single Compounds

Chlorinated Flame Retardants (CFRs) other than PCAs

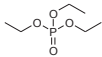
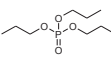
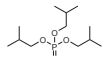
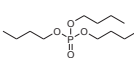
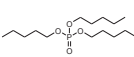
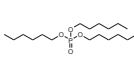
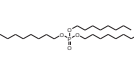
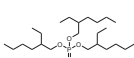
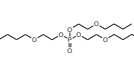
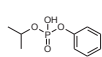
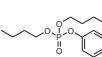
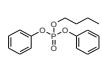
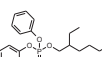
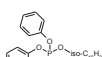
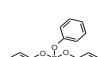
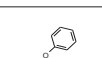
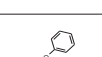
Catalogue No.	Structure	Description	Abbreviation	CAS No.	Conc.	Solvent	Quantity
Phosphates:							
8436.6-1G		Tris(2-chloroethyl) phosphate	TCEP	115-96-8	neat	neat	1 g
8774.9-50-T		Tris(2-chloropropyl) phosphate	TDCPP	6145-73-9	50 µg/mL	toluene	1 mL
8774.9-10MG					neat	neat	10 mg
8457.9-K-T		Tris(monochloropropyl) phosphate, isomer mixture	TCPP, isomer mixtue	26248-87-3	50 µg/mL	toluene	1 mL
8457.9-1G					neat	neat	1 g
11128.9-50-T		Tris(1-chloro-2-propyl) phosphate (Tris(2-chloroisopropyl) phosphate)	TCIPP	13674-84-5	50 µg/mL	toluene	1 mL
11128.9-10MG						neat	10 mg
8775.9-K-ME		Tris(2,3-dichloropropyl) phosphate	TDCPP	78-43-3	1000 µg/mL	methanol	1 mL
8775.9-100MG						neat	100 mg
8505.9-1G		Tris(1,3-dichloro-2-propyl) phosphate	TDCIPP	13674-87-8	neat	neat	1 g
11129.11-50-T		2,2-Bis(chloromethyl)-1,3-propandiol bis[bis(2-chloroethyl) phosphate]	BMCP-BCEP	38051-10-4	50 µg/mL	toluene	1 mL
11130.15		2,2-Bis(chloromethyl)-1,3-propandiol bis[bis(2-chloroethyl) phosphate]	BMCMP-BCMEP	1047637-37-5	Please enquire		
Bornanes:							
11139.15-50-T		1,4,5,6,7,7-Hexachlorobicyclo[2.2.1]hept-5-ene-2,3-dicarboxylic anhydride	HCBCH-DCA _{nh}	115-27-5	50 µg/mL	toluene	1 mL
11140.9-50-T		1,4,5,6,7,7-Hexachlorobicyclo[2.2.1]hept-5-ene-2,3-dicarboxylic acid	HCBCH-DCA	115-28-6	50 µg/mL	toluene	1 mL
11131.14-50-T		1,2,3,4,6,7,8,9,10,10,11,11-Dodecachloro-14,4a,5a,6,9,9a,9b-octahydro-1,4,6,9-dimethanodibenzofuran	DDC-DBF	31107-44-5	50 µg/mL	toluene	1 mL
8770.18-50-T		Dechlorane Plus; 1,2,3,4,5,6,7,8,12,12,13,13-Dodecachloro-1,4,4a,5,8,8a,9,9a,10,10a-decahydro-1,4:5,8:9,10-tetramethanoanthracene	DDC-CO	13560-89-9	50 µg/mL	toluene	1 mL
11141.18-50-T		syn-Dechlorane Plus	syn DDC-CO	135821-03-3	50 µg/mL	toluene	1 mL
11142.18-50-T		anti-Dechlorane Plus	anti DDC-CO	135821-74-8	50 µg/mL	toluene	1 mL
11132.17		1,2,3,4,5,6,7,8,12,12,13,13-Dodecachloro-1,4,4a,5,8,8a,9,9a,10,10a-decahydro-1,2,4:5,8:9,10-trimethanoanthracene	DDC-Ant	13560-92-4	Please enquire		
3457.10-100-AN		Perchloropentacyclodecane	MIREX	2385-85-5	100 µg/mL	acetonitrile	1 mL
3457.10-10MG					neat	neat	10 mg

Flame Retardant Single Compounds

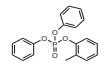
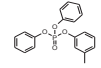
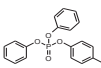
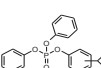
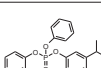
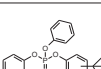
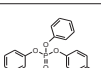
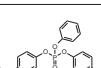
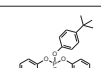
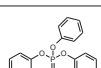
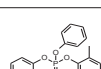
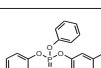
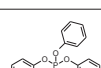
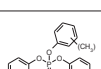
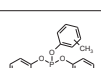
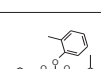
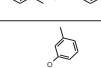
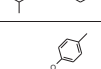
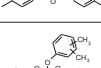
Catalogue No.	Structure	Description	Abbreviation	CAS No.	Conc.	Solvent	Quantity
Bisphenols:							
12549.12-50-T		3,3',5,5'-Tetrachlorobisphenol A	TCBPA	1352876-39-1	50 µg/mL	toluene	1 mL
12550.12-50-T		3,3',5,5'-Tetrachlorobisphenol A-13C12	TCBPA-13C12	79-95-8	50 µg/mL	toluene	1 mL
Other CFCs:							
11133.8-10MG		Tetrachlorophthalic anhydride	TECP-Anh	117-08-8	neat	neat	10 mg
11134.5		Hexachlorocyclopentadiene	HCCPD	77-47-4	Please enquire		

Flame Retardant Single Compounds

Phosphor-Phosphate-Based Flame Retardants, PFCs

Catalogue No.	Structure	Description	Abbreviation	CAS No.	Conc.	Solvent	Quantity
1400.3-K-IO		Trimethyl phosphate	TMP	512-56-1	1000 µg/mL	isooctane	1 mL
8026.6-K-IO		Triethyl phosphate	TEP	78-40-0	1000 µg/mL	methanol	1 mL
8027.9-K-IO		Tri-n-propyl phosphate	TPP	513-08-6	1000 µg/mL	methanol	1 mL
3966.12-K-IO		Triisobutyl phosphate	TIBP	126-71-6	1000 µg/mL	methanol	1 mL
1399.12-K-IO		Tri-n-butyl phosphate	TBP	126-73-8	1000 µg/mL	methanol	1 mL
11236.15-K-ME		Tri-n-pentyl phosphate	TPeP	2528-38-3	1000 µg/mL	methanol	1 mL
10781.18-K-ME		Tri-n-hexyl phosphate	THP	2528-39-4	1000 µg/mL	methanol	1 mL
10782.24-K-ME		Tri-n-octyl phosphate (see also 9489.24)	TOP	1806-54-8	1000 µg/mL	methanol	1 mL
9489.24-K-ME		Tris(2-ethylhexyl) phosphate	TEHP	78-42-2	1000 µg/mL	methanol	1 mL
9496.18-1G		Tris(2-butoxyethyl) phosphate	TBOEP	78-51-3	neat	neat	1 g
11135.9-100-IO		Isopropylphenyl phosphate	IPPP	46355-07-1	100 µg/mL	isooctane	1 mL
9562.14-K-IO		Dibutylphenyl phosphate	DBPhP	2528-36-1	1000 µg/mL	isooctane	1 mL
10110.12-50-IO		9,10-Dihydro-9-oxa-10-phospha-phenanthrene-10-oxide	DOPO	35948-25-5	50 µg/mL	isooctane	1 mL
10110.12-10MG					neat	neat	10 mg
9561.16-K-IO		Butyldiphenyl phosphate	DPhBP	2752-95-6	1000 µg/mL	isooctane	1 mL
9490.20-1G		2-Ethylhexyldiphenyl phosphate	EHDP	1241-94-7	neat	neat	1 g
11235.22-50-IO		Isodecyldiphenyl phosphate		29761-21-5	50 µg/mL	isooctane	1 mL
2138.18-K-IO		Triphenyl phosphate	TPHP	115-86-6	1000 µg/mL	isooctane	1 mL
10453.19-100MG		Diphenyltolyl phosphate, techn. (= "Cresyldiphenyl phosphate")	DPMP (Diphenyl methylphenyl phosphate, "CDP")	26444-49-5	neat	neat	100 mg
3967.19-50-T		Diphenyltolyl phosphate - purified technical mixture of o-,m-,p-tolyl isomers	DPMP ("CDP")	26444-49-5	50 µg/mL	toluene	1 mL

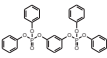
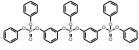
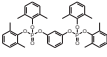
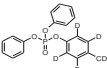
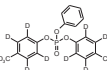
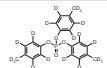
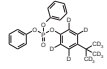
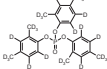
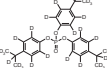
Flame Retardant Single Compounds

Catalogue No.	Structure	Description	Abbreviation	CAS No.	Conc.	Solvent	Quantity
11438.19-100-IO		Diphenyl-o-tolyl phosphate	o-DPMP, Diphenyl-2-tolyl phosphate	5254-12-6	100 µg/mL	isooctane	1 mL
11437.19-100-IO		Diphenyl-m-tolyl phosphate	m-DPMP, Diphenyl-3-tolyl phosphate	69500-28-3	100 µg/mL	isooctane	1 mL
11436.19-100-IO		Diphenyl-p-tolyl phosphate	p-DPMP, Diphenyl-4-tolyl phosphate	78-31-9	100 µg/mL	isooctane	1 mL
11839.21-100-IO		Diphenyl isopropylphenyl phosphate, techn. isomer mixture	DPIPP	28108-99-8	100 µg/mL	isooctane	1 mL
11839.21-K-IO					1000 µg/mL	isooctane	1 mL
11839.21-100MG					neat	neat	100 mg
11445.21-100-IO		Diphenyl-3-isopropylphenyl phosphate	3-IPDP (DPIPP)	69515-46-4	100 µg/mL	isooctane	1 mL
10452.22-100MG		<i>tert</i> -Butylphenyldiphenyl phosphate, techn. isomer mixture	BDPP (BDPPP)	56803-37-3	neat	neat	100 mg
10780.22-100-IO		4- <i>tert</i> -Butylphenyldiphenyl phosphate	4-BDPP (4-BP-DPP)	981-40-8	100 µg/mL	isooctane	1 mL
12310.26-50-IO		Bis(4- <i>tert</i> -butylphenyl)phenyl phosphate	4-BBPPP	115-87-7	50 µg/mL	isooctane	1 mL
12311.30-50-IO		Tris(4- <i>tert</i> -butylphenyl) phosphate	4-TBPP	78-33-1	50 µg/mL	isooctane	1 mL
8738.20-K-IO		Ditolylphenyl phosphate - Mixture of <i>o</i> -, <i>m</i> -, <i>p</i> -tolyl isomers		N/A	1000 µg/mL	isooctane	1 mL
11438.19-100-IO		Diphenyl-o-tolyl phosphate	o-DPMP, Diphenyl-2-tolyl phosphate	5254-12-6	100 µg/mL	isooctane	1 mL
11437.19-100-IO		Diphenyl-m-tolyl phosphate	m-DPMP, Diphenyl-3-tolyl phosphate	69500-28-3	100 µg/mL	isooctane	1 mL
11436.19-100-IO		Diphenyl-p-tolyl phosphate	p-DPMP, Diphenyl-4-tolyl phosphate	78-31-9	100 µg/mL	isooctane	1 mL
8739.19-100MG		Phenyl/Tolyl phosphates - Mixture of analogues - with detailed CoA		N/A	neat	neat	100 mg
2137.21-K-IO		Tritolyl phosphate (isomer mixture of <i>ortho</i> , <i>meta</i> , and <i>para</i>)	TMPP	1330-78-5	1000 µg/mL	isooctane	1 mL
2135-K-IO		Tri- <i>o</i> -tolyl phosphate	ToTP	78-30-8	1000 µg/mL	isooctane	1 mL
2134.21-K-IO		Tri- <i>m</i> -tolyl phosphate	TmTP	563-04-2	1000 µg/mL	isooctane	1 mL
2136.21-K-IO		Tri- <i>p</i> -tolyl phosphate	TpTP	78-32-0	1000 µg/mL	isooctane	1 mL
10265.24-K-IO		Trixylyl phosphate, technical mixture	TXP	25155-23-1	1000 µg/mL	isooctane	1 mL
10265.24-50MG		Trixylyl phosphate, technical mixture	TXP	25155-23-1	neat	neat	50 mg

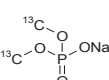
Flame Retardant Single Compounds

Catalogue No.	Structure	Description	Abbreviation	CAS No.	Conc.	Solvent	Quantity
10279.24-100-IO		Trixylyl phosphate, purified ion m/z 410 (hexamethyl = TXP)	TXP	25155-23-1	100 µg/mL	isooctane	1 mL
11214.21-100-IO		Trixylyl phosphate, purified ion m/z 368 (trimethyl)	TXP-3xMethyl	N/A	100 µg/mL	isooctane	1 mL
11215.22-100-IO		Trixylyl phosphate, purified ion m/z 382 (tetramethyl)	TXP-2xMethyl	N/A	100 µg/mL	isooctane	1 mL
11216.23-100-IO		Trixylyl phosphate, purified ion m/z 396 (pentamethyl)	TXP-1xMethyl	N/A	100 µg/mL	isooctane	1 mL
11217.25-100-IO		Trixylyl phosphate, purified ion m/z 424 (heptamethyl)	TXP+1xMethyl	N/A	100 µg/mL	isooctane	1 mL
11143.24-K-IO		Tris(2,3-dimethylphenyl) phosphate	2,3-TXP	65695-97-8	1000 µg/mL	isooctane	1 mL
11144.24-K-IO		Tris(2,4-dimethylphenyl) phosphate	2,4-TXP	3862-12-2	1000 µg/mL	isooctane	1 mL
11145.24-K-IO		Tris(2,5-dimethylphenyl) phosphate	2,5-TXP	19074-59-0	1000 µg/mL	isooctane	1 mL
11146.24-K-IO		Tris(2,6-dimethylphenyl) phosphate	2,6-TXP	121-06-2	1000 µg/mL	isooctane	1 mL
11147.24-K-IO		Tris(3,4-dimethylphenyl) phosphate	3,4-TXP	3862-11-1	1000 µg/mL	isooctane	1 mL
11148.24-K-IO		Tris(3,5-dimethylphenyl) phosphate	3,5-TXP	25653-16-1	1000 µg/mL	isooctane	1 mL
8777.27-100-IO		Isopropylated trisphenyl phosphate (Phenol, isopropylated, phosphate) <i>A detailed analytical certificate stating the degree of isopropylation is included</i>	TIPPP	68937-41-7	100 µg/mL	isooctane	1 mL
8777.27-1G					neat	neat	1 g
11234.27-100-IO		Tris(2-isopropylphenyl) phosphate	2-TIPPP	64532-95-2	100 µg/mL	isooctane	1 mL
11441.27-100-IO		Tris(3-isopropylphenyl) phosphate	3-TIPPP	72668-27-0	100 µg/mL	isooctane	1 mL
11136.27-100-IO		Tris(4-isopropylphenyl) phosphate	4-TIPPP	2502-15-0	100 µg/mL	isooctane	1 mL
12308.28-50-IO		Bis(2,4-di-tert-butylphenyl) phosphate	bDtBPP	69284-93-1	50 µg/mL	isooctane	1 mL
12309.42-50-T		Tris(2,4-di-tert-butylphenyl) phosphate	TDtBPP	95906-11-9	50 µg/mL	toluene	1 mL
10084.39-50-ME		Bisphenol A bis(diphenyl) phosphate, 99%	BPA-BDPP; BDP	5945-33-5	50 µg/mL	methanol	1 mL
8756.X-100MG		Bisphenol A bis(diphenyl) phosphate, techn.	BPA-BDPP; BDP, techn.	5945-33-5 / 181028-79-5 (techn.)	neat	neat	100 mg
10458.30-50-ME		Tetraphenylrecorcinol bis(diphenyl) phosphate, 99% (LC)	PBDPP; RDP	57583-54-7	50 µg/mL	methanol	1 mL

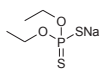
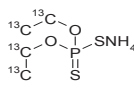
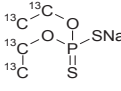
Flame Retardant Single Compounds

Catalogue No.	Structure	Description	Abbreviation	CAS No.	Conc.	Solvent	Quantity
10109.30-50-ME		Tetraphenylrecorcinol bis(diphenyl phosphate), techn.	PBDPP; RDP	57583-54-7	50 µg/mL	methanol	1 mL
10109.30-10MG					neat	neat	10 mg
10459.42-50-ME		PBDPP (RDP)-homologue	Byproduct in PBDPP (RDP)	N/A	50 µg/mL	methanol	1 mL
11137.38-50-T		1,3-Phenylene tetrakis(2,6-dimethylphenyl) diphosphate	PBDMPP	139189-30-3	50 µg/mL	toluene	1 mL
8798.0-1G		Ammonium polyphosphate (Phase II n>1000)	Reflam APP	68333-79-9	neat	neat	1 g
8769.0-1G		Polyphosphoric acids ammonium salt	APP, See 8798.0	68333-79-9	neat	neat	1 g
Labelled Phosphor-Phosphate Based Flame Retardants:							
9493.3-100-IO		Trimethyl phosphate- <i>d</i> 9	TMP- <i>d</i> 9	32176-12-8	100 µg/mL	isooctane	1 mL
9492.6-100-IO		Triethyl phosphate- <i>d</i> 15	TEP- <i>d</i> 15	135942-11-9	100 µg/mL	isooctane	1 mL
9495.9-100-IO		Tri- <i>n</i> -propyl phosphate- <i>d</i> 21	TPP- <i>d</i> 21	1219794-92-9	100 µg/mL	isooctane	1 mL
9491.12-100-IO		Tri- <i>n</i> -butyl phosphate- <i>d</i> 27	TBP- <i>d</i> 27	61196-26-7	100 µg/mL	isooctane	1 mL
9491.12-K-IO		Tri- <i>n</i> -butyl phosphate- <i>d</i> 27	TBP- <i>d</i> 27	61196-26-7	1000 µg/mL	isooctane	1 mL
9491.12-10MG		Tri- <i>n</i> -butyl phosphate- <i>d</i> 27	TBP- <i>d</i> 27	61196-26-7	neat	neat	10 mg
9494.18-100-IO		Triphenyl phosphate- <i>d</i> 15	TPHP- <i>d</i> 15	1173020-30-8	100 µg/mL	isooctane	1 mL
9494.18-K-IO		Triphenyl phosphate- <i>d</i> 15	TPHP- <i>d</i> 15	1173020-30-8	1000 µg/mL	isooctane	1 mL
9494.18-10MG		Triphenyl phosphate- <i>d</i> 15	TPHP- <i>d</i> 15	1173020-30-8	neat	neat	10 mg
11439.19-100-IO		Diphenyl- <i>p</i> -tolyl phosphate- <i>d</i> 7 (<i>p</i> -tolyl- <i>d</i> 7)	Diphenyl- <i>p</i> -tolyl phosphate- <i>d</i> 7	N/A	100 µg/mL	isooctane	1 mL
11435.20-100-IO		Di- <i>p</i> -tolylphenyl phosphate- <i>d</i> 14 (<i>p</i> -tolyl- <i>d</i> 7)	Phenyldi- <i>p</i> -tolyl phosphate- <i>d</i> 14	N/A	100 µg/mL	isooctane	1 mL
12064.18-100-IO		Tris(2-butyloxyethyl) phosphate- <i>d</i> 27	TBEP- <i>d</i> 27	N/A	100 µg/mL	isooctane	1 mL
11443.21-100-IO		Tris- <i>p</i> -tolyl phosphate- <i>d</i> 21	<i>p</i> -TMPP- <i>d</i> 21	N/A	100 µg/mL	isooctane	1 mL
11440.22-100-IO		4- <i>tert</i> -Butylphenyldiphenyl phosphate- <i>d</i> 13	4-BPDP- <i>d</i> 13	N/A	100 µg/mL	isooctane	1 mL
11444.24-100-IO		Tris(2,4-dimethylphenyl) phosphate- <i>d</i> 27	2,4-TXP- <i>d</i> 27	N/A	100 µg/mL	isooctane	1 mL
11442.27-100-IO		Tris(4-isopropylphenyl) phosphate- <i>d</i> 33	<i>p</i> -TIPPP- <i>d</i> 33	N/A	100 µg/mL	isooctane	1 mL
Other Melamine (Triazine)-Based Flame Retardants:							
8754.3-1G		Melamine cyanurate	Reflam MCA	N/A	neat	neat	1 g
8755.X-1G		Melamine micronized	Reflam MA	N/A	neat	neat	1 g
8753.X-1G		Melamine polyphosphate	Reflam MPP	N/A	neat	neat	1 g

Flame Retardant Single Compounds

Catalogue No.	Structure	Description	Abbreviation	CAS No.	Conc.	Solvent	Quantity
Other Relevant Phosphorcontaining Compounds:							
2209.6-100-ME		Tris-(aziridinyl)-phosphineoxide	TEPA, Aphoxide	545-55-1	100 µg/mL	methanol	1 mL
2209.6-10MG					neat	neat	10 mg
3968.6-10MG		1,1,1-Trimethylolpropanephosphate	Et bicyphat, Trimethylpropanephosphate	1005-93-2	neat	neat	10 mg
10403.2-K-ME		O,O-Dimethyl hydrogenphosphate	DMP	813-78-5	1000 µg/mL	methanol	1 mL
10403.2-50MG					neat	neat	50 mg
10761.2-K-ME		O,O-Dimethyl phosphate, sodium salt	DMP Na	32586-82-6	100 µg acid/mL	methanol	1 mL
10614.2-100-ME		O,O-Dimethyl phosphate-13C2, sodium salt	DMP-13C2 Na	157487-95-1	100 µg acid/mL	methanol	1 mL
10614.2-100-MEx5					100 µg acid/mL	methanol	1 mL
10404.4-K-ME		O,O-Diethyl hydrogenphosphate	DEP	598-02-7	1000 µg/mL	methanol	1 mL
10404.4-50MG					neat	neat	50 mg
10762.4-K-ME		O,O-Diethyl phosphate, sodium salt	DEP Na	2870-30-6	1000 µg acid/mL	methanol	1 mL
10707.4-100-ME		O,O-Diethyl phosphate-13C2, sodium salt	DEP-13C2 Na	1329513-90-2	100 µg acid/mL	methanol	1 mL
10707.4-100-MEx5						methanol	1 mLx5
10437.2-K-ME		O,O-Dimethyl thiophosphate, sodium salt	DMTP Na	23754-87-2	100 µg acid/mL	methanol	1 mL
10437.2-5MG					neat	neat	5 mg
10708.2-100-ME		O,O-Dimethyl thiophosphate-13C2, sodium salt	DMTP-13C2 Na	1330274-66-2 (for the acid)	100 µg acid/mL	methanol	1 mL
10708.2-100-MEx5					100 µg acid/mL	methanol	1 mLx5
10405.4-K-ME		O,O-Diethyl thiophosphate, potassium salt	DETP K	5871-17-0	1000 µg acid/mL	methanol	1 mL
10405.4-50MG					neat	neat	50 mg
10759.4-K-ME		O,O-Diethyl thiophosphate, sodium salt	DETP Na	5852-63-1	1000 µg acid/mL	methanol	1 mL
10709.4-100-ME		O,O-Diethylthiophosphate-13C2, sodium salt	DETP-13C2 Na	1330276-86-2 (for the acid)	100 µg acid/mL	methanol	1 mL
10709.4-100-MEx5					100 µg acid/mL	methanol	1 mLx5
10406.2-100-ME		O,O-Dimethyldithiophosphate, sodium salt	DMDTP Na	26377-29-7	100 µg acid/mL	methanol	1 mL
10406.2-5MG					neat	neat	5 mg
10411.2-50MG		O,O-Dimethylhydrogendithiophosphate	DMDTP	756-80-9	neat	neat	50 mg
10410.2-50MG		O,O-Dimethyl dithiophosphate, ammonium salt	DMDTP NH4	1066-97-3	neat	neat	50 mg
10710.2-100-ME		O,O-Dimethyl dithiophosphate-13C2, sodium salt	DMDTP-13C2 Na	1329745-95-0	100 µg acid/mL	methanol	1 mL
10710.2-100-MEx5					100 µg acid/mL	methanol	1 mLx5
10407.4-K-ME		O,O-Diethyl dithiophosphate, ammonium salt	DEDTP NH4	1068-22-0	1000 µg acid/mL	methanol	1 mL
10407.4-50MG					neat	neat	50 mg

Flame Retardant Single Compounds

Catalogue No.	Structure	Description	Abbreviation	CAS No.	Conc.	Solvent	Quantity
10760.4-K-ME		<i>O,O</i> -Diethyl dithiophosphate, sodium salt	DEDTP Na	3338-24-7	1000 µg acid/mL	methanol	1 mL
10408.4-100-ME		<i>O,O</i> -Diethyl dithiophosphate- ¹³ C ₄ , ammonium salt	DEDTP- ¹³ C ₄ NH ₄	1329641-22-6	100 µg acid/mL	methanol	1 mL
10408.4-100-MEx5					100 µg acid/mL	methanol	1 mLx5
10408.4-5MG					neat	neat	5 mg
10711.4-100-ME		<i>O,O</i> -Diethyl dithiophosphate- ¹³ C ₄ , sodium salt	DEDTP- ¹³ C ₄ Na	1329746-81-7 (for the acid)	100 µg acid/mL	methanol	1 mL
10711.4-100-MEx5					100 µg acid/mL	methanol	1 mLx5

Flame Retardant Single Compounds

PCAs, Polychlorinated Paraffines

Catalogue No.	Description	Chlorine content	CAS No.	Conc.	Solvent	Quantity
C6-C9 PCAs:						
12287.6-100-IO NEW	2,3,4,5-Tetrahalorohexane	63.3 %	N/A	100 µg/mL	isooctane	1 mL
1664.8-K-IO	1,2-Dichlorooctane	38.7 %	21948-46-9	1000 µg/mL	isooctane	1 mL
1660.8-K-IO	1,1,1,3-Tetrachlorooctane	56.3 %	18088-13-6	1000 µg/mL	isooctane	1 mL
1672.8-K-IO	1,2,7,8-Tetrachlorooctane	56.3 %	865306-19-0	1000 µg/mL	isooctane	1 mL
1657.8	1,1,1,3,7,8-Hexachlorooctane	65.1 %	1379331-17-5	Please enquire		
1656.8-K-IO	1,1,1,3,6,8,8-Octachlorooctane	72.8 %	61856-19-7	1000 µg/mL	isooctane	1 mL
1665.9-K-IO	1,2-Dichlorononane	36.0 %	56375-96-3	1000 µg/mL	isooctane	1 mL
1661.9-K-IO NEW	1,1,1,3-Tetrachlorononane	53.3 %	1070-27-5	1000 µg/mL	isooctane	1 mL
1673.9-K-IO	1,2,8,9-Tetrachlorononane	53.3 %	865306-20-3	1000 µg/mL	isooctane	1 mL
1658.9-K-IO	1,1,1,3,8,9-Hexachlorononane	65.6 %	865306-21-4	1000 µg/mL	isooctane	1 mL
C10-C13 PCAs (SCCPs):						
1666.10-100-IO	1,2-Dichlorodecane	33.6 %	34619-32-4	100 µg/mL	isooctane	1 mL
1662.10-100-IO	1,1,1,3-Tetrachlorodecane	50.6 %	51755-60-3	100 µg/mL	isooctane	1 mL
1671.10-100-IO	1,2,9,10-Tetrachlorodecane	50.6 %	205646-11-3	100 µg/mL	isooctane	1 mL
12590.10-100-IO NEW	2,3,4,5-Tetrachlorodecane	50.6 %	N/A	100 µg/mL	isooctane	1 mL
12427.10-100-IO NEW	2,3,8,9-Tetrachlorodecane	50.6 %	N/A	100 µg/mL	isooctane	1 mL
1659.10-100-IO	1,1,1,3,9,10-Hexachlorodecane	61.0 %	601523-26-6	100 µg/mL	isooctane	1 mL
12286.10-100-IO NEW	2,3,4,5,6,7,8,9-Octachlorodecane	61.0 %	189350-94-5	100 µg/mL	isooctane	1 mL
1622.10-100-IO	1,1,1,3,8,10,10,10-Octachlorodecane	67.9 %	601523-23-3	100 µg/mL	isooctane	1 mL
1667.11-100-IO	1,2-Dichloroundecane	31.5 %	81246-86-8	100 µg/mL	isooctane	1 mL
1649.11-100-IO	1,1,1,3-Tetrachloroundecane	48.2 %	56686-55-6	100 µg/mL	isooctane	1 mL
1674.11-100-IO NEW	1,2,10,11-Tetrachloroundecane	48.2 %	210049-49-3	100 µg/mL	isooctane	1 mL
12728.11-100-IO NEW	4,5,7,8-Tetrachloroundecane	48.2 %	N/A	100 µg/mL	isooctane	1 mL
12285.11-100-IO NEW	1,2,3,4,5,6-Hexachloroundecane	58.6 %	N/A	100 µg/mL	isooctane	1 mL
1650.11-100-IO	1,1,1,3,10,11-Hexachloroundecane	58.6 %	601523-28-8	100 µg/mL	isooctane	1 mL
1650.11-100-AC	1,1,1,3,10,11-Hexachloroundecane	58.6 %	601523-28-8	100 µg/mL	acetone	1 mL
1623.11-100-IO	1,1,1,3,9,11,11,11-Octachloroundecane	65.7 %	601523-25-5	100 µg/mL	isooctane	1 mL
1668.12-100-IO	1,2-Dichlorododecane	29.6 %	75121-23-2	100 µg/mL	isooctane	1 mL
1663.12-100-IO	1,12-Dichlorododecane	29.6 %	3922-28-9	100 µg/mL	isooctane	1 mL
1651.12-100-IO	1,1,1,3-Tetrachlorododecane	46.0 %	14983-60-9	100 µg/mL	isooctane	1 mL
1675.12-100-IO	1,2,11,12-Tetrachlorododecane	46.0 %	210115-98-3	100 µg/mL	isooctane	1 mL
12425.12-100-IO NEW	2,3,4,5-Tetrachlorododecane	46.0 %	N/A	100 µg/mL	isooctane	1 mL
1652.12-100-IO	1,1,1,3,11,12-Hexachlorododecane	56.4 %	865306-22-5	100 µg/mL	isooctane	1 mL
1624.12-100-IO	1,1,1,3,10,12,12,12-Octachlorododecane	63.6 %	601523-21-1	100 µg/mL	isooctane	1 mL
1669.13-100-IO	1,2-Dichlorotridecane	28.0 %	701920-72-1	100 µg/mL	isooctane	1 mL
1653.13-100-IO	1,1,1,3-Tetrachlorotridecane	44.0 %	67095-50-5	100 µg/mL	isooctane	1 mL
1654.13-100-IO	1,1,1,3,12,13-Hexachlorotridecane	54.4 %	865306-23-6	100 µg/mL	isooctane	1 mL
12428.13-100-IO NEW	2,3,4,5,6,7-Hexachlorotridecane	54.4 %	N/A	100 µg/mL	isooctane	1 mL
1625.13-100-IO	1,1,1,3,11,13,13,13-Octachlorotridecane	61.7%	865306-24-7	100 µg/mL	isooctane	1 mL

Flame Retardant Single Compounds

Catalogue No.	Description	Chlorine content	CAS No.	Conc.	Solvent	Quantity
C14+ PCAs (MCCPs and LCCPs):						
1670.14-K-IO	1,2-Dichlorotetradecane	26.5 %	701920-83-4	1000 µg/mL	isooctane	1 mL
1676.14-K-IO	1,1,1,3-Tetrachlorotetradecane	42.2 %	865306-25-8	1000 µg/mL	isooctane	1 mL
1677.14-K-IO NEW	1,2,13,14-Tetrachlorotetradecane	42.2 %	221155-23-3	1000 µg/mL	isooctane	1 mL
1678.14-K-IO	1,1,1,3,12,14,14,14-Octachlorotetradecane	59.8 %	865306-26-9	1000 µg/mL	isooctane	1 mL
8506.15-K-IO	1,1,1,3,14,15-Hexachloropentadecane	52.5 %	N/A	1000 µg/mL	isooctane	1 mL
8507.16-K-IO	1,1,1,3,14,16,16,16-Octachlorohexadecane	56.6 %	N/A	1000 µg/mL	isooctane	1 mL
8508.17-K-IO	1,1,1,3,15,17,17,17-Octachloroheptadecane	55.0 %	N/A	1000 µg/mL	isooctane	1 mL
2051.18-10K-DC	1-Chlorooctadecane	12.2 %	3386-33-2	10000 µg/mL	dichloromethane	1 mL
8509.18-K-IO	1,1,1,3,16,18,18,18-Octachlorooctadecane	53.6 %	N/A	1000 µg/mL	isooctane	1 mL
8510.19-K-IO	1,1,1,3,17,19,19,19-Octachlorononadecane	52.2 %	N/A	1000 µg/mL	isooctane	1 mL
8511.20-K-IO	1,1,1,3,18,20,20,20-Octachloroeicosane	50.9 %	N/A	1000 µg/mL	isooctane	1 mL
PCAs (Polychlorinated n-alkanes) Technical Mixes:						
9826.X-K-IO	Chlorinated paraffins (Cl:40%), technical mix	40 %	N/A	1000 µg/mL	isooctane	1 mL
9826.X-K-IOx10	Chlorinated paraffins (Cl:40%), technical mix	40 %	N/A	1000 µg/mL	isooctane	10 x 1 mL

Flame Retardant Mixes

Phosphorous-containing Flame Retardants Mixes

Phosphate flame retardants mix of 3 alkyl-chloro CFR compounds				
PFR Mix 03 3 Compounds at 100 µg/mL in methanol				
Catalogue No.	Part No.	Name	Abbreviation	CAS No.
S-4809	8436.6	Tris(2-chloroethyl) phosphate	(TCEP)	[115-96-8]
	8505.9	Tris(1,3-dichloro-2-propyl) phosphate	(TDCIPP)	[13674-87-8]
	8457.9	Tris(monochloropropyl) phosphate (isomer mixture)	(TCPP)	[26248-87-3]
	S-4809-100-ME, 1 x 1 mL ampoule in methanol			
	S-4809-100-MEx5, 5 x 1 mL ampoules in methanol			
Phosphate flame retardants mix of 10 PFR and CFR compounds				
PFR Mix 01 10 Compounds at 15 µg/mL in isooctane				
Catalogue No.	Part No.	Name	Abbreviation	CAS No.
S-4712	8436.6	Tris(2-chloroethyl) phosphate	(TCEP)	[115-96-8]
	8457.9	“Tris(monochloropropyl) phosphate (isomer mixture)”	(TCPP)	[26248-87-3]
	8505.9	Tris(1,3-dichloro-2-propyl) phosphate	(TDCIPP)	[13674-87-8]
	3966.12	Triisobutyl phosphate	(TIBP)	[126-71-6]
	1399.12	Tri- <i>n</i> -butyl phosphate	(TBP)	[126-73-8]
	9496.18	Tris(2-butoxyethyl) phosphate	(TBOEP)	[78-51-3]
	2138.18	Triphenyl phosphate	(TPHP)	[115-86-6]
	9490.20	2-Ethylhexyldiphenyl phosphate	(EHDP)	[1241-94-7]
	2137.21	Tritolyl phosphate (isomer mixture)	(TMPP)	[1330-78-5]
	9489.24	Tris(2-ethylhexyl) phosphate	(TEHP)	[78-42-3]
	S-4712-15-IO, 1 x 1 mL ampoule in isooctane			
	S-4712-15-IOx10, 10 x 1 mL ampoules in isooctane			
Phosphate flame retardants and alkoxyesters/alcohols mix of 10 compounds				
PFR Mix 02 10 Compounds at 100 µg/mL in ethyl acetate				
Catalogue No.	Part No.	Name	Abbreviation	CAS No.
S-4788	10418.5	2-Methoxyethyl acetate		[110-49-6]
	2553.6	2-Ethoxyethyl acetate		[111-15-9]
	10416.6	Diglyme		[111-96-6]
	8436.6	Tri(2-chloroethyl) phosphate	(TCEP)	[115-96-8]
	F-7132.6	2-Methoxy-1-propyl acetate		[70657-70-4]
	2209.6	Tris(1-aziridinyl) phosphine oxide	(TEPA, Aphoxide)	[545-55-1]
	8586.9	Tris(2,3-dibromopropyl) phosphate, techn.	(TDBPP)	[126-72-7]
	10417.14	1,4,5,8-Tetraamino-9,10-anthracenedione		[2475-45-8]
	2135.21	Tri- <i>o</i> -cresyl phosphate		[78-30-8]
	1379.1	Methanol		[67-56-1]
	S-4788-100-EA, 1 x 1 mL ampoule in ethyl acetate			
	S-4788-100-EAx5, 5 x 1 mL ampoules in ethyl acetate			
	S-4788-100-10EA, 1 x 10 mL screwcap bottle in ethyl acetate			

Flame Retardant Mixes

PBB Mixes

PBB Mix of 10 mono- to decabrominated compounds, PBB Mix 01a PBB Mix 01a 10 Compounds at 30 or 50 µg/mL in toluene					
Catalogue No.	Part No.	Name	Abbreviation	CAS No.	
S-4769	3091.12	4-Bromobiphenyl	(PBB-3)	[92-66-0]	
	3096.12	4,4'-Dibromobiphenyl	(BB-15)	[92-86-4]	
	3097.12	2,2',5-Tribromobiphenyl	(BB-18)	[59080-34-1]	
	3103.12	2,2',5,5'-Tetrabromobiphenyl	(BB-52)	[59080-37-4]	
	3107.12	2,2',4,5',6-Pentabromobiphenyl	(BB-103)	[59080-39-6]	
	3108.12	2,2',4,4',5,5'-Hexabromobiphenyl	(BB-153)	[59080-40-9]	
	10174.12	2,2',3,4,4',5,5'-Heptabromobiphenyl	(BB-180)	[67733-52-2]	
	9716.12	2,2',4,4',5,5'-Hexabromobiphenyl	(BB-153)	[59080-40-9]	
	9536.12	2,2',3,3',4,4',5,5',6-Nonabromobiphenyl	(BB-206)	[69278-62-2]	
	2677.12	Decabromobiphenyl	(BB-209)	[13654-09-6]	
	S-4769-50-T, 1 x 1 mL ampoule in toluene				
	S-4769-50-Tx10, 10 x 1 mL ampoules in toluene				
	S-4769-30-10T, 1 x 10 mL screwcap bottle in toluene				
PBB Mix of 10 mono- to decabrominated compounds (PBB Mix 01b, Assorted concentrations) (alternative S-4769 (PBB-Mix 1a),S-4823, S-4875, and S-4939) PBB Mix 01b 10 Compounds at assorted concentrations in toluene					
Catalogue No.	Part No.	Name	Abbreviation	CAS No.	Conc.
S-4769	3091.12	4-Bromobiphenyl	(BB-3)	[92-66-0]	30 µg/mL
	3096.12	4,4'-Dibromobiphenyl	(BB-15)	[92-86-4]	30 µg/mL
	3097.12	2,2',5-Tribromobiphenyl	(BB-18)	[59080-34-1]	30 µg/mL
	3103.12	2,2',5,5'-Tetrabromobiphenyl	(BB-52)	[59080-37-4]	30 µg/mL
	3107.12	2,2',4,5',6-Pentabromobiphenyl	(BB-103)	[59080-39-6]	50 µg/mL
	3108.12	2,2',4,4',5,5'-Hexabromobipheny	(BB-153)	[59080-40-9]	50 µg/mL
	10174.12	2,2',3,4,4',5,5'-Heptabromobiphenyl	(BB-180)	[67733-52-2]	50 µg/mL
	9716.12	2,2',4,4',5,5'-Hexabromobiphenyl	(BB-153)	[59080-40-9]	100 µg/mL
	9536.12	2,2',3,3',4,4',5,5',6-Nonabromobiphenyl	(BB-206)	[69278-62-2]	100 µg/mL
	2677.12	Decabromobiphenyl	(BB-209)	[13654-09-6]	100 µg/mL
	S-4769-ASS-T, 1 x 1 mL ampoule in toluene				
	S-4769-ASS-10T, 1 x 10 mL screwcap bottle in toluene				
PBB Mix of 10 mono- to decabrominated compounds (alternative to S-4769, S-4823, and S-4939) PBB Mix 03 10 Compounds at 50 µg/mL in isooctane					
Catalogue No.	Part No.	Name	Abbreviation	CAS No.	
S-4875	3091.12	4-Bromobiphenyl	(BB-3)	[92-66-0]	
	3096.12	4,4'-Dibromobiphenyl	(BB-15)	[92-86-4]	
	3097.12	2,2',5-Tribromobiphenyl	(BB-18)	[59080-34-1]	
	3103.12	2,2',5,5'-Tetrabromobiphenyl	(BB-52)	[59080-37-4]	
	3106.12	2,2',4,5,5'-Pentabromobiphenyl	(BB-101)	[67888-96-4]	
	3108.12	2,2',4,4',5,5'-Hexabromobipheny	(BB-153)	[59080-40-9]	
	10174.12	2,2',3,4,4',5,5'-Heptabromobiphenyl	(BB-180)	[67733-52-2]	
	9716.12	2,2',4,4',5,5'-Hexabromobiphenyl	(BB-153)	[59080-40-9]	
	9536.12	2,2',3,3',4,4',5,5',6-Nonabromobiphenyl	(BB-206)	[69278-62-2]	
	2677.12	Decabromobiphenyl	(BB-209)	[13654-09-6]	
	S-4875-50-IO, 1 x 1 mL ampoule in isooctane				
	S-4875-50-IOx10, 10 x 1 mL ampoules in isooctane				

Flame Retardant Mixes

PBB Mixes (cont.)

PBB Mix of 10 mono- to decabrominated compounds (alternative to S-4769, S-4875, and S-4939) PBB Mix 02 10 Compounds at 50 or 100 µg/ml in toluene				
Catalogue No.	Part No.	Name	Abbreviation	CAS No.
S-4875	3091.12	4-Bromobiphenyl	(BB-3)	[92-66-0]
	3096.12	4,4'-Dibromobiphenyl	(BB-15)	[92-86-4]
	3097.12	2,2',5-Tribromobiphenyl	(BB-18)	[59080-34-1]
	3103.12	2,2',5,5'-Tetrabromobiphenyl	(BB-52)	[59080-37-4]
	3106.12	2,2',4,5,5'-Pentabromobiphenyl	(BB-101)	[67888-96-4]
	3108.12	2,2',4,4',5,5'-Hexabromobipheny	(BB-153)	[59080-40-9]
	10174.12	2,2',3,4,4',5,5'-Heptabromobiphenyl	(BB-180)	[67733-52-2]
	9716.12	2,2',4,4',5,5'-Hexabromobiphenyl	(BB-153)	[59080-40-9]
	9536.12	2,2',3,3',4,4',5,5',6-Nonabromobiphenyl	(BB-206)	[69278-62-2]
	2677.12	Decabromobiphenyl	(BB-209)	[13654-09-6]
	S-4875-50-IO, 1 x 1 mL ampoule in isooctane			
	S-4875-50-IOx10, 10 x 1 mL ampoules in isooctane			
PBB Mix of 10 mono- to decabrominated compounds (alternative to S-4769, S-4875, and S-4939) PBB Mix 02 10 Compounds at 50 or 100 µg/ml in toluene				
Catalogue No.	Part No.	Name	Abbreviation	CAS No.
S-4823	3089.12	2-Bromobiphenyl	(BB-1)	[2052-07-5]
	3092.12	2,2'-Dibromobiphenyl	(BB-4)	[13029-09-9]
	2664.12	2,4,5-Tribromobiphenyl	(BB-29)	[115245-07-3]
	3105.12	3,3',5,5'-Tetrabromobiphenyl	(BB-80)	[16400-50-3]
	3107.12	2,2',4,5',6-Pentabromobiphenyl	(BB-103)	[59080-39-6]
	3109.12	3,3',4,4',5,5'-Hexabromobiphenyl	(BB-169)	[60044-26-0]
	9534.12	2,3,3',4,4',5,5'-Heptabromobiphenyl	(BB-189)	[88700-06-5]
	9716.12	2,2',3,3',4,4',5,5'-Octabromobiphenyl	(BB-194)	[67889-00-3]
	9536.12	2,2',3,3',4,4',5,5',6-Nonabromobiphenyl	(BB-206)	[69278-62-2]
	2677.12	Decabromobiphenyl	(BB-209)	[13654-09-6]
	S-4823-50-T, 1 x 1 mL ampoule in toluene			
	S-4823-50-Tx10, 10 x 1 mL ampoules in toluene			
	S-4823-100-T, 1 x 1 mL ampoule in toluene			
	S-4823-100-Tx10, 10 x 1 mL ampoules in toluene			
	S-4823-100-10T, 1 x 10 mL screwcap bottle in toluene			
	S-4823-500-T, 1 x 1 mL ampoules in toluene			
	S-4875-50-IOx10, 10 x 1 mL ampoules in isooctane			

Flame Retardant Mixes

PBB Mixes (cont.)

PBB Mix of 10 mono- to decabrominated compounds (alternative to S-4769, S-4875, and S-4939)				
PBB Mix 02	10 Compounds at 50 or 100 µg/ml in toluene			
Catalogue No.	Part No.	Name	Abbreviation	CAS No.
S-4823	3089.12	2-Bromobiphenyl	(BB-1)	[2052-07-5]
	3092.12	2,2'-Dibromobiphenyl	(BB-4)	[13029-09-9]
	2664.12	2,4,5-Tribromobiphenyl	(BB-29)	[115245-07-3]
	3105.12	3,3',5,5'-Tetrabromobiphenyl	(BB-80)	[16400-50-3]
	3107.12	2,2',4,5',6-Pentabromobiphenyl	(BB-103)	[59080-39-6]
	3109.12	3,3',4,4',5,5'-Hexabromobiphenyl	(BB-169)	[60044-26-0]
	9534.12	2,3,3',4,4',5,5'-Heptabromobiphenyl	(BB-189)	[88700-06-5]
	9716.12	2,2',3,3',4,4',5,5'-Octabromobiphenyl	(BB-194)	[67889-00-3]
	9536.12	2,2',3,3',4,4',5,5',6-Nonabromobiphenyl	(BB-206)	[69278-62-2]
	2677.12	Decabromobiphenyl	(BB-209)	[13654-09-6]
	S-4823-50-T, 1 x 1 mL ampoule in toluene			
	S-4823-50-Tx10, 10 x 1 mL ampoules in toluene			
	S-4823-100-T, 1 x 1 mL ampoule in toluene			
	S-4823-100-Tx10, 10 x 1 mL ampoules in toluene			
	S-4823-100-10T, 1 x 10 mL screwcap bottle in toluene			
	S-4823-500-T, 1 x 1 mL ampoules in toluene			
PBB Mix of 10 mono- to decabrominated compounds (alternative to S-4769, S-4823, and S-4875)				
PBB Mix 04	10 Compounds at 100 µg/ml in toluene			
Catalogue No.	Part No.	Name	Abbreviation	CAS No.
S-4939	3089.12	2-Bromobiphenyl	(BB-1)	[2052-07-5]
	3094.12	2,5-Dibromobiphenyl	(BB-9)	[57422-77-2]
	3097.12	2,2',5-Tribromobiphenyl	(BB-18)	[59080-34-1]
	3102.12	2,2',4,5'-Tetrabromobiphenyl	(BB-49)	[60044-24-8]
	3107.12	2,2',4,5',6-Pentabromobiphenyl	(BB-103)	[59080-39-6]
	3108.12	2,2',4,4',5,5'-Hexabromobiphenyl	(BB-153)	[59080-40-9]
	9534.12	2,3,3',4,4',5,5'-Heptabromobiphenyl	(BB-189)	[88700-06-5]
	9716.12	2,2',3,3',4,4',5,5'-Octabromobiphenyl	(BB-194)	[67889-00-3]
	9536.12	2,2',3,3',4,4',5,5',6-Nonabromobiphenyl	(BB-206)	[69278-62-2]
	2677.12	Decabromobiphenyl	(BB-209)	[13654-09-6]
	S-4939-100-T, 1 x 1 mL ampoule in toluene			
	S-4939-100-Tx10, 10 x 1 mL ampoules in toluene			
	S-4939-100-10T, 1 x 10 mL screwcap bottle in toluene			

Flame Retardant Mixes

PBB Mixes (cont.)

RoHS PBBs. Mix of 10 mono- to decabrominated compounds PBB Mix 05 10 Compounds at 50 µg/mL in isooctane				RoHS directive, see below
Catalogue No.	Part No.	Name	Abbreviation	CAS No.
S-4989	PBBs used for calibration (IEC 62321):			
	3091.12	4-Bromobiphenyl	(BB-3)	[92-66-0]
	3096.12	4,4'-Dibromobiphenyl	(BB-15)	[92-86-49]
	2664.12	2,4,5-Tribromobiphenyl	(BB-09)	[115245-07-3]
	3102.12	2,2',4,5'-Tetrabromobiphenyl	(BB-49)	[60044-24-8]
	10266.12	3,3',4,4'-Tetrabromobiphenyl	(BB-77)	[77102-82-0]
	3107.12	2,2',4,5',6-Pentabromobiphenyl	(BB-103)	[59080-39-6]
	3108.12	2,2',4,4',5,5'-Hexabromobiphenyl	(BB-153)	[59080-40-9]
	3109.12	3,3',4,4',5,5'-Hexabromobiphenyl	(BB-169)	[60044-26-0]
	2677.12	Technical mixture containing hepta-, octa-, and nonabromobiphenyls	(Dow FR-250)	[27858-07-7]
	2677.12	Decabromobiphenyl	(BB-209)	[13654-09-6]
	S-4989-50-IO, 1 x 1 mL ampoule in isooctane			
	S-4989-50-IOx5, 5 x 1 mL ampoules in isooctane			

PBDE Mixes and KITs, Lake Michigan Study (LMS)

Lake Michigan Study PBDEs single solutions (PBDE KIT)				Lake Michigan Study
9 Single Individual solutions at 50 µg/mL in isooctane				
Catalogue No.	Part No.	Name	Abbreviation	CAS No.
2653.9-KIT	1961.12	2,2,4'-Tribromodiphenyl ether	(BDE-28)	[41318-75-6]
(S-4391)	1962.12	2,2',4,4'-Tetrabromodiphenyl ether	(BDE-47)	[5436-43-1]
	1964.12	2,3',4,4'-Tetrabromodiphenyl ether	(BDE-66)	[189084-61-5]
	1966.12	2,2',3,4,4'-Pentabromodiphenyl ether	(BDE-85)	[182346-21-0]
	1967.12	2,2',4,4',5-Pentabromodiphenyl ether	(BDE-99)	[60348-60-9]
	1968.12	2,2',4,4',6-Pentabromodiphenyl ether	(BDE-100)	[189084-64-8]
	1970.12	2,2',3,4,4',5-Hexabromodiphenyl ether	(BDE-138)	[182677-30-1]
	1971.12	2,2',4,4',5,5'-Hexabromodiphenyl ether	(BDE-153)	[68631-49-2]
	1972.12	2,2',4,4',5,6'-Hexabromodiphenyl ether	(BDE-154)	[207122-15-4]
	2653.9-KIT, 9 x 1 mL ampoules in isooctane			
Lake Michigan Study PBDEs				Lake Michigan Study
PBDE Mix 06 9 Compounds at 10 µg/mL in toluene				
Catalogue No.	Part No.	Name	Abbreviation	CAS No.
S-4391	1961.12	2,2,4'-Tribromodiphenyl ether	(BDE-28)	[41318-75-6]
	1962.12	2,2',4,4'-Tetrabromodiphenyl ether	(BDE-47)	[5436-43-1]
	1964.12	2,3',4',6-Tetrabromodiphenyl ether	(BDE-66)	[189084-62-6]
	1966.12	2,2',3,4,4'-Pentabromodiphenyl ether	(BDE-85)	[182346-21-0]
	1967.12	2,2',4,4',5-Pentabromodiphenyl ether	(BDE-99)	[60348-60-9]
	1968.12	2,2',4,4',6-Pentabromodiphenyl ether	(BDE-100)	[189084-64-8]
	1970.12	2,2',3,4,4',5-Hexabromodiphenyl ether	(BDE-138)	[182677-30-1]
	1971.12	2,2',4,4',5,5'-Hexabromodiphenyl ether	(BDE-153)	[68631-49-2]
	1972.12	2,2',4,4',5,6'-Hexabromodiphenyl ether	(BDE-154)	[207122-15-4]
	S-4391-10-IO: 1 x 1 mL ampoule in isooctane			
	S-4391-10-IOx5: 5 x 1 mL ampoules in isooctane			

Flame Retardant Mixes

PBDE Mixes, ISO Method 22032

ISO 22032 PBDE Multi-component solution of native reference substances					ISO 22032					
PBDE Mix 08 8 Compounds at 10 µg/mL in isoctane										
Catalogue No.	Part No.	Name					Abbreviation	CAS No.		
S-4535	1962.12	2,2',4,4'-Tetrabromodiphenyl ether					(BDE-47)	[5436-43-1]		
	1967.12	2,2',4,4',5-Pentabromodiphenyl ether					(BDE-99)	[60348-60-9]		
	1968.12	2,2',4,4',6-Pentabromodiphenyl ether					(BDE-100)	[189084-64-8]		
	1971.12	2,2',4,4',5,5'-Hexabromodiphenyl ether					(BDE-153)	[68631-49-2]		
	1972.12	2,2',4,4',5,6'-Hexabromodiphenyl ether					(BDE-154)	[207122-15-4]		
	1973.12	2,2',3,4,4',5',6'-Heptabromodiphenyl ether					(BDE-183)	[207122-16-5]		
	2647.12	2,3,3',4,4',5,5',6-Octabromodiphenyl ether					(BDE-205)	[446255-56-7]		
	1811.12	2,2',3,3',4,4',5,5',6,6'-Decabromodiphenyl ether					(BDE-209)	[1163-19-5]		
	S-4535-10-IO, 1 x 1 mL ampoule in isoctane									
	S-4535-10-IOx5, 5 x 1 mL ampoules in isoctane									
ISO 22032 PBDE Multi-component stock solution of native ref. substances (§ 5.8 in the ISO-method										ISO 22032
PBDE Mix 03 8 Compounds at 50 µg/mL in isoctane										
Catalogue No.	Part No.	Name					Abbreviation	CAS No.		
S-4388	1962.12	2,2',4,4'-Tetrabromodiphenyl ether					(BDE-47)	[5436-43-1]		
	1967.12	2,2',4,4',5-Pentabromodiphenyl ether					(BDE-99)	[60348-60-9]		
	1968.12	2,2',4,4',6-Pentabromodiphenyl ether					(BDE-100)	[189084-64-8]		
	1971.12	2,2',4,4',5,5'-Hexabromodiphenyl ether					(BDE-153)	[68631-49-2]		
	1972.12	2,2',4,4',5,6'-Hexabromodiphenyl ether					(BDE-154)	[207122-15-4]		
	1973.12	2,2',3,4,4',5',6'-Heptabromodiphenyl ether					(BDE-183)	[207122-16-5]		
	2647.12	2,3,3',4,4',5,5',6-Octabromodiphenyl ether					(BDE-205)	[446255-56-7]		
	1811.12	2,2',3,3',4,4',5,5',6,6'-Decabromodiphenyl ether					(BDE-209)	[1163-19-5]		
	S-4388-50-IO, 1 x 1 mL ampoule in isoctane									
	S-4388-50-IOx5, 5 x 1 mL ampoules in isoctane									
ISO 22032 Calibration Curve										ISO 22032
PBDE Mix 04 Set of 7 solutions in isoctane/toluene, 7 x 1 mL										
Catalogue No.	Part.No.	Sol. 1 ng/mL	Sol. 2 ng/mL	Sol. 3 ng/mL	Sol. 4 ng/mL	Sol. 5 ng/mL	Sol. 6 ng/mL	Sol. 7 ng/mL		
S-4388	BDE-47	5	12.5	25	50	100	150	250		
	BDE-99	5	12.5	25	50	100	150	250		
	BDE-100	5	12.5	25	50	100	150	250		
	BDE-153	5	12.5	25	50	100	150	250		
	BDE-154	5	12.5	25	50	100	150	250		
	BDE-183	5	12.5	25	50	100	150	250		
	BDE-205	5	12.5	25	50	100	150	250		
	BDE-209	25	50	100	200	500	700	1000		
	S-4389-SET, 7 x 1 mL ampoules in isoctane/toluene									

Flame Retardant Mixes

PBDE Mixes, EPA Methods 1614 and 527

EPA 1614 - Multi-component solution, PBDE Congeners of primary interest (\$7.8 in the ISO-method)					EPA 1614
PBDE Mix 05a 8 Compounds at 1 or 20 µg/mL in isooctane					
Catalogue No.	Part No.	Name	Abbreviation	CAS No.	
S-4390	1961.12	2,2,4'-Tribromodiphenyl ether	(BDE-28)	[41318-75-6]	
	1962.12	2,2',4,4'-Tetrabromodiphenyl ether	(BDE-47)	[5436-43-1]	
	1967.12	2,2',4,4',5-Pentabromodiphenyl ether	(BDE-99)	[60348-60-9]	
	1968.12	2,2',4,4',6-Pentabromodiphenyl ether	(BDE-100)	[189084-64-8]	
	1971.12	2,2',4,4',5,5'-Hexabromodiphenyl ether	(BDE-153)	[68631-49-2]	
	1972.12	2,2',4,4',5,6'-Hexabromodiphenyl ether	(BDE-154)	[207122-15-4]	
	1973.12	2,2',3,4,4',5',6-Heptabromodiphenyl ether	(BDE-183)	[207122-16-5]	
	1811.12	2,2',3,3',4,4',5,5',6,6'-Decabromodiphenyl ether	(BDE-209)	[1163-19-5]	
	S-4390-1-IO, 1 x 1 mL ampoule in isooctane				
	S-4390-1-IOx10, 10 x 1 mL ampoule in isooctane				
	S-4390-20-IO, 1 x 1 mL ampoule in isooctane				
	S-4390-20-IOx10, 10 x 1 mL ampoules in isooctane				
EPA 1614 - Multi-component solution, PBDE Congeners of primary interest (\$7.8 in the ISO-method)					EPA 1614
PBDE Mix 05c 8 Compounds at assorted concentrations in isooctane					
Catalogue No.	Part No.	Name	Abbreviation	CAS No.	Conc.
S-4390	1961.12	2,2,4'-Tribromodiphenyl ether	(BDE-28)	[41318-75-6]	550 µg/L
	1962.12	2,2',4,4'-Tetrabromodiphenyl ether	(BDE-47)	[5436-43-1]	550 µg/L
	1967.12	2,2',4,4',5-Pentabromodiphenyl ether	(BDE-99)	[60348-60-9]	500 µg/L
	1968.12	2,2',4,4',6-Pentabromodiphenyl ether	(BDE-100)	[189084-64-8]	450 µg/L
	1971.12	2,2',4,4',5,5'-Hexabromodiphenyl ether	(BDE-153)	[68631-49-2]	500 µg/L
	1972.12	2,2',4,4',5,6'-Hexabromodiphenyl ether	(BDE-154)	[207122-15-4]	550 µg/L
	1973.12	2,2',3,4,4',5',6-Heptabromodiphenyl ether	(BDE-183)	[207122-16-5]	500 µg/L
	1811.12	2,2',3,3',4,4',5,5',6,6'-Decabromodiphenyl ether	(BDE-209)	[1163-19-5]	600 µg/L
	S-4390-ASS-IO, 1 x 1 mL ampoule isooctane				
	S-4390-ASS-IOx10, 10 x 1 mL ampoules isooctane				
	S-4390-ASS-IOx60, 60 x 1 mL ampoules i isooctane				
EPA 1614 PDBEs in cyclohexane					EPA 1614+
PBDE Mix 16 8 Compounds at 10 µg/mL in cyclohexane					
Catalogue No.	Part No.	Name	Abbreviation	CAS No.	
S-4659	1961.12	2,2,4'-Tribromodiphenyl ether	(BDE-28)	[41318-75-6]	
	1962.12	2,2',4,4'-Tetrabromodiphenyl ether	(BDE-47)	[5436-43-1]	
	1967.12	2,2',4,4',5-Pentabromodiphenyl ether	(BDE-99)	[60348-60-9]	
	1968.12	2,2',4,4',6-Pentabromodiphenyl ether	(BDE-100)	[189084-64-8]	
	1971.12	2,2',4,4',5,5'-Hexabromodiphenyl ether	(BDE-153)	[68631-49-2]	
	1972.12	2,2',4,4',5,6'-Hexabromodiphenyl ether	(BDE-154)	[207122-15-4]	
	1973.12	2,2',3,4,4',5',6-Heptabromodiphenyl ether	(BDE-183)	[207122-16-5]	
	1811.12	2,2',3,3',4,4',5,5',6,6'-Decabromodiphenyl ether	(BDE-209)	[1163-19-5]	
	S-4659-10-CY, 1 x 1 mL ampoule in cyclohexane				
	S-4659-10-10CY, 1 x 10 mL screwcap bottle in cyclohexane				

Flame Retardant Mixes

PBDE Mixes, EPA Methods 1614 and 527 (cont.)

EPA 527 Mix 3, BDE Congeners and Hexabromobiphenyl					EPA 527
PBDE Mix 07 5 Compounds at 50 µg/mL in isooctane/ethyl acetate (=8:2) (PBB- and PBDE Mix 01)					
Catalogue No.	Part No.	Name	Abbreviation	CAS No.	
S-4484	3108.12	2,2',4,4',5,5'-Hexabromobiphenyl	(BB-153)	[59080-40-9]	
	1962.12	2,2',4,4'-Tetrabromodiphenyl ether	(BDE-47)	[5436-43-1]	
	1967.12	2,2',4,4',5-Pentabromodiphenyl ether	(BDE-99)	[60348-60-9]	
	1968.12	2,2',4,4',6-Pentabromodiphenyl ether	(BDE-100)	[189084-64-8]	
	1971.12	2,2',4,4',5,5'-Hexabromodiphenyl ether	(BDE-153)	[68631-49-2]	
	S-4484-50-MX, 1 x 1 mL ampoule in isooctane/ethyl acetate				
	S-4484-50-MXx5, 5 x 1 mL ampoules in isooctane/ethyl acetate				

Other PBDE Mixes, Customised Solutions with 2-8 Compounds

PBDE Mix of BDE-153 and BDE-196				
PBDE Mix 20 2 Compounds at 100 µg/mL in cyclohexane				
Catalogue No.	Part No.	Name	Abbreviation	CAS No.
S-4736	1971.12	2,2',4,4',5,5'-Hexabromodiphenyl ether	(BDE-153)	[68631-49-2]
	9135.12	2,2',3,3',4,4',5,6'-Octabromodiphenyl ether	(BDE-196)	[446255-39-6]
	S-4736-100-CY, 1 x 1 mL ampoule in cyclohexane			
	S-4736-100-10CY, 1 x 10 mL screwcap in cyclohexane			
PBDE Mix of 4 octa- to decabrominated compounds				
PBDE Mix 22 4 Compounds at 50 µg/mL in toluene				
Catalogue No.	Part No.	Name	Abbreviation	CAS No.
S-4768	9135.12	2,2',3,3',4,4',5,6'-Octabromodiphenyl ether	(BDE-196)	[446255-39-6]
	9033.12	2,2',3,3',4,4',5,5',6'-Nonabromodiphenyl ether	(BDE-206)	[63387-28-0]
	9035.12	2,2',3,3',4,5,5',6,6'-Nonabromodiphenyl ether	(BDE-208)	[437701-78-5]
	1811.12	2,2',3,3',4,4',5,5',6,6'-Decabromodiphenyl ether	(BDE-209)	[1163-19-5]
	S-4768-50-T, 1 x 1 mL ampoule in toluene			
	S-4768-50-Tx10, 10 x 1 mL ampoules in toluene			
PBDE Mix of 5 tri- to hexabrominated compounds				
PBDE Mix 18 5 Compounds at 10 µg/mL in isooctane				
Catalogue No.	Part No.	Name	Abbreviation	CAS No.
S-4689	1961.12	2,2,4'-Tribromodiphenyl ether	(BDE-28)	[41318-75-6]
	1962.12	2,2',4,4'-Tetrabromodiphenyl ether	(BDE-47)	[5436-43-1]
	1968.12	2,2',4,4',6-Pentabromodiphenyl ether	(BDE-100)	[189084-64-8]
	1971.12	2,2',4,4',5,5'-Hexabromodiphenyl ether	(BDE-153)	[68631-49-2]
	1972.12	2,2',4,4',5,6'-Hexabromodiphenyl ether	(BDE-154)	[207122-15-4]
	S-4689-10-IO, 1 x 1 mL ampoule in isooctane			
	S-4689-10-IOx10, 10 x 1 mL ampoules in isooctane			

Flame Retardant Mixes

Other PBDE Mixes, Customised Solutions with 2-8 Compounds (cont.)

PBDE Mix of 7 tri- to decabrominated compounds					
PBDE Mix 19 7 Compounds at 100 µg/mL in isooctane					
Catalogue No.	Part No.	Name	Abbreviation	CAS No.	
S-4720	1961.12	2,2,4'-Tribromodiphenyl ether	(BDE-28)	[41318-75-6]	
	1962.12	2,2',4,4'-Tetrabromodiphenyl ether	(BDE-47)	[5436-43-1]	
	1967.12	2,2',4,4',5-Pentabromodiphenyl ether	(BDE-99)	[60348-60-9]	
	1968.12	2,2',4,4',6-Pentabromodiphenyl ether	(BDE-100)	[189084-64-8]	
	1972.12	2,2',4,4',5,6'-Hexabromodiphenyl ether	(BDE-154)	[207122-15-4]	
	1973.12	2,2',3,4,4',5',6-Heptabromodiphenyl ether	(BDE-183)	[207122-16-5]	
	1811.12	2,2',3,3',4,4',5,5',6,6'-Decabromodiphenyl ether	(BDE-209)	[1163-19-5]	
	S-4720-100-CY, 1 x 1 mL ampoule in isooctane				
	S-4720-100-10CY, 1 x 10 mL screwcap in isooctane				
PBDE Mix of 7 tri- to decabrominated compounds (alternative to S-4588)					
PBDE Mix 09 7 Compounds at assorted concentrations in toluene					
Catalogue No.	Part No.	Name	Abbreviation	CAS No.	Conc.
S-4545	1961.12	2,2,4'-Tribromodiphenyl ether	(BDE-28)	[41318-75-6]	10 ng/ml
	1962.12	2,2',4,4'-Tetrabromodiphenyl ether	(BDE-47)	[5436-43-1]	40 ng/ml
	1967.12	2,2',4,4',5-Pentabromodiphenyl ether	(BDE-99)	[60348-60-9]	60 ng/ml
	1968.12	2,2',4,4',6-Pentabromodiphenyl ether	(BDE-100)	[189084-64-8]	15 ng/ml
	1971.12	2,2',4,4',5,5'-Hexabromodiphenyl ether	(BDE-153)	[68631-49-2]	10 ng/ml
	1972.12	2,2',4,4',5,6'-Hexabromodiphenyl ether	(BDE-154)	[207122-15-4]	10 ng/ml
	1811.12	2,2',3,3',4,4',5,5',6,6'-Decabromodiphenyl ether	(BDE-209)	[1163-19-5]	100 ng/ml
	S-4545-ASS-T, 1 x 1 mL ampoule in toluene				
	S-4545-ASS-Tx10, 1 x 10 mL ampoules in toluene				
EPA 1614 PDBEs less BDE-183					
PBDE Mix 17 7 Compounds at assorted concentrations in isooctane					
Catalogue No.	Part No.	Name	Abbreviation	CAS No.	Conc.
S-4661	1961.12	2,2,4'-Tribromodiphenyl ether	(BDE-28)	[41318-75-6]	20 ng/mL
	1962.12	2,2',4,4'-Tetrabromodiphenyl ether	(BDE-47)	[5436-43-1]	70 ng/mL
	1967.12	2,2',4,4',5-Pentabromodiphenyl ether	(BDE-99)	[60348-60-9]	100 ng/mL
	1968.12	2,2',4,4',6-Pentabromodiphenyl ether	(BDE-100)	[189084-64-8]	20 ng/mL
	1971.12	2,2',4,4',5,5'-Hexabromodiphenyl ether	(BDE-153)	[68631-49-2]	15 ng/mL
	1972.12	2,2',4,4',5,6'-Hexabromodiphenyl ether	(BDE-154)	[207122-15-4]	15 ng/mL
	1811.12	2,2',3,3',4,4',5,5',6,6'-Decabromodiphenyl ether	(BDE-209)	[1163-19-5]	180 ng/mL
	S-4661-ASS-CY, 1 x 1 mL ampoule in isooctane				
	S-4661-ASS-CYx5, 5 x 1 mL ampoules in isooctane				
PBDE Mix of 7 tetra- to decabrominated compounds (alternative to S-4545)					
PBDE Mix 11 7 Compounds at 10 µg/mL in hexane					
Catalogue No.	Part No.	Name	Abbreviation	CAS No.	Conc.
S-4588	1962.12	2,2,4'-Tribromodiphenyl ether	(BDE-28)	[41318-75-6]	20 ng/mL
	1967.12	2,2',4,4',5-Pentabromodiphenyl ether	(BDE-99)	[60348-60-9]	70 ng/mL
	1968.12	2,2',4,4',6-Pentabromodiphenyl ether	(BDE-100)	[189084-64-8]	100 ng/mL
	1971.12	2,2',4,4',5,5'-Hexabromodiphenyl ether	(BDE-153)	[68631-49-2]	20 ng/mL
	1972.12	2,2',4,4',5,6'-Hexabromodiphenyl ether	(BDE-154)	[207122-15-4]	15 ng/mL
	1973.12	2,2',3,4,4',5',6-Heptabromodiphenyl ether	(BDE-183)	[207122-16-5]	15 ng/mL
	1811.12	2,2',3,3',4,4',5,5',6,6'-Decabromodiphenyl ether	(BDE-209)	[1163-19-5]	180 ng/mL
	S-4588-10-HX, 1 x 1 mL certain bottle in hexane				
	S-4588-10-10HX, 1 x 10 mL screwcap bottle in hexane				

Flame Retardant Mixes

Other PBDE Mixes, Customised Solutions with 9+ Compounds

PBDE Mix of 9 tri- to heptabrominated compounds					
PBDE Mix 15 9 Compounds at 100 µg/mL in isooctane					
Catalogue No.	Part No.	Name	Abbreviation	CAS No.	
S-4657	1961.12	2,2,4'-Tribromodiphenyl ether	(BDE-28)	[41318-75-6]	
	1962.12	2,2',4,4'-Tetrabromodiphenyl ether	(BDE-47)	[5436-43-1]	
	1964.12	2,3',4',6-Tetrabromodiphenyl ether	(BDE-66)	[189084-62-6]	
	1966.12	2,2',3,4,4'-Pentabromodiphenyl ether	(BDE-85)	[182346-21-0]	
	1967.12	2,2',4,4',5-Pentabromodiphenyl ether	(BDE-99)	[60348-60-9]	
	1968.12	2,2',4,4',6-Pentabromodiphenyl ether	(BDE-100)	[189084-64-8]	
	1971.12	2,2',4,4',5,5'-Hexabromodiphenyl ether	(BDE-153)	[68631-49-2]	
	1972.12	2,2',4,4',5,6'-Hexabromodiphenyl ether	(BDE-154)	[207122-15-4]	
	1973.12	2,2',3,4,4',5',6-Heptabromodiphenyl ether	(BDE-183)	[207122-16-5]	
	S-4657-100-IO, 1 x 1 mL ampoule in isooctane				
	S-4657-100-IOx5, 5 x 1 mL ampoules in isooctane				
	S-4657-100-IOx10, 10 x 1 mL ampoules in isooctane				
PBDE Mix of 10 tri- to nonabrominated compounds					
PBDE Mix 23a 10 Compounds at 50 µg/mL in toluene					
Catalogue No.	Part No.	Name	Abbreviation	CAS No.	
S-4726	1961.12	2,2,4'-Tribromodiphenyl ether	(BDE-28)	[41318-75-6]	
	1962.12	2,2',4,4'-Tetrabromodiphenyl ether	(BDE-47)	[5436-43-1]	
	1964.12	2,3',4',6-Tetrabromodiphenyl ether	(BDE-66)	[189084-62-6]	
	1967.12	2,2',4,4',5-Pentabromodiphenyl ether	(BDE-99)	[60348-60-9]	
	1968.12	2,2',4,4',6-Pentabromodiphenyl ether	(BDE-100)	[189084-64-8]	
	1969.12	2,3',4,4',6-Pentabromodiphenyl ether	(BDE-119)	[189084-6-0]	
	1970.12	2,2',3,4,4',5-Hexabromodiphenyl ether	(BDE-138)	[182677-30-1]	
	1971.12	2,2',4,4',5,5'-Hexabromodiphenyl ether	(BDE-153)	[68631-49-2]	
	1972.12	2,2',4,4',5,6'-Hexabromodiphenyl ether	(BDE-154)	[207122-15-4]	
	1973.12	2,2',3,4,4',5',6-Heptabromodiphenyl ether	(BDE-183)	[207122-16-5]	
	S-4726-50-T, 1 x 1 mL ampoule in toluene				
	S-4726-50-Tx10, 10 x 1 mL ampoules in toluene				
PBDE Mix of 10 mono- to decabrominated compounds (alternative to S-4655 and S-4940)					
PBDE Mix 13 10 Compounds at 50 µg/mL in toluene					
Catalogue No.	Part No.	Name	Abbreviation	CAS No.	
S-4604	8747.12	3-Bromodiphenyl ether	(BDE-2)	[6876-00-2]	20 ng/mL
	8749.12	3,4'-Dibromodiphenyl ether	(BDE-13)	[83694-71-7]	70 ng/mL
	1961.12	2,2,4'-Tribromodiphenyl ether	(BDE-28)	[41318-75-6]	100 ng/mL
	1964.12	2,3',4',6-Tetrabromodiphenyl ether	(BDE-66)	[189084-62-6]	20 ng/mL
	1966.12	2,2',3,4,4'-Pentabromodiphenyl ether	(BDE-85)	[182346-21-0]	15 ng/mL
	1970.12	2,2',3,4,4',5-Hexabromodiphenyl ether	(BDE-138)	[182677-30-1]	15 ng/mL
	1992.12	2,3,3',4,4',5,6-Heptabromodiphenyl ether	(BDE-190)	[189084-68-2]	180 ng/mL
	2647.12	2,3,3',4,4',5,5',6-Octabromodiphenyl ether	(BDE-205)	[446255-56-7]	15 ng/mL
	9033.12	2,2',3,3',4,4',5,5',6-Nonabromodiphenyl ether	(BDE-206)	[63387-28-0]	15 ng/mL
	1811.12	2,2',3,3',4,4',5,5',6,6'-Decabromodiphenyl ether	(BDE-209)	[1163-19-5]	180 ng/mL
	S-4604-50-T, 1 x 1 mL ampoule in toluene				
	S-4604-50-Tx5, 5 x 1 mL ampoules in toluene				
	S-4604-50-Tx20, 20 x 1 mL ampoules in toluene				
	S-4604-500-T, 1 x 1 mL ampoule in toluene				
	S-4604-500-Tx10, 10 x 1 mL ampoules in toluene				

Flame Retardant Mixes

Other PBDE Mixes, Customised Solutions with 9+ Compounds (cont.)

PBDE Mix of 10 mono- to decabrominated compounds (alternative to S-4604 and S-4940)					
PBDE Mix 14 10 Compounds at 50 µg/mL in isooctane					
Catalogue No.	Part No.	Name	Abbreviation	CAS No.	
S-4655	8748.12	4-Bromodiphenyl ether	(BDE-3)	[101-55-3]	
	8750.12	4,4'-Dibromodiphenyl ether	(BDE-15)	[2050-47-7]	
	2116.12	3,3',4-Tribromodiphenyl ether	(BDE-35)	[147217-80-9]	
	1964.12	2,3',4',6-Tetrabromodiphenyl ether	(BDE-66)	[189084-62-6]	
	1967.12	2,2',4,4',5-Pentabromodiphenyl ether	(BDE-99)	[60348-60-9]	
	1972.12	2,2',4,4',5,6'-Hexabromodiphenyl ether	(BDE-154)	[207122-15-4]	
	1992.12	2,3,3',4,4',5,6-Heptabromodiphenyl ether	(BDE-190)	[189084-68-2]	
	9135.12	2,2',3,3',4,4',5,6'-Octabromodiphenyl ether	(BDE-196)	[446255-39-6]	
	9035.12	2,2',3,3',4,5,5',6,6'-Nonabromodiphenyl ether	(BDE-208)	[437701-78-5]	
	1811.12	2,2',3,3',4,4',5,5',6,6'-Decabromodiphenyl ether	(BDE-209)	[1163-19-5]	
	S-4655-50-T, 1 x 1 mL ampoule in isooctane				
	S-4655-50-Tx10, 10 x 1 mL ampoule in isooctane				
	S-4604-50-10T, 1 x 10 mL screwcap bottle in isooctane				
PBDE Mix of 10 mono- to decabrominated compounds (alternative to S-4604 and S-4655)					
PBDE Mix 28 10 Compounds at 100 µg/mL in toluene					
Catalogue No.	Part No.	Name	Abbreviation	CAS No.	
S-4940	9124.12	2-Bromodiphenyl ether	(BDE-1)	[7025-06-1]	
	9246.12	2,4-Dibromodiphenyl ether	(BDE-7)	[171977-44-9]	
	1961.12	2,2,4'-Tribromodiphenyl ether	(BDE-28)	[41318-75-6]	
	1962.12	2,2',4,4'-Tetrabromodiphenyl ether	(BDE-47)	[5436-43-1]	
	1967.12	2,2',4,4',5-Pentabromodiphenyl ether	(BDE-99)	[60348-60-9]	
	1972.12	2,2',4,4',5,6'-Hexabromodiphenyl ether	(BDE-154)	[207122-15-4]	
	1973.12	2,2',3,4,4',5',6-Heptabromodiphenyl ether	(BDE-183)	[207122-16-5]	
	1975.12	2,2',3,4,4',5,5',6-Octabromodiphenyl ether	(BDE-203)	[337513-72-1]	
	9033.12	2,2',3,3',4,4',5,5',6-Nonabromodiphenyl ether	(BDE-206)	[63387-28-0]	
	1811.12	2,2',3,3',4,4',5,5',6,6'-Decabromodiphenyl ether	(BDE-209)	[1163-19-5]	
	S-4940-100-T, 1 x 1 mL ampoule in toluene				
	S-4940-100-Tx10, 10 x 1 mL ampoules in toluene				
	S-4940-100-10T, 1 x 10 mL screwcap bottle in toluene				
PBDE Mix of 11 tri- to heptabrominated compounds (alternative to S-4987)					
PBDE Mix 24 11 Compounds at 50 µg/mL in isooctane					
Catalogue No.	Part No.	Name	Abbreviation	CAS No.	
S-4887	1961.12	2,2,4'-Tribromodiphenyl ether	(BDE-28)	[41318-75-6]	
	1962.12	2,2',4,4'-Tetrabromodiphenyl ether	(BDE-47)	[5436-43-1]	
	1964.12	2,3',4',6-Tetrabromodiphenyl ether	(BDE-66)	[189084-62-6]	
	1965.12	2,3',4',6-Tetrabromodiphenyl ether	(BDE-71)	[189084-62-6]	
	1966.12	2,2',3,4,4'-Pentabromodiphenyl ether	(BDE-85)	[182346-21-0]	
	1967.12	2,2',4,4',5-Pentabromodiphenyl ether	(BDE-99)	[60348-60-9]	
	1968.12	2,2',4,4',6-Pentabromodiphenyl ether	(BDE-100)	[189084-64-8]	
	1970.12	2,2',3,4,4',5-Hexabromodiphenyl ether	(BDE-138)	[182677-30-1]	
	1971.12	2,2',4,4',5,5'-Hexabromodiphenyl ether	(BDE-153)	[68631-49-2]	
	1972.12	2,2',4,4',5,6'-Hexabromodiphenyl ether	(BDE-154)	[207122-15-4]	
	1973.12	2,2',3,4,4',5',6-Heptabromodiphenyl ether	(BDE-183)	[207122-16-5]	
	S-4887-50-IO, 1 x 1 mL ampoule in isooctane				
	S-4887-50-IOx10, 10 x 1 mL ampoules in isooctane				

Flame Retardant Mixes

Other PBDE Mixes, Customised Solutions with 9+ Compounds (cont.)

PBDE Mix of 11 tri- to heptabrominated compounds (alternative to S-4887)				
PBDE Mix 29 11 Compounds at 50 µg/mL in isooctane				
Catalogue No.	Part No.	Name	Abbreviation	CAS No.
S-4987	1961.12	2,2,4'-Tribromodiphenyl ether	(BDE-28)	[41318-75-6]
	1962.12	2,2',4,4'-Tetrabromodiphenyl ether	(BDE-47)	[5436-43-1]
	1963.12	2,2',4,5'-Tetrabromobiphenyl ether	(BDE-49)	[243982-82-3]
	1964.12	2,3',4',6-Tetrabromodiphenyl ether	(BDE-66)	[189084-62-6]
	1967.12	2,2',4,4',5-Pentabromodiphenyl ether	(BDE-99)	[60348-60-9]
	1968.12	2,2',4,4',6-Pentabromodiphenyl ether	(BDE-100)	[189084-64-8]
	1969.12	2,3',4,4',6- Pentabromodiphenyl eher	(BDE-119)	[189084-6-0]
	1970.12	2,2',3,4,4',5-Hexabromodiphenyl ether	(BDE-138)	[182677-30-1]
	1971.12	2,2',4,4',5,5'-Hexabromodiphenyl ether	(BDE-153)	[68631-49-2]
	1972.12	2,2',4,4',5,6'-Hexabromodiphenyl ether	(BDE-154)	[207122-15-4]
	1973.12	2,2',3,4,4',6,6'-Heptabromodiphenyl ether	(BDE-183)	[207122-16-5]
	S-4987-50-T, 1 x 1 mL ampoule in isooctane			
	S-4987-50-Tx10, 10 x 1 mL ampoules in isooctane			
Extended mix of Lake Michigan Study + BDE-183 and BDE-209 in toluene (see also S-4737)				
PBDE Mix 12 11 Compounds at 100 µg/mL in isooctane				
Catalogue No.	Part No.	Name	Abbreviation	CAS No.
S-4600	1961.12	2,2,4'-Tribromodiphenyl ether	(BDE-28)	[41318-75-6]
	1962.12	2,2',4,4'-Tetrabromodiphenyl ether	(BDE-47)	[5436-43-1]
	1964.12	2,3',4',6-Tetrabromodiphenyl ether	(BDE-66)	[189084-62-6]
	1966.12	2,2',3,4,4'-Pentabromodiphenyl ether	(BDE-85)	[182346-21-0]
	1967.12	2,2',4,4',5-Pentabromodiphenyl ether	(BDE-99)	[60348-60-9]
	1968.12	2,2',4,4',6-Pentabromodiphenyl ether	(BDE-100)	[189084-64-8]
	1970.12	2,2',3,4,4',5-Hexabromodiphenyl ether	(BDE-138)	[182677-30-1]
	1971.12	2,2',4,4',5,5'-Hexabromodiphenyl ether	(BDE-153)	[68631-49-2]
	1972.12	2,2',4,4',5,6'-Hexabromodiphenyl ether	(BDE-154)	[207122-15-4]
	1973.12	2,2',3,4,4',5,6'-Heptabromodiphenyl ether	(BDE-183)	[207122-16-5]
	1811.12	2,2',3,3',4,4',5,5',6,6'-Decabromodiphenyl ether	(BDE-209)	[1163-19-5]
	S-4600-100-IOx10, 10 x 1 mL ampoules in isooctane			
Extended mix of Lake Michigan Study PBDEs + BDE-183 and BDE-209 in toluene (see also S-4600)				
PBDE Mix 21 11 Compounds at 100 µg/mL in toluene				
Catalogue No.	Part No.	Name	Abbreviation	CAS No.
S-4737	1961.12	2,2,4'-Tribromodiphenyl ether	(BDE-28)	[41318-75-6]
	1962.12	2,2',4,4'-Tetrabromodiphenyl ether	(BDE-47)	[5436-43-1]
	1964.12	2,3',4',6-Tetrabromodiphenyl ether	(BDE-66)	[189084-62-6]
	1966.12	2,2',3,4,4'-Pentabromodiphenyl ether	(BDE-85)	[182346-21-0]
	1967.12	2,2',4,4',5-Pentabromodiphenylether	(BDE-99)	[60348-60-9]
	1968.12	2,2',4,4',6-Pentabromodiphenyl ether	(BDE-100)	[189084-64-8]
	1970.12	2,2',3,4,4',5-Hexabromodiphenyl ether	(BDE-138)	[182677-30-1]
	1971.12	2,2',4,4',5,5'-Hexabromodiphenyl ether	(BDE-153)	[68631-49-2]
	1972.12	2,2',4,4',5,6'-Hexabromodiphenyl ether	(BDE-154)	[207122-15-4]
	1973.12	2,2',3,4,4',5,6'-Heptabromodiphenyl ether	(BDE-183)	[207122-16-5]
	1811.12	2,2',3,3',4,4',5,5',6,6'-Decabromodiphenyl ether	(BDE-209)	[1163-19-5]
	S-4737-100-T, 1 x 1 mL ampoule toluene			
	S-4737-100-Tx10, 10 x 1 mL ampoules in toluene			

Flame Retardant Mixes

Other PBDE Mixes, Customised Solutions with 9+ Compounds (cont.)

RoHS PBDEs. Mix of 13 mono- to decabrominated compounds				RoHS directive, See below
PBDE Mix 30 13 Compounds at 50 µg/mL in isooctane				
Catalogue No.	Part No.	Name	Abbreviation	CAS No.
S-4990	PBDEs used for calibration (IEC 62321):			
	8748.12	4-Bromodiphenyl ether	(BDE-3)	[101-55-3]
	8750.12	4,4'-Dibromodiphenyl ether	(BDE-15)	[2050-47-7]
	1961.12	2,4,4'-Tribromodiphenyl ether	(BDE-28)	[41318-75-6]
	10267.12	2',3,4-Tribromodiphenyl ether	(BDE-33)	[147217-78-5]
	1962.12	2,2',4,4'-Tetrabromodiphenyl ether	(BDE-47)	[5436-43-1]
	1967.12	2,2',4,4',5-Pentabromodiphenyl ether	(BDE-99)	[60348-60-9]
	1968.12	2,2',4,4',6-Pentabromodiphenyl ether	(BDE-100)	[189084-64-8]
	1971.12	2,2',4,4',5,5'-Hexabromodiphenyl ether	(BDE-153)	[68631-49-2]
	1972.12	2,2',4,4',5,6'-Hexabromodiphenyl ether	(BDE-154)	[207122-15-4]
	1973.12	2,2',3,4,4',5',6-Heptabromodiphenyl ether	(BDE-183)	[207122-16-5]
	1975.12	2,2',3,4,4',5,5',6-Octabromodiphenyl ether	(BDE-203)	[337513-72-1]
	9033.12	2,2',3,3',4,4',5,5',6-Nonabromodiphenyl ether	(BDE-206)	[63387-28-0]
	1811.12	Decabromodiphenyl ether	(BDE-209)	[1163-19-5]
	S-4990-50-IO, 1 x 1 mL ampoule in isooctane			
	S-4990-50-IOx5, 5 x 1 mL ampoules in isooctane			
PBDE Mix of 18 tri- to decabrominated compounds				
PBDE Mix 10 18 Compounds at 50 µg/mL in toluene				
Catalogue No.	Part No.	Name	Abbreviation	CAS No.
S-4559	8742.12	2,2',4-Tribromodiphenyl ether	(BDE-17)	[147217-75-2]
	1961.12	2,2,4'-Tribromodiphenyl ether	(BDE-28)	[41318-75-6]
	1962.12	2,2',4,4'-Tetrabromodiphenyl ether	(BDE-47)	[5436-43-1]
	1963.12	2,2',4,5'-Tetrabromodiphenyl ether	(BDE-49)	[243982-82-3]
	1964.12	2,3',4',6-Tetrabromodiphenyl ether	(BDE-66)	[189084-62-6]
	1965.12	2,3',4',6-Tetrabromodiphenyl ether	(BDE-71)	[189084-62-6]
	1990.12	2,4,4',6-Tetrabromodiphenyl ether	(BDE-75)	[189084-63-7]
	1991.12	3,3',4,4'-Tetrabromodiphenyl ether	(BDE-77)	[93703-48-1]
	1966.12	2,2',3,4,4'-Pentabromodiphenyl ether	(BDE-85)	[182346-21-0]
	1967.12	2,2',4,4',5-Pentabromodiphenyl ether	(BDE-99)	[60348-60-9]
	1968.12	2,2',4,4',6-Pentabromodiphenyl ether	(BDE-100)	[189084-64-8]
	1969.12	2,3',4,4',6- Pentabromodiphenyl eher	(BDE-119)	[189084-6-0]
	1970.12	2,2',3,4,4',5-Hexabromodiphenyl ether	(BDE-138)	[182677-30-1]
	1971.12	2,2',4,4',5,5'-Hexabromodiphenyl ether	(BDE-153)	[68631-49-2]
	1972.12	2,2',4,4',5,6'-Hexabromodiphenyl ether	(BDE-154)	[207122-15-4]
	1973.12	2,2',3,4,4',5',6-Heptabromodiphenyl ether	(BDE-183)	[207122-16-5]
	1992.12	2,3,3',4,4',5,6-Heptabromodiphenyl ether	(BDE-190)	[189084-68-2]
	1811.12	2,2',3,3',4,4',5,5',6,6'-Decabromodiphenyl ether	(BDE-209)	[1163-19-5]
	S-4559-50-T, 1 x 1 mL ampoule in toluene			
	S-4559-50-Tx10, 10 x 1 mL ampoules in toluene			

Flame Retardant Mixes

F-PBDE® Mixes, Internal Standards Mixes

F-PBDE Mix of 8 tetra- to nonabrominated compounds				RoHS directive
PBDE Mix 23b 8 Compounds at 50 µg/mL in toluene				
Catalogue No.	Part No.	Name	Abbreviation	CAS No.
S-4791	2161.12	6-Fluoro-2,2',4,4'-tetrabromodiphenyl ether	6-F-BDE-47	[876310-23-4]
	2506.12	5,5'-Difluoro-2,2',4,4'-tetrabromodiphenyl ether (2,2',4,4'-Tetrabromo-5,5'-difluorodiphenyl ether)	5,5'-F2-BDE-47	[886748-32-9]
	2505.12	3,6-Difluoro-2,2',4,4',5-pentabromodiphenyl ether (2,2',4,4',5-Pentabromo-3,6-difluorodiphenyl ether)	3,6-F2-BDE-99	[886748-34-1]
	2163.12	3-Fluoro-2,2',4,4',6-pentabromodiphenyl ether	3-F-BDE-100	[887401-80-1]
	1929.12	4'-Fluoro-2,3,3',4,5,6-hexabromodiphenyl ether	4'-F-BDE-160	[863314-88-9]
	2166.12	3-Fluoro-2,2',4,4',5,5',6-heptabromodiphenyl ether	3-F-BDE-183	[876310-28-0]
	2167.12	4',6-Difluoro-2,2',3,3',4,5,5',6'-octabromodiphenyl ether	2,4'-F2-BDE-199	[863314-96-9]
	2168.12	4'-Fluoro-2,2',3,3',4,5,5',6,6'-nonabromodiphenyl ether	4'-F-BDE-208	[876310-29-1]
	S-4791-50-T, 1 x 1 mL ampoule in toluene			
	S-4791-50-10T, 1 x 10 mL screwcap bottle in toluene			
	S-4791-50-Tx10, 10 x 1 mL ampoules in toluene			
F-PBDE Mix of 9 mono- to nonabrominated compounds, F-Internal standards mix for PBDEs, all bromination levels				
PBDE Mix 25 9 Compounds at 50 µg/mL in toluene				
Catalogue No.	Part No.	Name	Abbreviation	CAS No.
S-4899	1608.12	3-Bromo-4'-fluorodiphenyl ether	4'-F-BDE-2	[50904-38-6]
	2258.12	3'-Fluoro-2,4-dibromodiphenyl ether	3'-F-BDE-7	[CAS No.: N/A]
	2160.12	2'-Fluoro-2,4,4'-tribromodiphenyl ether	2'-F-BDE-28	[876310-22-4]
	2161.12	6-Fluoro-2,2',4,4'-tetrabromodiphenyl ether	6-F-BDE-47	[876310-23-4]
	2163.12	3-Fluoro-2,2',4,4',6-pentabromodiphenyl ether	3-F-BDE-100	[887401-80-1]
	1929.12	4'-Fluoro-2,3,3',4,5,6-hexabromodiphenyl ether	4'-F-BDE-160	[863314-88-9]
	2166.12	3-Fluoro-2,2',4,4',5,5',6-heptabromodiphenyl ether	3-F-BDE-183	[876310-28-0]
	2167.12	4',6-Difluoro-2,2',3,3',4,5,5',6'-octabromodiphenyl ether	2,4'-F2-BDE-199	[863314-96-9]
	2168.12	4'-Fluoro-2,2',3,3',4,5,5',6,6'-nonabromodiphenyl ether	4'-F-BDE-208	[876310-29-1]
	S-4899-50-T, 1 x 1 mL ampoule in toluene			
	S-4899-50-Tx10, 10 x 1 mL ampoules in toluene			
	S-4899-50-10T, 1 x 10 mL screwcap bottle in toluene			

Flame Retardant Mixes

The RoHS directive, PBB- and PBDE-mixes

RoHS PBBs. Mix of 10 mono- to decabrominated compounds					RoHS directive
PBB Mix 05 10 Compounds at 50 µg/mL in isooctane					
Catalogue No.	Part No.	Name	Abbreviation	CAS No.	
S-4989	PBBs used for calibration (IEC 62321):				
	3091.12	4-Bromobiphenyl	(BB-3)	[92-66-0]	
	3096.12	4,4'-Dibromobiphenyl	(BB-15)	[92-86-49]	
	2664.12	2,4,5-Tribromobiphenyl	(BB-29)	[115245-07-3]	
	3102.12	2,2',4,5'-Tetrabromobiphenyl	(BB-49)	[60044-24-8]	
	10266.12	3,3',4,4'-Tetrabromobiphenyl	(BB-77)	[77102-82-0]	
	3107.12	2,2',4,5',6-Pentabromobiphenyl	(BB-103)	[59080-39-6]	
	3108.12	2,2',4,4',5,5'-Hexabromobiphenyl	(BB-153)	[59080-40-9]	
	3109.12	3,3',4,4',5,5'-Hexabromobiphenyl	(BB-169)	[60044-26-0]	
	2679.12	Technical mixture containing hepta-, octa-, and nonabromo-biphenyls	(Dow FR-250)	[27858-07-7]	
	2677.12	Decabromobiphenyl	(BB-209)	[13654-09-6]	
	S-4989-50-IO, 1 x 1 mL ampoule in isooctane				
	S-4989-50-IOx5, 5 x 1 mL ampoules in isooctane				
RoHS PBDEs. Mix of 13 mono- to decabrominated compounds					RoHS directive
PBDE Mix 30 13 Compounds at 50 µg/mL in isooctane					
Catalogue No.	Part No.	Name	Abbreviation	CAS No.	
S-4990	PBDEs used for calibration (IEC 62321):				
	8748.12	4-Bromodiphenyl ether	(BDE-3)	[101-55-3]	
	8750.12	4,4'-Dibromodiphenyl ether	(BDE-15)	[2050-47-7]	
	1961.12	2,4,4'-Tribromodiphenyl ether	(BDE-28)	[41318-75-6]	
	10267.12	2',3,4-Tribromodiphenyl ether	(BDE-33)	[147217-78-5]	
	1962.12	2,2',4,4'-Tetrabromodiphenyl ether	(BDE-47)	[5436-43-1]	
	1967.12	2,2',4,4',5-Pentabromodiphenyl ether	(BDE-99)	[60348-60-9]	
	1968.12	2,2',4,4',6-Pentabromodiphenyl ether	(BDE-100)	[189084-64-8]	
	1971.12	2,2',4,4',5,5'-Hexabromodiphenyl ether	(BDE-153)	[68631-49-2]	
	1972.12	2,2',4,4',5,6'-Hexabromodiphenyl ether	(BDE-154)	[207122-15-4]	
	1973.12	2,2',3,4,4',5',6-Heptabromodiphenyl ether	(BDE-183)	[207122-16-5]	
	1975.12	2,2',3,4,4',5,5',6-Octabromodiphenyl ether	(BDE-203)	[337513-72-1]	
	9033.12	2,2',3,3',4,4',5,5',6-Nonabromodiphenyl ether	(BDE-206)	[63387-28-0]	
	S-4990-50-IO, 1 x 1 mL ampoule in isooctane				
	S-4990-50-IOx5, 5 x 1 mL ampoules in isooctane				
RoHS Directive. Surrogate and Internal standards					RoHS directive
Part No.		Name	Abbreviation	CAS No.	Conc.
Surrogate standards to monitor analyte recovery:					
2891.12-100-IO		4,4'-Dibromooctafluorobiphenyl	(DBOFB)	[10386-84-2]	100 µg/mL in 1 x 1 mL ampoule in isooctane
2891.12-2K-DC		4,4'-Dibromooctafluorobiphenyl	(DBOFB)	[10386-84-2]	2000 µg/mL in 1 x 1 mL Certan bottle in dichloromethane
Internal standards to correct for injection errors:					
8708.12-100-CY		Decachlorobiphenyl	(CB-209)	[2051-24-3]	100 µg/mL in 1 x 1 mL ampoule in cyclohexane
8708.12-10MG		Decachlorobiphenyl	(CB-209)	[2051-24-3]	10 mg neat

Flame Retardant Mixes

PBB and PBDE Mixes

PBB and PBDE Mix of 8 tri- to heptabrominated compounds				
PBB- and PBDE Mix 02 8 Compounds at 100 µg/mL in isooctane				
Catalogue No.	Part No.	Name	Abbreviation	CAS No.
S-4885	2664.12	2,4,5-Tribromobiphenyl	(BB-29)	[115245-07-3]
	3103.12	2,2',5,5'-Tetrabromobiphenyl	(BB-52)	[59080-37-4]
	3107.12	2,2',4,5',6-Pentabromobiphenyl	(BB-103)	[59080-39-6]
	3110.12	2,2',4,4',6,6'-Hexabromobiphenyl	(BB-155)	[59261-08-4]
	1962.12	2,2',4,4'-Tetrabromodiphenyl ether	(BDE-47)	[5436-43-1]
	1967.12	2,2',4,4',5-Pentabromodiphenyl ether	(BDE-99)	[60348-60-9]
	1971.12	2,2',4,4',5,5'-Hexabromodiphenyl ether	(BDE-153)	[68631-49-2]
	1973.12	2,2',3,4,4',5,6-Heptabromodiphenyl ether	(BDE-183)	[207122-16-5]
	S-4885-100-IO, 1 x 1 mL ampoule in isooctane			
	S-4885-100-IOx10, 10 x 1 mL ampoules in isooctane			
EPA 527 Mix 3, PBDE Congeners and Hexabromobiphenyl				EPA 527
PBDE Mix 07 5 Compounds at 50 µg/mL in isooctane/ethyl acetate (=8:2) (PBB- and PBDE Mix 01)				
Catalogue No.	Part No.	Name	Abbreviation	CAS No.
S-4484	3108.12	2,2',4,4',5,5'-Hexabromobiphenyl	(BB-153)	[59080-40-9]
	1962.12	2,2',4,4'-Tetrabromodiphenyl ether	(BDE-47)	[5436-43-1]
	1967.12	2,2',4,4',5-Pentabromodiphenyl ether	(BDE-99)	[60348-60-9]
	1968.12	2,2',4,4',6-Pentabromodiphenyl ether	(BDE-100)	[189084-64-8]
	1971.12	2,2',4,4',5,5'-Hexabromodiphenyl ether	(BDE-153)	[68631-49-2]
	S-4484-50-MX, 1 x 1 mL ampoule in isooctane/ethyl acetate			
	S-4484-50-MXx10, 10 x 1 mL ampoules in isooctane/ethyl acetate			

Flame Retardant Mixes

PCA (SCCP) Mixes

C10 PCA (SCCP) Mix				
PCA Mix 01 5 Compounds at 100 µg/mL in isooctane				
Catalogue No.	Part No.	Name	Abbreviation	CAS No.
S-4784	1666.10	1,2-Dichlorodecane		[34619-32-4]
	1662.10	1,1,1,3-Tetrachlorodecane		[51755-60-3]
	1671.10	1,2,9,10-Tetrachlorodecane		[205646-11-39]
	1659.10	1,1,1,3,9,10-Hexachlorodecane		[601523-26-69]
	1622.10	1,1,1,3,8,10,10,10-Octachloroundecane		[601523-23-3]
	S-4784-100-IO, 1 x 1 mL ampoule in isooctane			
	S-4784-100-IOx5, 5 x 1 mL ampoules in isooctane			
C11 PCA (SCCP) Mix				
PCA Mix 02 5 Compounds at 100 µg/mL in isooctane				
Catalogue No.	Part No.	Name	Abbreviation	CAS No.
S-4785	1667.11	1,2-Dichloroundecane		[81246-86-8]
	1649.11	1,1,1,3-Tetrachloroundecane		[56686-55-6]
	1674.11	1,2,10,11-Tetrachloroundecane		[210049-49-3]
	1650.11	1,1,1,3,10,11-Hexachloroundecane		[601523-28-8]
	1623.11	1,1,1,3,9,11,11,11-Octachloroundecane		[601523-25-5]
	S-4785-100-IO, 1 x 1 mL ampoule i isooctane			
	S-4785-100-IOx5, 5 x 1 mL ampoules in isooctane			
C12 PCA (SCCP) Mix				
PCA Mix 03 6 Compounds at 100 µg/mL in isooctane				
Catalogue No.	Part No.	Name	Abbreviation	CAS No.
S-4786	1668.12	1,2-Dichlorododecane		[75121-23-2]
	1663.12	1,12-Dichlorododecane		[3922-28-9]
	1651.12	1,1,1,3-Tetrachlorododecane		[14983-60-9]
	1675.12	1,2,11,12-Tetrachlorododecane		[210115-98-3]
	1652.12	1,1,1,3,11,12-Hexachlorododecane		[865306-22-5]
	1624.12	1,1,1,3,9,11,11,11-Octachlorododecane		[601523-21-1]
	S-4786-100-IO, 1 x 1 mL ampoule in isooctane			
	S-4786-100-IOx5, 5 x 1 mL ampoules in isooctane			
C13 PCA (SCCP) Mix				
PCA Mix 04 4 Compounds at 100 µg/mL in isooctane				
Catalogue No.	Part No.	Name	Abbreviation	CAS No.
S-4787	1669.13	1,2-Dichlorotridecane		[701920-72-1]
	1653.13	1,1,1,3-Tetrachlorotridecane		[67095-50-5]
	1654.13	1,1,1,3,12,13-Hexachlorotridecane		[865306-23-6]
	1625.13	1,1,1,3,11,13,13,13-Octachlorotridecane		[865306-24-7]
	S-4787-100-IO, 1 x 1 mL ampoule in isooctane			
	S-4787-100-IOx5, 5 x 1 mL ampoules in isooctane			



*For ordering and information about prices and delivery in your country, please contact your **local distributor:***