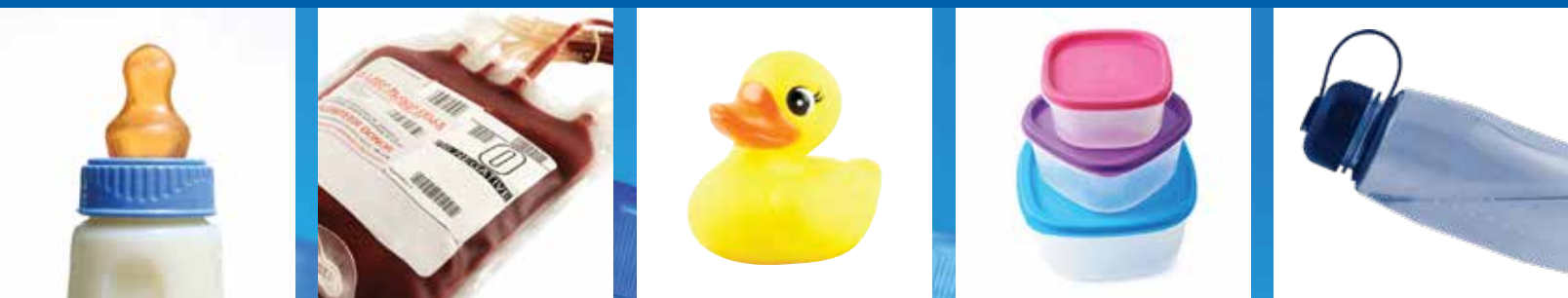
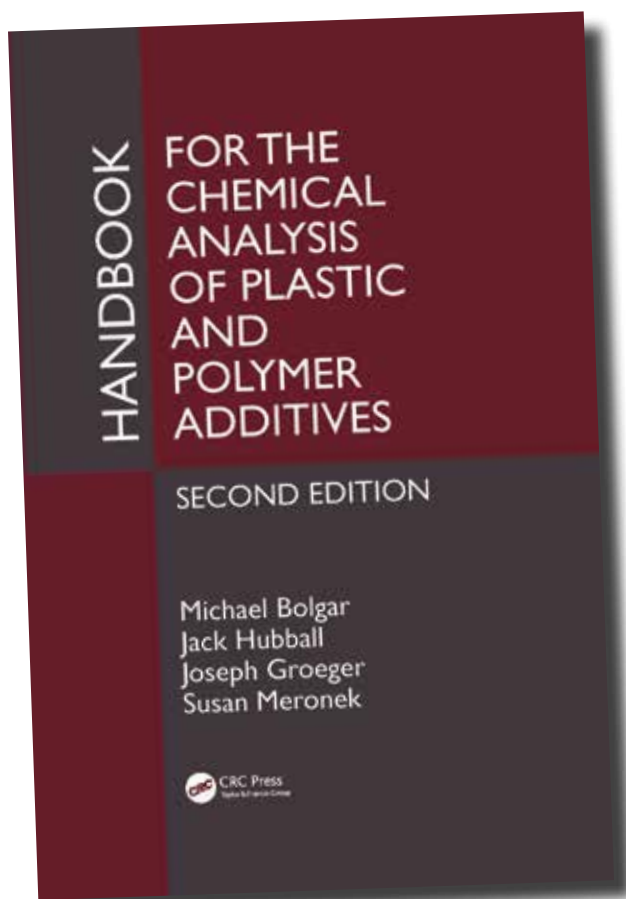


Plastic Additive Standards Guide



The perfect companion for your analysis!

This reference book contains the compounds in this catalog, with important reference data to aid in testing and compliance.



Each Compound has:

Chemical Information

- Structure
- CAS Number (where applicable)
- RTECS Number (where available)
- Formula
- Molecular Weight
- IUPAC Name, other common names and some popular brand names

Physical Properties

- Appearance
- Melting and Boiling Points
- Stability
- Solubilities in several common solvents

Other Important Information

- Application
- Regulatory
- Environmental Impact
- Point of Release
- Toxicological Data

Analytical Data

- Mass Spectrum with key ions tabulated
- Chromatogram with conditions

As well as information to help with real world examples, tips for analysis in challenging matrices and much more!

Cat. No: PLAS-CRC-BOOK2

Handbook for the Chemical Analysis of Plastic and Polymer Additives, 2nd Ed.

The Second Edition of this handbook provides the necessary tools for chemists to obtain a more complete listing of additives present in a particular polymeric matrix. This edition features:

- Updated material to include the most recent additives available
- Contains actual analytical data for each chemical along with the description and methods used for obtaining the results
- Highlights the toxicological and environmental impact of each product
- Summarizes regulatory and health information in a convenient "one-step" format

With 50 additional compounds, this 2nd edition nearly doubles the number of additives in several categories including processing aids, anti-static compounds, mold release products and blowing agents. It includes a listing that can be cross-referenced by trade name, chemical name, CAS number and even key mass unit ions from the GC/MS run. Also included are new case studies related to "real-world" issues.

Plastic Additives

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AccuStandard has been serving the analytical community with high quality Chemical Reference Standards for 30 years.

Today, we are the largest independent manufacturer specializing exclusively in analytical reference standards in the world. We achieved this distinction by concentrating on two goals: to have the widest range of organic and inorganic analytical standards and to have a knowledgeable and responsive customer and technical service department.

We also provide custom formulations and synthesis of new or rare compounds.

Introduction

Plastics and other polymeric materials have become indispensable in our everyday lives. Although they offer many benefits, hazardous chemicals may be present in these materials. These hazardous materials can be introduced either intentionally as additives, or unintentionally as pollutants.

AccuStandard has collected or synthesized many of these polymer adjuncts and is pleased to present them in this newest unique catalog as certified reference standards for monitoring these chemicals.

The occurrence, toxicity and analytical methods used in the detection and monitoring (for both presence and levels) of these chemical classes and individual compounds within these classes are more thoroughly described in the book the "Handbook for the Chemical Analysis of Plastic and Polymer Additives" (2nd edition published in 2016 by CRC Press). Both manufacturers and distributors of plastic and related polymeric materials will find the CRC book to be an authoritative source of information that complements this catalog.

This catalog contains a comprehensive list of Certified Reference Materials for Additive Analysis available for analysis. Calibrating with certified standards adds an additional layer of confidence in the analysis that can aid in meeting regulations, protecting in challenges from governmental regulations and providing protection from legal issues that could be raised by consumers of your products.

Below find a list of regulations that require analysis of many of these additives:

- EU Directive 2002/96/EC WEEE (Waste Electrical and Electronic Equipment) that establishes limits for the content of a product that must be recyclable or reusable.
- EU Directive 2003/11/EC ROHS (Restriction Of the use of certain Hazardous Substances) restricting the use of six toxins from most electronic and electrical equipment.
- EU Directive 90/128/EC for monomers and additives for plastics intended for food contact.
- EU Directive 2002/72/EC relating to plastic materials and articles intended to come in contact with foodstuffs.
- EU Directive 2002/61/EC Aryl Amine Breakdown Products in Azo Dyes
- EU Directive 67/548/EEC Carcinogenic and Regulated Dyes
- FDA and The United States Code of Federal Regulations (CFR) – 21 CFR Parts 175-178 that regulate adhesives, components of coatings, paper and paperboard components, polymers and adjuvants and production aids.
- United States Environmental Protection Agency (USEPA) – Methods 506, 606 and 8061 regulating Phthalates and Adipates.

Both the catalog and book are organized into classes by additive type. Manufacturers can easily find Standards that match their particular application and product formulation for the following product categories:

- Medical Devices
- Food Packaging
- Pharmaceutical Packaging
- Toys
- Wire and Cable

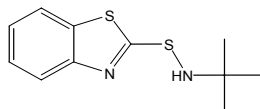


Accelerants

Accelerators are additives that, as the name implies, accelerate or speed up the chemical reaction or the curing of the polymers into the final plastic. Accelerators are also sometimes called promoters. In rubbers, accelerators are used to increase the crosslinking reaction with sulfur in the vulcanization of rubber.

Accelerator BBTS

N-(1,1-Dimethylethyl)-2-benzothiazolesulfenamide

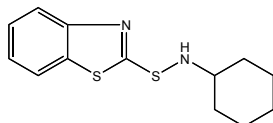


CAS 95-31-8 MF C₁₁H₁₄N₂S₂ MW 238.38

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AC-003S	1 mL
NEAT	PLAS-AC-003N	50 mg

Accelerator CBTS

N-Cyclohexyl-2-benzothiazole sulfenamide

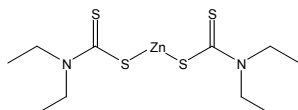


CAS 95-33-0 MF C₁₃H₁₆N₂S₂ MW 264.41

Matrix	Cat. No.	Unit
NEAT	PLAS-AC-007N	50 mg

Accelerator EZ & EZ-SP

Zinc diethyldithiocarbamate

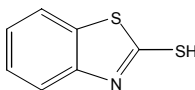


CAS 14324-55-1 MF C₁₀H₂₀N₂S₄ • Zn MW 361.93

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane:Acetone 90:10	PLAS-AC-006S	1 mL
NEAT	PLAS-AC-006N	50 mg

Accelerator MBT, MBT/MG

2-Mercaptobenzothiazole

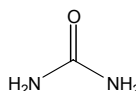


CAS 149-30-4 MF C₇H₅S₂N MW 167.25

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane:Acetone 90:10	PLAS-AC-001S	1 mL
NEAT	PLAS-AC-001N	50 mg

Activator OT Urea

Urea

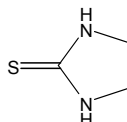


CAS 57-13-6 MF CH₄N₂O MW 60.07

Matrix	Cat. No.	Unit
1000 µg/mL in Acetone	PLAS-AC-005S-A	1 mL
NEAT	PLAS-AC-005N	50 mg

Akroform ETU-22 PM

Ethylene thiourea

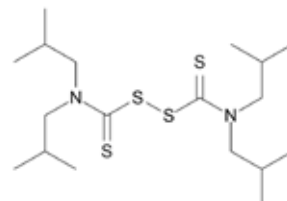


CAS 96-45-7 MF C₃H₆N₂S MW 102.11

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane:Acetone 70:30	PLAS-AC-002S	1 mL
NEAT	PLAS-AC-002N	50 mg

Cure-Rite® IBT

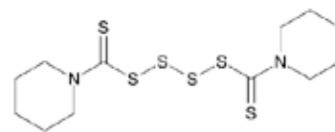
Tetraisobutylthiuram disulfide



CAS 3064-73-1 MF C₁₈H₃₆N₂S₄ MW 408.76

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AC-004S	1 mL
NEAT	PLAS-AC-004N	50 mg

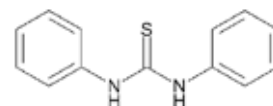
Dipentamethylenethiuram tetrasulfide



CAS 120-54-7 MF C₁₂H₂₀N₂S₆ MW 384.69

Matrix	Cat. No.	Unit
NEAT	PLAS-AC-009N	50 mg

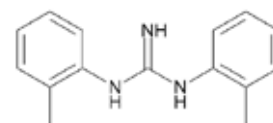
1,3-Diphenyl-2-thiourea



CAS 102-08-9 MF C₁₃H₁₂N₂S MW 228.31

Matrix	Cat. No.	Unit
NEAT	PLAS-AC-008N	50 mg

1,3-Di-o-tolylguanidine



CAS 97-39-2 MF C₁₅H₁₇N₃ MW 239.32

Matrix	Cat. No.	Unit
NEAT	PLAS-AC-010N	50 mg

Property Key

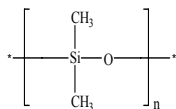
CAS	Chemical Abstract Service Number	MF	Molecular Formula
		MW	Molecular Weight

Antifoams

Antifoaming agents (sometimes called defoamers) act to stop foaming during processing and typically work by reducing surface tension breaking up the foam. Foaming can cause both processing problems as well as weak spots in the final product.

SF100

Dimethyl silicone fluid



CAS 9016-00-6 MF (C₂H₆OSi)_n MW N/A

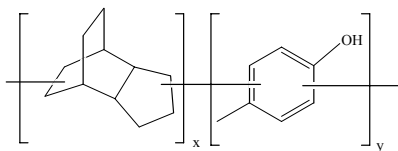
Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AF-001S	1 mL
NEAT	PLAS-AF-001N	50 mg

Antidegradants

Antidegradants include a broad category of additives used in compounding to slow deterioration that can occur due to oxidation, ozone, light or any combination of these conditions. It is basically a generic term for additives that include antioxidants, antiozonants and UV Stabilizers.

Akrochem Antiox 12

Butylated reaction product of p-cresol and dicyclopentadiene

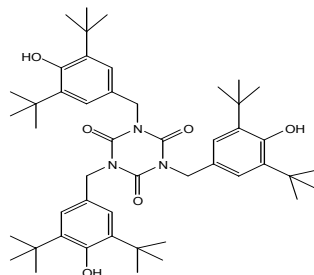


CAS 68610-51-5 MF [C₁₁H₂₀OH • C₁₂H₂₃OH]_n C₄H₉ MW 600-800

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane:Acetone 80:20	PLAS-AD-001S	1 mL
NEAT	PLAS-AD-001N	50 mg

Ethanox® 314

1,3,5-tris(3,5-Di-tert-butyl-4-hydroxybenzyl)-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione

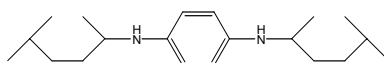


CAS 27676-62-6 MF C₄₈H₆₉N₃O₆ MW 784.08

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-084S	1 mL
NEAT	PLAS-AX-084N	50 mg

Santoflex® 77PD

N,N'-bis(1,4-Dimethylpentyl)-p-phenylenediamine



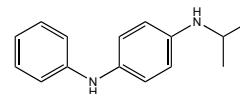
Flexsys

CAS 3081-14-9 MF C₂₀H₃₆N₂ MW 304.51

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AD-002S	1 mL
NEAT	PLAS-AD-002N	50 mg

Santoflex® IPPD

N-Isopropyl-N'-phenyl-p-phenylenediamine

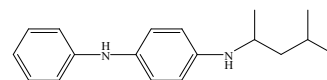


CAS 101-72-4 MF C₁₅H₁₈N₂ MW 226.32

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane:Acetone 80:20	PLAS-AD-003S	1 mL
NEAT	PLAS-AD-003N	50 mg

Santoflex® 6PPD

N-(1,3-Dimethylbutyl)-N'-phenyl-p-phenylenediamine



CAS 793-24-8 MF C₁₈H₂₄N₂ MW 268.40

Matrix	Cat. No.	Unit
NEAT	PLAS-AD-004N	50 mg

Property Key

CAS	Chemical Abstract Service Number	MF	Molecular Formula
		MW	Molecular Weight

Antioxidants

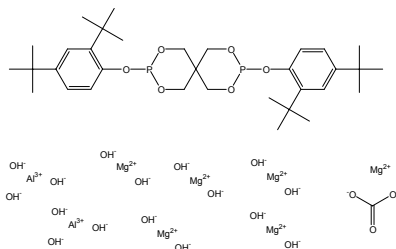
Oxidation during compounding or processing can cause problems such as: loss of strength, breakdown or discoloration. Oxidation can also occur in the final product causing discoloration, scratching and loss of strength, flexibility, stiffness or gloss.

Antioxidants are used in most hydrocarbon polymers including polyethylene, polypropylene, polystyrene and ABS.

Antioxidants work to slow down the oxidation cycle, usually by scavenging free radicals. Some types of antioxidants are: organophosphites, sterically hindered phenols, amines and thioesters.

Alkanox® P27

bis(2,4-di-tert-Butylphenyl)pentaerythritol diphosphate and magnesium aluminum hydroxy carbonate hydrate



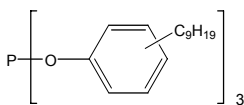
Chemtura Corporation

CAS 26741-53-7 / 11097-59-9 MF $C_{33}H_{50}O_6P_2 \cdot H_{16}Al_2Mg_6O_{19}$ MW N/A

Matrix	Cat. No.	Unit
NEAT	PLAS-AX-032N	50 mg

Alkanox® TNPP

tris(Nonylphenyl) phosphite with up to 1% triisopropanol amine

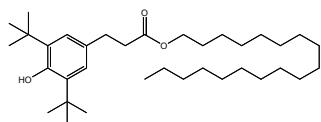


CAS 26523-78-4 MF $C_{45}H_{69}O_3P$ MW 689

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-077S	1 mL
NEAT	PLAS-AX-077N	50 mg

Anox® PP18

Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propanoate

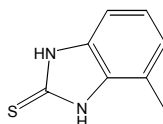


CAS 2082-79-3 MF $C_{35}H_{62}O_3$ MW 530.86

Matrix	Cat. No.	Unit
NEAT	PLAS-AX-114N	50 mg

Antioxidant 60

Methyl-2-mercaptobenzimidazole

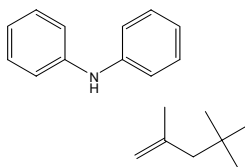


CAS 53988-10-6 MF $C_8H_8N_2S$ MW 164.23

Matrix	Cat. No.	Unit
1000 µg/mL in Methanol	PLAS-AX-019S-M	1 mL
NEAT	PLAS-AX-019N	50 mg

Antioxidant S

Benzenamine, N-phenyl, reaction products with 2,4,4-trimethylpentene

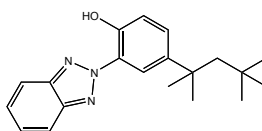


CAS 68411-46-1 MF $C_{12}H_{11}N \cdot C_8H_{16}$ MW 393.66

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-057S	1 mL
NEAT	PLAS-AX-057N	50 mg

2-(2H-Benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol

2-(2-Hydroxy-5-tert-octylphenyl)benzotriazole

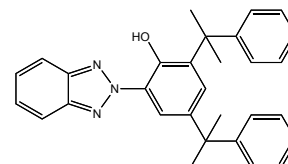


CAS 3147-75-9 MF $C_{20}H_{25}N_3O$ MW 323.43

Matrix	Cat. No.	Unit
NEAT	PLAS-AX-094N	50 mg

BLS® 234

2-(2-Hydroxy-3,5-di-(1,1-dimethylbenzyl))-benzotriazole

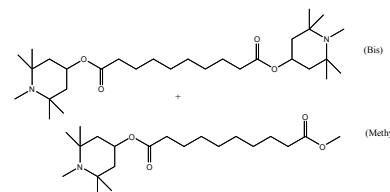


CAS 70321-86-7 MF $C_{30}H_{29}N_3O$ MW 447.57

Matrix	Cat. No.	Unit
NEAT	PLAS-AX-088N	50 mg

BLS® 292

bis(1,2,2,6,6-pentamethyl-4-piperidiny)sebacate and Methyl(1,2,2,6,6-pentamethyl-4-piperidiny)sebacate

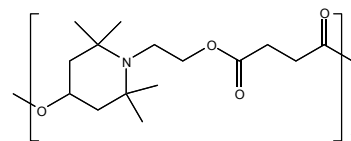


CAS 41556-26-7/8219-37-7 MF $C_{30}H_{56}N_2O_4 / C_{21}H_{39}NO_4$ MW 508.78/369.54

Matrix	Cat. No.	Unit
NEAT	PLAS-AX-089N	50 mg

BLS® 1622

Dimethyl sebacate polymer with 4-hydroxy-2,2,6,6-tetramethyl-1-piperidine ethanol



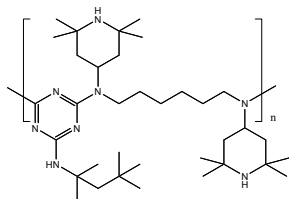
CAS 65447-77-0 MF $(C_{15}H_{25}NO_4)_n$ MW (283.35)_n

Matrix	Cat. No.	Unit
NEAT	PLAS-AX-096N	50 mg

Antioxidants (continued)

BLS® 1944

Poly[[6-[(1,1,3,3-tetramethylbutyl)aminol]-s-triazine-2,4-diyl][(2,2,6,6-tetramethyl-4-piperidyl)imino]] hexamethylene[(2,2,6,6-tetramethyl-4-piperidyl)imino]

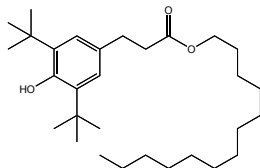


CAS 70624-18-9 MF $C_{35}H_{66}N_8$ MW (599.09)_n

Matrix	Cat. No.	Unit
NEAT	PLAS-AX-090N	50 mg

BNX 1077

Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, isotridecyl ester

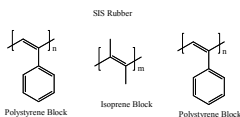
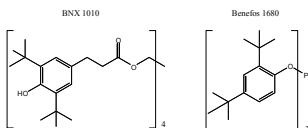


CAS 847488-62-4 MF $C_{30}H_{52}O_3$ MW 460.73

Matrix	Cat. No.	Unit
NEAT	PLAS-AX-087N	50 mg

BNX 1225TPR

Blend of BNX®1010, Benefos®1680 and SIS Block Copolymer

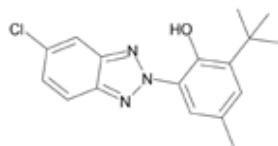


CAS 6683-19-8/31570-04-4/25038-32-8 MF N/A MW N/A

Matrix	Cat. No.	Unit
NEAT	PLAS-AX-091N	50 mg

2-tert-Butyl-6-(5-chloro-2H-benzotriazol-azol-2-yl)-4-methylphenol

2-(2-Hydroxy-3-tert-butyl-5-methylphenyl)-5-chloro-benzotriazole

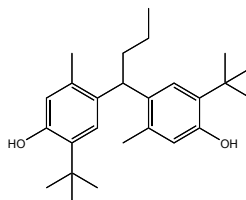


CAS 3896-11-5 MF $C_{17}H_{18}ClN_3O$ MW 315.80

Matrix	Cat. No.	Unit
NEAT	PLAS-AX-093N	50 mg

4,4'-Butylidenebis(6-tert-butyl-m-cresol)

6,6'-di-tert-Butyl-4,4'-butylidene di-m-cresol

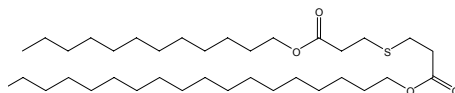


CAS 85-60-9 MF $C_{26}H_{38}O_2$ MW 382.58

Matrix	Cat. No.	Unit
NEAT	PLAS-AX-105N	50 mg

Cyanox® 1212

Lauryl stearyl thiopropionate



CAS 13103-52-1 MF $C_{36}H_{70}O_4S$ MW 599.00

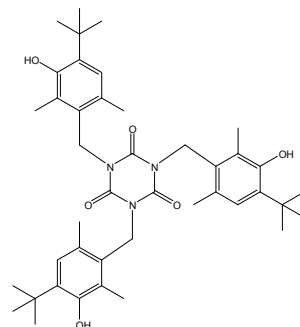
Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-047S	1 mL
NEAT	PLAS-AX-047N	50 mg

Property Key

CAS	Chemical Abstract Service Number	MF	Molecular Formula
		MW	Molecular Weight

Cyanox® 1790

1,3,5-tris(4-tert-Butyl-3-hydroxy-2,6-dimethylbenzyl)-1,3,5-triazine-2,4,6-(1H, 3H,5H)-trione

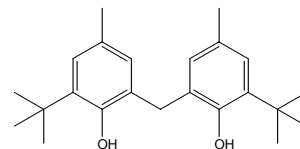


CAS 40601-76-1 MF $C_{42}H_{57}N_3O_6$ MW 699.92

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-005S	1 mL
NEAT	PLAS-AX-005N	50 mg

Cyanox® 2246

2,2'-Methylene-bis(4-methyl-6-tert-butylphenol)

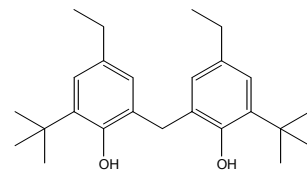


CAS 119-47-1 MF $C_{23}H_{32}O_2$ MW 340.55

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-013S	1 mL
NEAT	PLAS-AX-013N	50 mg

Cyanox® 425

2,2'-Methylene-bis(4-ethyl-6-tert-butylphenol)



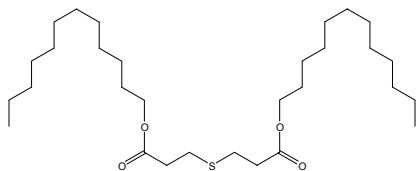
CAS 88-24-4 MF $C_{25}H_{36}O_2$ MW 368.55

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-012S	1 mL
NEAT	PLAS-AX-012N	50 mg

Antioxidants (continued)

Cyanox® LTDP

Dilauryl thiodipropionate

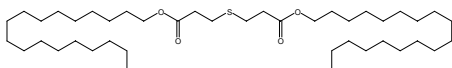


CAS 123-28-4 MF C₃₀H₅₈O₄S MW 514.85

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-041S	1 mL
NEAT	PLAS-AX-041N	50 mg

Cyanox® STDP

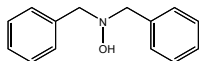
Distearyl thiodipropionate



CAS 693-36-7 MF C₄₂H₈₂O₄S MW 683.3

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-044S	1 mL
NEAT	PLAS-AX-044N	50 mg

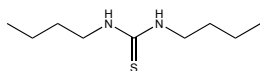
Dibenzylhydroxylamine



CAS 621-07-8 MF C₁₄H₁₅NO MW 213.28

Matrix	Cat. No.	Unit
NEAT	PLAS-AX-092N	50 mg

N,N'-Dibutylthiourea

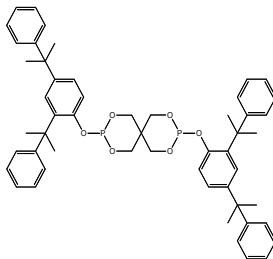


CAS 109-46-6 MF C₉H₂₀N₂S MW 188.33

Matrix	Cat. No.	Unit
NEAT	PLAS-AX-102N	50 mg

3,9-bis(2,4-Dicumylphenoxy)-2,4,8,10-tetraoxa-3,9-diphosphaspiro[5,5]undecane

3,9-bis[2,4-bis(2-Phenylpropan-2-yl)phenoxy]-2,4,8,10-tetraoxa-3,9-diphosphaspiro[5,5]undecane

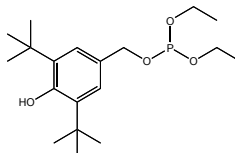


CAS 154862-43-8 MF C₅₃H₅₈O₆P₂ MW 852.97

Matrix	Cat. No.	Unit
NEAT	PLAS-AX-111N	50 mg

Diethyl 3,5-di-tert-butyl-4-hydroxybenzylphosphonate

2,6-di-tert-Butyl-4-(diethoxyphosphorylmethyl)phenol

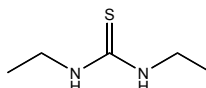


CAS 976-56-7 MF C₁₉H₃₃O₄P MW 356.44

Matrix	Cat. No.	Unit
NEAT	PLAS-AX-110N	50 mg

N,N'-Diethylthiourea

1,3-Diethyl-2-thiourea

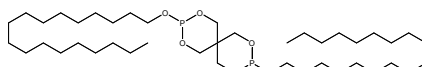


CAS 105-55-5 MF C₅H₁₂N₂S MW 132.23

Matrix	Cat. No.	Unit
NEAT	PLAS-AX-103N	50 mg

3,9-bis(Octadecyloxy)-2,4,8,10-tetraoxa-3,9-diphosphaspiro[5.5]undecane

Distearyl pentaerythritol bisphosphite

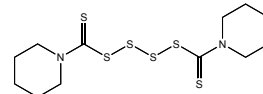


CAS 3806-34-6 MF C₄₁H₈₂O₆P₂ MW 733.03

Matrix	Cat. No.	Unit
NEAT	PLAS-AX-108N	50 mg

Dipentamethylenethiuram tetrasulfide

Piperidine, 1,1'-(tetraethiodicarbonothioyl)-bis-

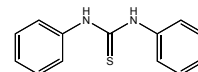


CAS 120-54-7 MF C₁₂H₂₀N₂S₆ MW 384.70

Matrix	Cat. No.	Unit
NEAT	PLAS-AX-104N	50 mg

1,3-Diphenyl-2-thiourea

1,3-Diphenylthiourea

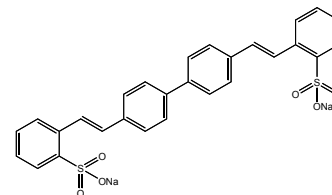


CAS 102-08-9 MF C₁₃H₁₂N₂S MW 228.31

Matrix	Cat. No.	Unit
NEAT	PLAS-AX-100N	50 mg

Distyryl biphenyl

Disodium 4,4'-bis(2-sulfonatostyryl)biphenyl

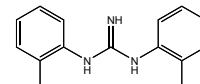


CAS 27344-41-8 MF C₂₈H₂₀Na₂O₆S₂ MW 562.57

Matrix	Cat. No.	Unit
NEAT	PLAS-AX-099N	50 mg

1,3-Di-o-tolylguanidine

1,2-bis(2-Methylphenyl)guanidine

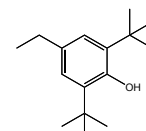


CAS 97-39-2 MF C₁₅H₁₇N₃ MW 239.32

Matrix	Cat. No.	Unit
NEAT	PLAS-AX-101N	50 mg

2,6-Di-tert-butyl-4-ethylphenol

2,6-bis(1,1-Dimethylethyl)-4-ethylphenol



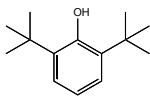
CAS 4130-42-1 MF C₁₆H₂₆O MW 234.38

Matrix	Cat. No.	Unit
NEAT	PLAS-AX-107N	50 mg

Antioxidants (continued)

2,6-Di-tert-butylphenol

2,6-Di-tert-butylphenol

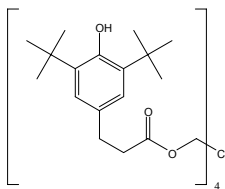


CAS 128-39-2 MF C₁₄H₂₂O MW 206.32

Matrix	Cat. No.	Unit
NEAT	PLAS-AX-112N	50 mg

Ethanox® 310

Pentaerythritol tetrakis (3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate)

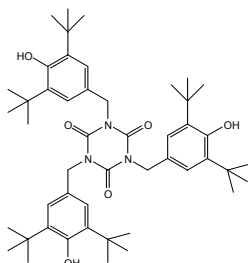


CAS 6683-19-8 MF C₇₃H₁₀₈O₁₂ MW 1177.65

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-086S	1 mL
NEAT	PLAS-AX-086N	50 mg

Ethanox® 314

tris(3,5-Di-tert-butyl-4-hydroxybenzyl)isocyanurate

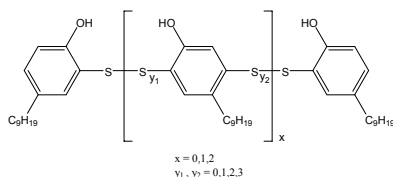


CAS 27676-62-6 MF C₄₈H₆₉N₃O₆ MW 784.08

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-084S	1 mL
NEAT	PLAS-AX-084N	50 mg

Ethanox® 323

Nonylphenol disulfide oligomer

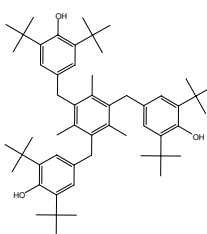


CAS MF MW

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-082S	1 mL
NEAT	PLAS-AX-082N	50 mg

Ethanox® 330

1,3,5-Trimethyl-2,4,6-tris(3,5-di-tert-butyl-4-hydroxybenzyl) benzene

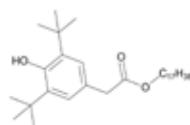


CAS 1709-70-2 MF C₅₄H₇₈O₃ MW 775.32

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-021S	1 mL
NEAT	PLAS-AX-021N	50 mg

Ethanox® 376

Octadecyl 3,5-di-tert-butyl-4-hydroxyhydrocinnamate

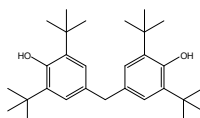


CAS 2082-79-3 MF C₃₅H₆₂O₃ MW 530.87

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-054S	1 mL
NEAT	PLAS-AX-054N	50 mg

Ethanox® 702

4,4'-Methylene bis(2,6-di-tert-butylphenol)

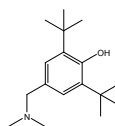


CAS 118-82-1 MF C₂₉H₄₄O₂ MW 424.66

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-025S	1 mL
NEAT	PLAS-AX-025N	50 mg

Ethanox® 703

2,6-Di-tert-butyl-N,N-dimethylamino-p-cresol

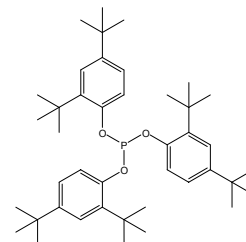


CAS 88-27-7 MF C₁₇H₂₉NO MW 263.42

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-085S	1 mL
NEAT	PLAS-AX-085N	50 mg

Ethaphos® 368

Tris(2,4-di-tert-butylphenyl) phosphite

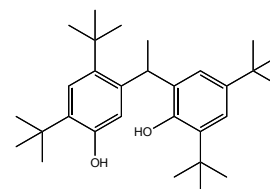


CAS 31570-04-4 MF C₄₂H₆₃O₃P MW 646.92

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-074S	1 mL
NEAT	PLAS-AX-074N	50 mg

2,2'-Ethylidene-bis(4,6-di-tert-butylphenol)

Phenol, 2,2'-ethylidenebis[4,6-bis(1,1-dimethylethyl)-

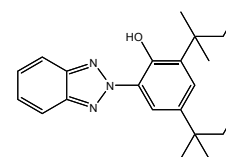


CAS 35958-30-6 MF C₃₀H₄₆O₂ MW 438.69

Matrix	Cat. No.	Unit
NEAT	PLAS-AX-106N	50 mg

2-(2-Hydroxy-3,5-di-tert-amylphenyl) benzotriazole

2-(Benzotriazol-2-yl)-4,6-bis(2-methylbutan-2-yl) phenol



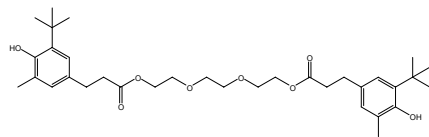
CAS 25973-55-1 MF C₂₂H₂₉N₃O MW 351.49

Matrix	Cat. No.	Unit
NEAT	PLAS-AX-095N	50 mg

Antioxidants (continued)

Irganox® 245

Triethyleneglycol bis[3-(3-tert-butyl-4-hydroxy-5-methylphenyl)propionate]

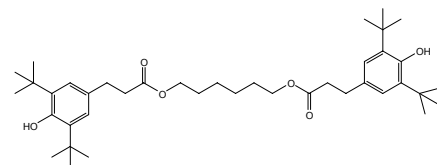


CAS 36443-68-2 MF C₃₄H₅₀O₈ MW 586.76

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane:Acetone (95:5)	PLAS-AX-070S	1 mL
NEAT	PLAS-AX-070N	50 mg

Irganox® 259

Hexamethylene bis(3-(3,5-di-tert-butyl-4-hydroxy-phenyl)propionate)

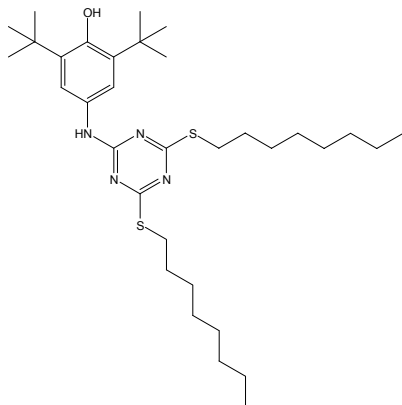


CAS 35074-77-2 MF C₄₀H₆₂O₆ MW 638.92

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-045S	1 mL
NEAT	PLAS-AX-045N	50 mg

Irganox® 565

2,4-bis(n-Octylthio)-6-(4-hydroxy-3,5-di-tert-butylanilino)-1,3,5-triazine

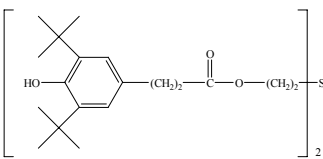


CAS 991-84-4 MF C₃₃H₅₆N₄OS₂ MW 588.96

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-014S	1 mL
NEAT	PLAS-AX-014N	50 mg

Irganox® 1035

Thiodiethylene glycol bis(3,5-di-tert-butyl-4-hydroxyhydrocinnamate)

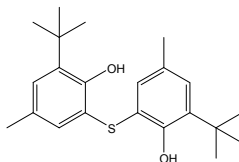


CAS 41484-35-9 MF C₃₈H₅₈O₆S MW 642.93

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-069S	1 mL
NEAT	PLAS-AX-069N	50 mg

Irganox® 1081

6,6'-Di-tert-butyl-2,2'-thiodi-p-cresol

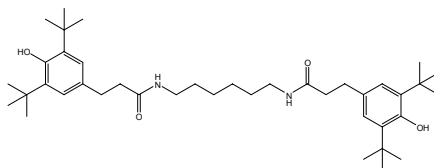


CAS 90-66-4 MF C₂₂H₃₀O₂S MW 358.54

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-080S	1 mL
NEAT	PLAS-AX-080N	50 mg

Irganox® 1098

N,N'-1,6-Hexanediyl bis[3,5-bis(1,1-dimethylethyl)-4-hydroxy-benzenepropanamide]



CAS 23128-74-7 MF C₄₀H₆₄N₂O₄ MW 636.95

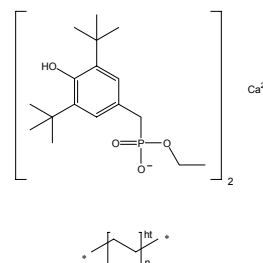
Matrix	Cat. No.	Unit
1000 µg/mL in Hexane:Acetone 80:20	PLAS-AX-050S	1 mL
NEAT	PLAS-AX-050N	50 mg

Property Key

CAS	Chemical Abstract Service Number	MF	Molecular Formula
		MW	Molecular Weight

Irganox® 1425 WL

Ethyl 3,5-di-tert-butyl-4-hydroxybenzylphosphonate, calcium salt and polyethylene-wax mixture

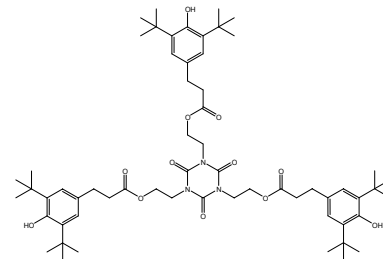


CAS 65140-91-2 / 9002-88-4 MF 2C₁₇H₂₉O₄P • Ca(C₂H₄)_x MW 695

Matrix	Cat. No.	Unit
NEAT	PLAS-AX-079N	50 mg

Irganox® 3125

3,5-Di-tert-butyl-4-hydroxyhydrocinnamic triester with 1,3,5-tris[2-Hydroxyethyl]-s-triazine-2,4,6-[1H,3H,5H]-trione

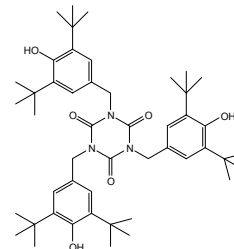


CAS 34137-09-2 MF C₆₀H₈₇N₃O₁₂ MW 1042.35

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane:Acetone (95:5)	PLAS-AX-020S	1 mL
NEAT	PLAS-AX-020N	50 mg

Irganox® 3114FF

1,3,5-tris(3,5-Di-tert-butyl-4-hydroxybenzyl)-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione



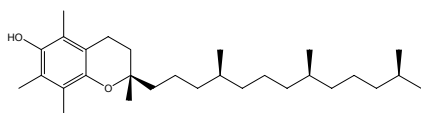
CAS 27676-62-6 MF C₄₈H₆₉N₃O₆ MW 784.08

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-078S	1 mL
NEAT	PLAS-AX-078N	50 mg

Antioxidants (continued)

Irganox® E 201

alpha-Tocopherol

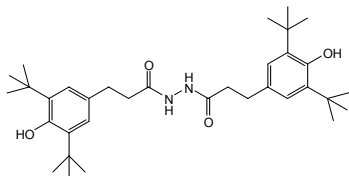


CAS 10191-41-0 MF C₂₉H₅₀O₂ MW 430.71

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-027S	1 mL
NEAT	PLAS-AX-027N	50 mg

Irganox® MD 1024

1,2-bis(3,5-Di-tert-butyl-4-hydroxyhydrocinnamoyl)hydrazide

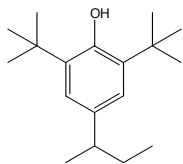


CAS 32687-78-8 MF C₃₄H₅₂N₂O₄ MW 552.79

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane:Acetone 80:20	PLAS-AX-001S	1 mL
NEAT	PLAS-AX-001N	50 mg

Isonox® 132

2,6-Di-tert-butyl-4-sec-butylphenol



CAS 17540-75-9 MF C₁₈H₃₀O MW 262.43

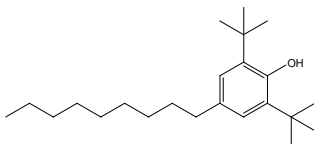
Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-018S	1 mL
NEAT	PLAS-AX-018N	50 mg

Property Key

CAS	Chemical Abstract Service Number	MF	Molecular Formula	MW	Molecular Weight
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Isonox® 232

2,6-Di-tert-butyl-4-nonylphenol

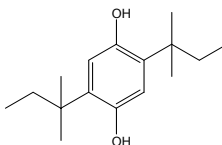


CAS 4306-88-1 MF C₂₃H₄₀O MW 262.43

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-063S	1 mL
NEAT	PLAS-AX-063N	50 mg

Lowinox® AH25

2,5-bis(1,1-Dimethylpropyl)-1,4-benzenediol

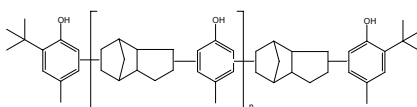


CAS 79-74-3 MF C₁₆H₂₆O₂ MW 250.38

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-016S	1 mL
NEAT	PLAS-AX-016N	50 mg

Lowinox® CPL

Polymeric sterically hindered phenol

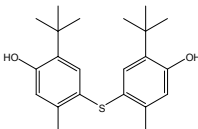


CAS 68610-51-5 MF N/A MW 600-700

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane:Acetone 95:5	PLAS-AX-059S	1 mL
NEAT	PLAS-AX-059N	50 mg

Lowinox® TBM-6

4,4'-Thiobis(2-tert-butyl-5-methylphenol)



CAS 96-69-5 MF C₂₂H₃₀O₂S MW 358.54

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane:Acetone 90:10	PLAS-AX-024S	1 mL
NEAT	PLAS-AX-024N	50 mg

Markstat® 60

Polyethylene glycol ether - contain < 20% sodium perchlorate

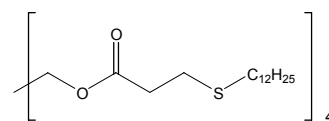
N/A

CAS 7601-89-0 MF N/A MW N/A

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-028S	1 mL
NEAT	PLAS-AX-028N	50 mg

Naugard® 412S

Pentaerythritol tetrakis (beta-laurylthiopropionate)

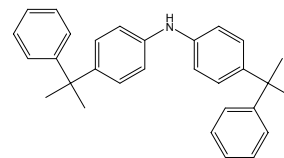


CAS 29598-76-3 MF C₆₅H₁₂₄O₈S₄ MW 1161.94

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-030S	1 mL
NEAT	PLAS-AX-030N	50 mg

Naugard® 445

4,4'-bis(alpha,alpha-Dimethylbenzyl)diphenylamine

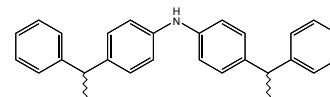


CAS 10081-67-1 MF C₃₀H₃₁N MW 405.57

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-022S	1 mL
NEAT	PLAS-AX-022N	50 mg

Naugard® 635

4-(1-Phenylethyl)-N-[4-(1-phenylethyl)phenyl]aniline



CAS 68442-68-2 MF C₃₈H₂₇N MW 377.52

Matrix	Cat. No.	Unit
NEAT	PLAS-AX-113N	50 mg

Antioxidants (continued)

Naugard® 956

Proprietary blend of primary and secondary antioxidants

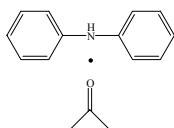
N/A

CAS N/A MF N/A MW N/A

Matrix	Cat. No.	Unit
1000 µg/mL in Toluene	PLAS-AX-060S-T	1 mL
NEAT	PLAS-AX-060N	50 mg

Naugard® A

Acetone diphenylamine condensation products

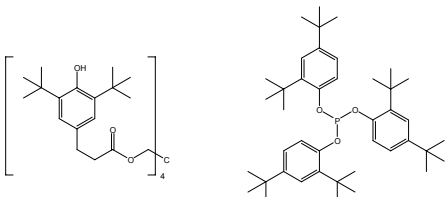


CAS 68412-48-6 MF C₁₂H₁₁N • C₃H₆O MW 227.31

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane:Acetone 80:20	PLAS-AX-026S	1 mL
NEAT	PLAS-AX-026N	50 mg

Naugard® B-25

1:1 blend of Naugard 10 & Naugard 424

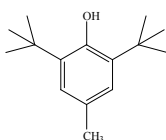


CAS 6683-19-8/31570-04-4 MF C₇₃H₁₀₈O₁₂ • C₄₂H₆₃O₃P MW 1177.65 / 646.92

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-061S	1 mL
NEAT	PLAS-AX-061N	50 mg

Naugard® BHT

2,6-Di-tert-butyl-4-methylphenol

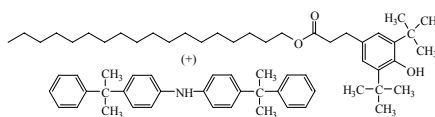


CAS 128-37-0 MF C₁₅H₂₄O MW 220.35

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-017S	1 mL
NEAT	PLAS-AX-017N	50 mg

Naugard® HM-22

Blend of phenolic primary and diphenylamine secondary antioxidants (Naugards 76 and 445)

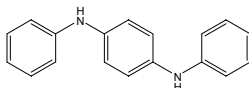


CAS 10081-67-1/2082-79-3 MF C₃₀H₃₁N / C₃₅H₆₂O₃ MW 405.57/530.86

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-033S	1 mL
NEAT	PLAS-AX-033N	50 mg

Naugard® J

N,N'-Diphenyl-p-phenylenediamine

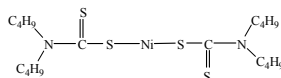


CAS 74-31-7 MF C₁₈H₁₆N₂ MW 260.36

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane:Acetone 50:50	PLAS-AX-048S	1 mL
NEAT	PLAS-AX-048N	50 mg

Naugard® NBC

Nickel dibutyl dithiocarbamate

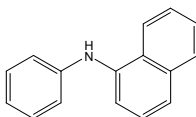


CAS 13927-77-0 MF C₁₈H₃₆N₂NiS₄ MW 467.45

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-051S	1 mL
NEAT	PLAS-AX-051N	50 mg

Naugard® PANA

N-Phenyl-1-naphthylamine

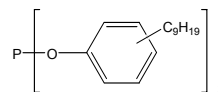


CAS 90-30-2 MF C₁₆H₁₃N MW 219.28

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-058S	1 mL
NEAT	PLAS-AX-058N	50 mg

Naugard® PHR

tris(Nonylphenyl) phosphite with up to 1% triisopropylamine

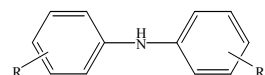


CAS 26523-78-4 MF C₄₅H₆₉O₃P MW 689.00

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-076S	1 mL
NEAT	PLAS-AX-076N	50 mg

Naugard® PS-30

Benzenamine, N-phenyl, reaction products with 2,4,4-trimethylpentene



CAS 68411-46-1 MF C₁₂H₁₁N • C₈H₁₆ MW N/A

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-038S	1 mL
NEAT	PLAS-AX-038N	50 mg

Naugard® PS-35

Butylated, octylated diphenylamine-2,6 di-tert-butyl-4-sec-butyl phenol

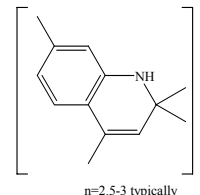
N/A

CAS N/A MF N/A MW N/A

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-046S	1 mL
NEAT	PLAS-AX-046N	50 mg

Naugard® Q Extra

1,2-Dihydro-2,2,4-trimethylquinoline (polymerized)



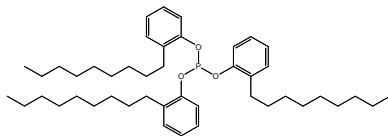
CAS 26780-96-1 MF (C₁₂H₁₅N)_n MW (173.25)_n

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-002S	1 mL
NEAT	PLAS-AX-002N	50 mg

Antioxidants (continued)

Naugard® RM-51

tris(Nonylphenyl)phosphite

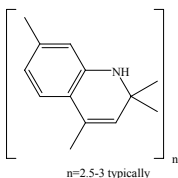


CAS 26523-78-4 MF C₄₅H₆₉C₃P MW 689.00

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-034S	1 mL
NEAT	PLAS-AX-034N	50 mg

Naugard® Super Q

1,2-Dihydro-2,2,4-trimethylquinoline (polymerized)



CAS 26780-96-1 MF (C₁₂H₁₅N)_n MW (173.25)_n

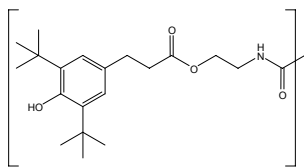
Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-003S	1 mL
NEAT	PLAS-AX-003N	50 mg

Property Key

CAS	Chemical Abstract Service Number	MF	Molecular Formula
		MW	Molecular Weight

Naugard® XL-1

2,2'-Oxamidobis[ethyl-3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate]

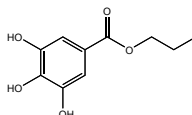


CAS 70331-94-1 MF C₄₀H₆₀N₂O₈ MW 697.00

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane:Acetone 80:20	PLAS-AX-008S	1 mL
NEAT	PLAS-AX-008N	50 mg

Propyl gallate

Propyl 3,4,5-trihydroxybenzoate

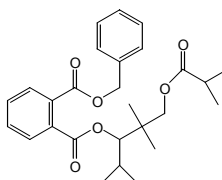


CAS 121-79-9 MF C₁₀H₁₂O₅ MW 212.20

Matrix	Cat. No.	Unit
NEAT	PLAS-AX-109N	50 mg

Santicizer® 278

Benzyl 3-isobutyroxy-1-isopropyl-2,2-dimethylpropyl phthalate

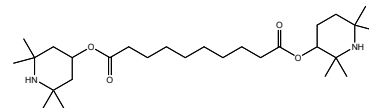


CAS 16883-83-3 MF C₂₇H₃₄O₆ MW 454.56

Matrix	Cat. No.	Unit
NEAT	PLAS-PL-074N	50 mg

bis(2,2,6,6-Tetramethyl-4-piperidyl) sebacate **NEW**

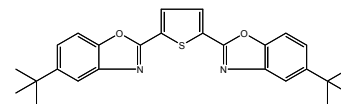
Bis(2,2,6,6-tetramethylpiperidin-4-yl) decanedioate



CAS 52829-07-9 MF C₂₈H₅₂N₂O₄ MW 480.72

Matrix	Cat. No.	Unit
NEAT	PLAS-AX-097N	50 mg

2,2'-(2,5-Thiophenediyl)bis(5-tert-butylbenzoxazole)

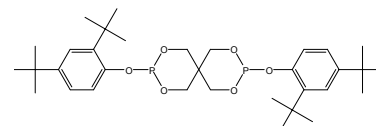


CAS 7128-64-5 MF C₂₆H₂₆N₂O₂S MW 430.56

Matrix	Cat. No.	Unit
NEAT	PLAS-AX-098N	50 mg

Ultrinox® 626

Bis(2,4-di-tert-butylphenyl)pentaerythritol di-phosphite



CAS 26741-53-7 MF C₃₃H₅₀O₆P₂ MW 604.62

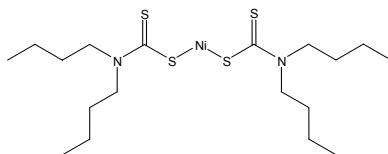
Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AX-031S	1 mL
NEAT	PLAS-AX-031N	50 mg

Antiozonants

Antiozonants are materials added to plastics to slow the deterioration of the finished product that occurs from exposure to ozone. Antiozonants typically work by migrating to the surface of the product and creating an ozone-impermeable barrier or skin on the surface.

Akrochem® NIBUD

Nickel dibutyl dithiocarbamate



CAS 13927-77-0 MF $C_{18}H_{36}N_2NiS_4$ MW 467.45

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-AZ-001S	1 mL
NEAT	PLAS-AZ-001N	50 mg

Akrowax™ 195

A highly refined petroleum wax which is comprised of long chain saturated hydrocarbon molecules

CAS 64742-42-3 MF N/A MW N/A

Matrix	Cat. No.	Unit
NEAT	PLAS-AZ-002N	50 mg



PolyAdd  **Check™**

Polymer Additive Reference Standards

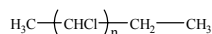
Blowing Agents

Blowing agents are sometimes also called chemical foaming agents. They are used to release gas into the plastic or resin. Blowing agents can be used to reduce weight, improve softness, provide insulation, add shock absorption properties or add resilience in the final product.

Chemical blowing agents (as opposed to physical blowing agents such as nitrogen gas) are principally organic chemicals that decompose at elevated temperatures to release a gas during decomposition that can add a cellular structure in the plastic.

CPW-100

Chlorinated paraffin wax

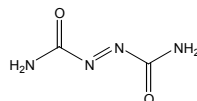


CAS 63449-39-8 MF Unspecified MW

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-BA-001S	1 mL
NEAT	PLAS-BA-001N	50 mg

Celogen® AZ

Carbamoyliminurea

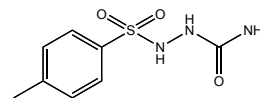


CAS 123-77-3 MF C₂H₄N₄O₂ MW 116.08

Matrix	Cat. No.	Unit
1000 µg/mL in DMSO	PLAS-BA-002-DMSO	1 mL
NEAT	PLAS-BA-002N	50 mg

Celogen® RA

[[4-Methylphenyl)sulfonylamino]urea



CAS 10396-10-8 MF C₈H₁₁N₃O₃S MW 229.26

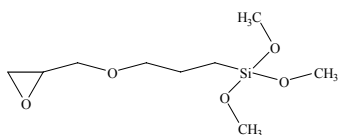
Matrix	Cat. No.	Unit
NEAT	PLAS-BA-003N	50 mg

Coupling Agents

Coupling agents promote the physical or chemical interaction with the polymer.

Silquest® A-187

gamma-Glycidioxypropyltrimethoxysilane

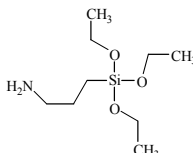


CAS 2530-83-8 MF C₉H₂₀O₅Si MW 236.38

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-CA-004S	1 mL
NEAT	PLAS-CA-004N	50 mg

Silquest® A-1102

gamma-Aminopropyltriethoxysilane (Tech grade)

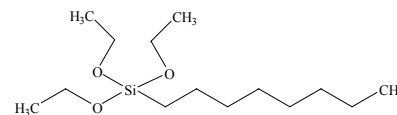


CAS 919-30-2 MF C₉H₂₃NO₃Si MW 221.37

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-CA-003S	1 mL
NEAT	PLAS-CA-003N	50 mg

Silquest® A-137

Octyltriethoxysilane

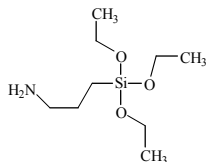


CAS 2943-75-1 MF C₁₄H₃₂O₃Si MW 276.55

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-CA-005S	1 mL
NEAT	PLAS-CA-005N	50 mg

Silquest® A-1100

gamma-Aminopropyltriethoxysilane

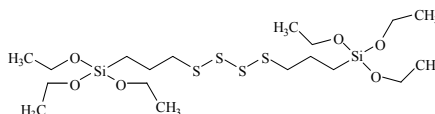


CAS 919-30-2 MF C₉H₂₃NO₃Si MW 221.37

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-CA-002S	1 mL
NEAT	PLAS-CA-002N	50 mg

Silquest® A-1289

bis-(Triethoxysilylpropyl)tetrasulfane

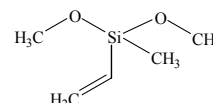


CAS 40372-72-3 MF C₁₈H₄₂O₆S₄Si₂ MW 538.94

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-CA-001S	1 mL
NEAT	PLAS-CA-001N	50 mg

Silquest® A-2171

Vinylmethyldimethoxysilane



CAS 16753-62-1 MF C₅H₁₂O₂Si MW 132.24

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-CA-006S	1 mL
NEAT	PLAS-CA-006N	50 mg

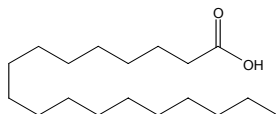
Cross-Linking Agents

Crosslinking is the polymerization reaction that branches out from the main molecular chain forming a network pattern of chemical bonds. Crosslinking agents enhance this crosslinking and bonding between polymer chains.

Crosslinking adds desirable properties such as: solidity, elasticity, impermeability to gases and better electrical insulation. Crosslinking can also improve a rubber's resistance to chemicals, heat and abrasion.

F-300, F-1000, F-1500, F-2000, F-3000

Stearic acid

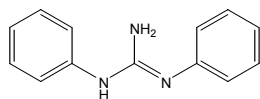


CAS 57-11-4 MF C₁₈H₃₆O₂ MW 284.48

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-CL-006S	1 mL
NEAT	PLAS-CL-006N	50 mg

Perkacit® DPG

N,N'-Diphenylguanidine

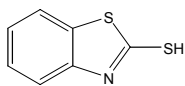


CAS 102-06-7 MF C₁₃H₁₃N₃ MW 211.27

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane:Acetone 90:10	PLAS-CL-004S	1 mL
NEAT	PLAS-CL-004N	50 mg

Perkacit® MBT

2-Mercaptobenzothiazole

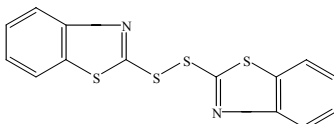


CAS 149-30-4 MF C₇H₅S₂N MW 167.25

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-CL-002S	1 mL
NEAT	PLAS-CL-002N	50 mg

Perkacit® MBTS

2,2'-Dithiobis(benzothiazole)

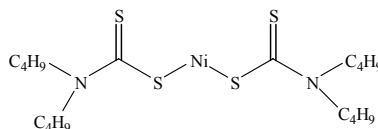


CAS 120-78-5 MF C₁₄H₈N₂S₄ MW 332.48

Matrix	Cat. No.	Unit
1000 µg/mL in Dichloromethane	PLAS-CL-001S-D	1 mL
NEAT	PLAS-CL-001N	50 mg

Perkacit® NDBC

Nickel dibutyl dithiocarbamate



CAS 13927-77-0 MF C₁₈H₃₆N₂NiS₄ MW 467.45

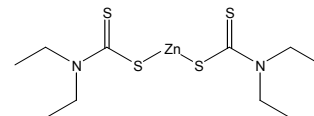
Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-CL-005S	1 mL
NEAT	PLAS-CL-005N	50 mg

Property Key

CAS	Chemical Abstract Service Number	MF	Molecular Formula
		MW	Molecular Weight

Perkacit® ZDEC

Zinc diethyldithiocarbamate

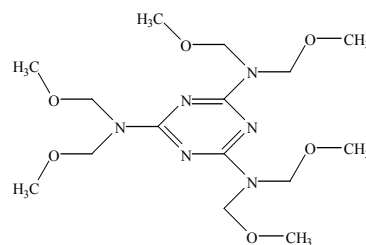


CAS 14324-55-1 MF C₁₀H₂₀N₂S₂Zn MW 361.9

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-CL-007S	1 mL
NEAT	PLAS-CL-007N	50 mg

Resimene® 3520

Hexamethoxy methyl melamine



CAS 3089-11-0 MF C₁₅H₃₀N₆O₆ MW 390.51

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-CL-003S	1 mL
NEAT	PLAS-CL-003N	50 mg

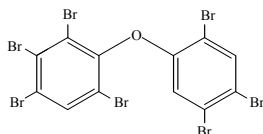
Flame Retardants

Flame retardants are added to inhibit ignition or the flammability of the end-use product. Flame retardants generally function by inhibiting the mechanisms of burning. Typical chemical elements found in compounds used as flame retardants are: aluminum, bromine, chlorine, fluorine and sulfur.

Brominated flame retardants are commonly used in polystyrene, polyesters, polyolefins, polyamides, epoxies and ABS. Decabromodiphenyl ether is the most frequently used brominated flame retardant. The bromodiphenyl ethers are the most highly regulated of these compounds, and AccuStandard offers the most complete line of individual congeners available anywhere.

Some of these flame retardants are not typically added to polymers in processing, but can be found in a polymer matrix from leaching out of the contents. The largest example of this type is the Aroclors, which can often be found in a plastic matrix from having been in contact with a fluid containing these materials.

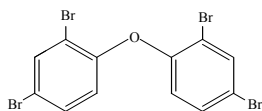
2,2',3,4,4',5',6-Heptabromodiphenyl ether



CAS 207122-16-5 MF C₁₂H₃Br₇O MW 722.48

Matrix	Cat. No.	Unit
50 µg/mL in Isooctane	BDE-183S	1 mL

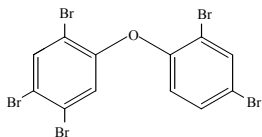
2,2',4,4'-Tetrabromodiphenyl ether



CAS 5436-43-1 MF C₁₂H₆Br₄O MW 485.82

Matrix	Cat. No.	Unit
50 µg/mL in Isooctane	BDE-047S	1 mL

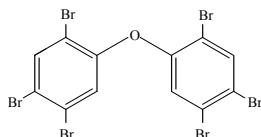
2,2',4,4',5-Pentabromodiphenyl ether



CAS 60348-60-9 MF C₁₂H₅Br₅O MW 564.69

Matrix	Cat. No.	Unit
50 µg/mL in Isooctane	BDE-099S	1 mL

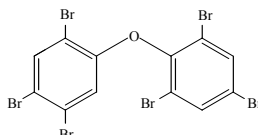
2,2',4,4',5,5'-Hexabromodiphenyl ether



CAS 68631-49-2 MF C₁₂H₄Br₆O MW 643.58

Matrix	Cat. No.	Unit
50 µg/mL in Isooctane	BDE-153S	1 mL

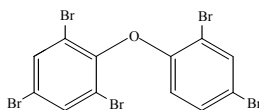
2,2',4,4',5,6'-Hexabromodiphenyl ether



CAS 207122-15-4 MF C₁₂H₄Br₆O MW 643.58

Matrix	Cat. No.	Unit
50 µg/mL in Isooctane	BDE-154S	1 mL

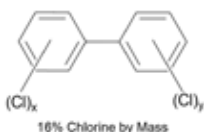
2,2',4,4',6-Pentabromodiphenyl ether



CAS 189084-64-8 MF C₁₂H₅Br₅O MW 564.69

Matrix	Cat. No.	Unit
50 µg/mL in Isooctane	BDE-100S	1 mL

Aroclor® 1016



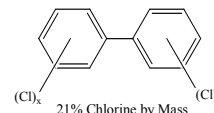
CAS 12674-11-2 MF Tech mix MW

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	C-216S-H-10X	1 mL
NEAT	C-216N	100 mg

Property Key

CAS Chemical Abstract Service Number MF Molecular Formula MW Molecular Weight

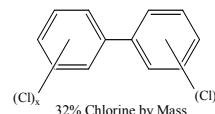
Aroclor® 1221



CAS 11104-28-2 MF Tech mix MW

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	C-221S-H-10X	1 mL
NEAT	C-221N-50MG	50 mg

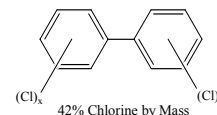
Aroclor® 1232



CAS 11141-16-5 MF Tech mix MW

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	C-232S-H-10X	1 mL

Aroclor® 1242

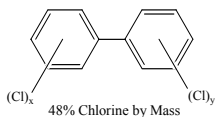


CAS 53469-21-9 MF Tech mix MW

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	C-242S-H-10X	1 mL
NEAT	C-242N-50MG	50 mg

Flame Retardants (continued)

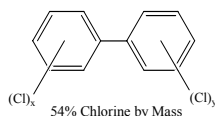
Aroclor® 1248



CAS 12672-29-6 MF Tech mix MW N/A

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	C-248S-H-10X	1 mL
NEAT	C-248N-50MG	50 mg

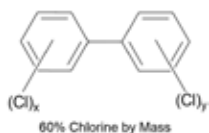
Aroclor® 1254



CAS 11097-69-1 MF Tech mix MW N/A

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	C-254S-H-10X	1 mL
NEAT	C-254N-50MG	50 mg

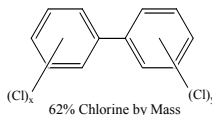
Aroclor® 1260



CAS 11096-82-5 MF Tech mix MW N/A

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	C-260S-H-10X	1 mL
NEAT	C-260N-50MG	50 mg

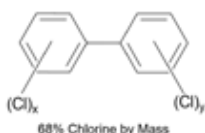
Aroclor® 1262



CAS 37324-23-5 MF Tech mix MW N/A

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	C-262S-H-10X	1 mL
NEAT	C-262N-50MG	50 mg

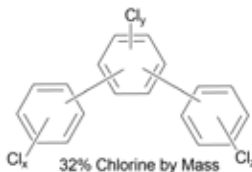
Aroclor® 1268



CAS 11100-14-4 MF Tech mix MW N/A

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	C-268S-H-10X	1 mL

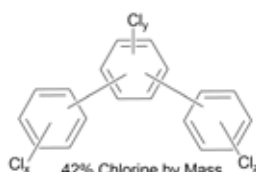
Aroclor® 5432



CAS 63496-31-1 MF Technical Mix MW N/A

Matrix	Cat. No.	Unit
35 µg/mL in Toluene	T-432S	1 mL

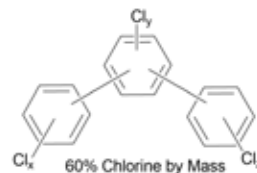
Aroclor® 5442



CAS 12642-23-8 MF Tech mix MW N/A

Matrix	Cat. No.	Unit
35 µg/mL in Toluene	T-442S	1 mL

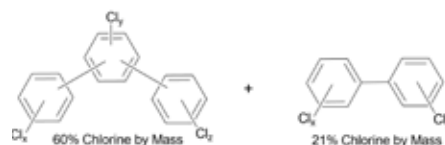
Aroclor® 5460



CAS 11126-42-4 MF Tech mix MW N/A

Matrix	Cat. No.	Unit
35 µg/mL in Toluene	T-460S	1 mL

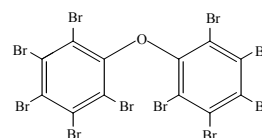
Aroclor® 6050



CAS MF Tech mix MW N/A

Matrix	Cat. No.	Unit
35 µg/mL in Toluene	T-6050S	1 mL

Decabromodiphenyl ether

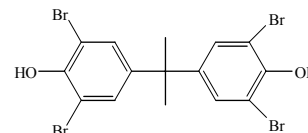


CAS 1163-19-5 MF C₁₂Br₁₀O MW 959.22

Matrix	Cat. No.	Unit
50 µg/mL in Isooctane	BDE-209S	1 mL

Firemaster BP4A

4,4'-(1-Methylethylidene) bis(2,6-dibromophenol)



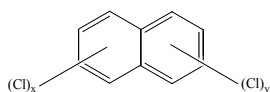
CAS 79-94-7 MF C₁₅H₁₂Br₄O₂ MW 543.91

Matrix	Cat. No.	Unit
100 µg/mL in Toluene	FRS-006S	1 mL

Flame Retardants (continued)

Halowax 1013

Pentachloronaphthalene

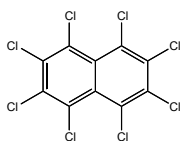


CAS 1321-64-8 MF C₁₀H₃Cl₅ MW 300.38

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	N-1013S	1 mL

Halowax 1051

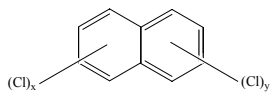
Octachloronaphthalene



CAS 2234-13-1 MF C₁₀Cl₈ MW 403.73

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	N-1051S	1 mL

Halowax 1099

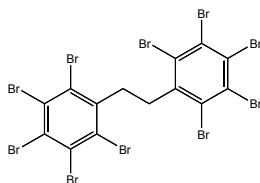


CAS 39450-05-0 MF Tech Mix MW

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	N-1099S	1 mL

Saytex® 8010

Decabromodiphenyl ethane

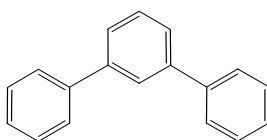


CAS 84852-53-9 MF C₁₄H₄Br₁₀ MW 971.22

Matrix	Cat. No.	Unit
NEAT	PLAS-FR-001N	50 mg

m-Terphenyl

1,3-Diphenylbenzene

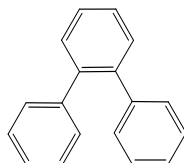


CAS 92-06-8 MF C₁₈H₁₄ MW 230.32

Matrix	Cat. No.	Unit
NEAT	T-002N	100 mg

o-Terphenyl

1,2-Diphenylbenzene

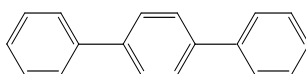


CAS 84-15-1 MF C₁₈H₁₄ MW 230.32

Matrix	Cat. No.	Unit
NEAT	T-001N	100 mg

p-Terphenyl

1,4-Diphenylbenzene



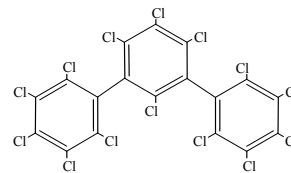
CAS 92-94-4 MF C₁₈H₁₄ MW 230.32

Matrix	Cat. No.	Unit
NEAT	T-003N	100 mg

Property Key

CAS Chemical Abstract Service Number MF Molecular Formula MW Molecular Weight

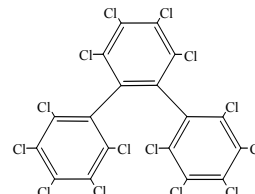
Tetradecachloro-m-terphenyl



CAS 42429-89-0 MF C₁₈Cl₁₄ MW 712.48

Matrix	Cat. No.	Unit
35 µg/mL in Toluene	T-005S	1 mL

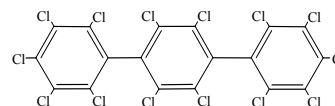
Tetradecachloro-o-terphenyl



CAS MF C₁₈Cl₁₄ MW 712.48

Matrix	Cat. No.	Unit
35 µg/mL in Toluene	T-004S	1 mL

Tetradecachloro-p-terphenyl



CAS MF C₁₈Cl₁₄ MW 712.48

Matrix	Cat. No.	Unit
100 µg/mL in MeOH	T-006S	1 mL

Plasticizers

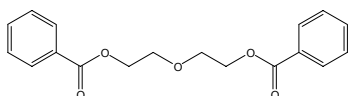
A plasticizer is a compound added to a material, usually a plastic, to make it flexible, resilient and easier to handle. Plasticizers are major components in plastics that determine the physical properties of polymer products.

Plasticizers are generally medium to high molecular weight esters of aliphatic or aromatic carboxylic acids, or sometimes of phosphoric acid. The phosphate esters are often also used for their flame retardant properties. Adipates and phthalates are also very common, but are becoming more highly regulated due to concern that they could act as endocrine disruptors.

The USEPA regulates many Phthalates and Adipates by Methods 606, 506-1 and 8061.

Benzoflex® 2-45

Diethylene glycol dibenzoate



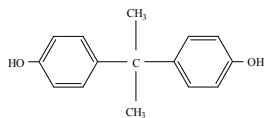
CAS 120-55-8 MF C₁₈H₁₈O₅ MW 314.33

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-015S	1 mL
NEAT	PLAS-PL-015N	50 mg

See pages 30-31 for all
Bisphenol Analog Standards

Bisphenol A (BPA)

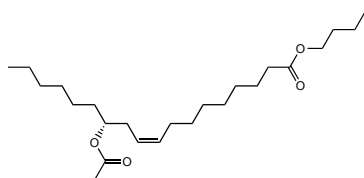
4,4'-Dihydroxy-2,2-diphenylpropane



CAS 80-05-7 MF C₁₅H₁₆O₂ MW 228.29

Matrix	Cat. No.	Unit
1000 µg/mL in Methanol	M-1626-01S	1 mL

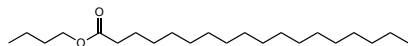
n-Butyl acetyl ricinoleate NEW



CAS 140-04-5 MF C₂₄H₄₄O₄ MW 396.60

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-107S	1 mL

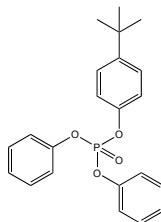
n-Butyl stearate NEW



CAS 123-95-5 MF C₂₂H₄₄O₂ MW 340.58

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-114S	1 mL

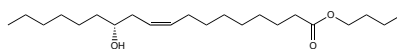
t-Butylphenyl diphenyl phosphate NEW



CAS 56803-37-3 MF C₂₂H₂₃O₄P MW 382.39

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-103S	1 mL

Butyl ricinoleate NEW

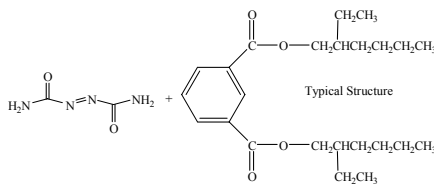


CAS 151-13-3 MF C₂₂H₄₂O₃ MW 354.57

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-105S	1 mL

Celogen® SD-125

50% Azodicarbonamide in a phthalate plasticizer



CAS N/A MF N/A MW N/A

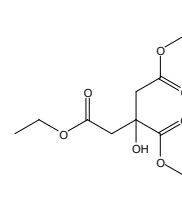
Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-009S	1 mL
NEAT	PLAS-PL-009N	50 mg

Property Key

CAS Chemical Abstract Service Number MF Molecular Formula MW Molecular Weight

Citroflex 2

Triethyl 2-hydroxy-1,2,3-propanetricarboxylate

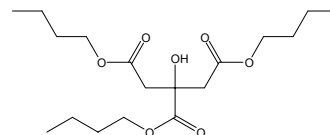


CAS 77-93-0 MF C₁₂H₂₀O₇ MW 276.32

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-028S	1 mL
NEAT	PLAS-PL-028N	50 mg

Citroflex 4

Tributyl 2-hydroxy-1,2,3-propanetricarboxylate

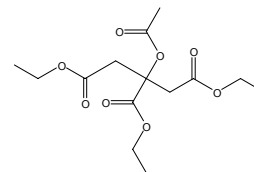


CAS 77-94-1 MF C₁₈H₃₂O₇ MW 360.45

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-030S	1 mL
NEAT	PLAS-PL-030N	50 mg

Citroflex A-2

Triethyl 2-acetyloxy-1,2,3-propanetricarboxylate



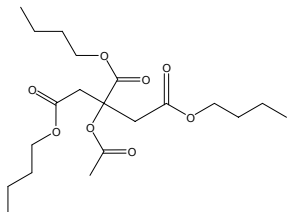
CAS 77-89-4 MF C₁₄H₂₂O₈ MW 318.32

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-001S	1 mL
NEAT	PLAS-PL-001N	50 mg

Plasticizers (continued)

Citroflex A-4

Tributyl 2-acetoxy-1,2,3-propanetricarboxylate

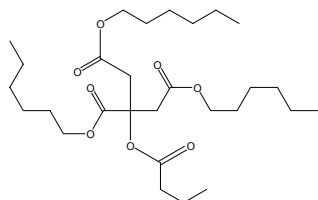


CAS 77-90-7 MF C₂₀H₃₄O₈ MW 402.54

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-002S	1 mL
NEAT	PLAS-PL-002N	50 mg

Citroflex B-6

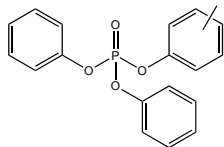
n-Butyryltri-n-hexyl citrate



CAS 82469-79-2 MF C₂₈H₅₀O₈ MW 514.7

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-025S	1 mL
NEAT	PLAS-PL-025N	50 mg

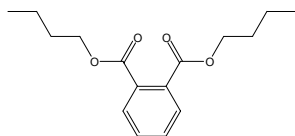
Cresyl diphenyl phosphate



CAS 26444-49-5 MF C₁₉H₁₇O₄P MW 340.31

Matrix	Cat. No.	Unit
NEAT	PLAS-PL-059N	50 mg

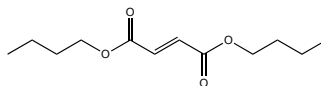
Dibutyl phthalate



CAS 84-74-2 MF C₁₆H₂₂O₄ MW 278.34

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-013S	1 mL
NEAT	PLAS-PL-013N	50 mg

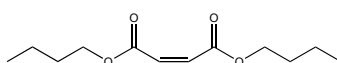
Dibutyl fumarate NEW



CAS 105-75-9 MF C₁₂H₂₀O₄ MW 228.28

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-087S	1 mL

Di-n-butyl maleate NEW

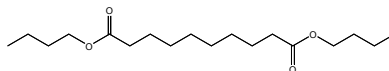


CAS 105-76-0 MF C₁₂H₂₀O₄ MW 228.28

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-091S	1 mL

Dibutyl sebacate

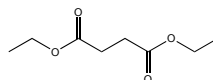
Dibutyl decanedioate



CAS 109-43-3 MF C₁₈H₃₄O₄ MW 314.46

Matrix	Cat. No.	Unit
NEAT	PLAS-PL-062N	50 mg

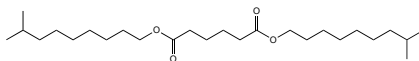
Diethyl succinate NEW



CAS 123-25-1 MF C₈H₁₄O₄ MW 174.19

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-109S	1 mL

Diisodecyl adipate NEW



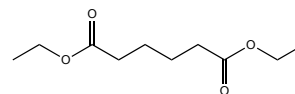
CAS 27178-16-1 MF C₂₆H₅₀O₄ MW 426.67

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-083S	1 mL

Property Key

CAS Chemical Abstract Service Number MF MW Molecular Formula Molecular Weight

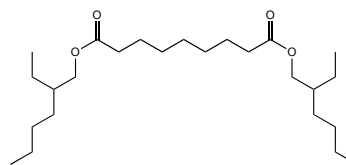
Diethyl adipate



CAS 141-28-6 MF C₁₀H₁₈O₄ MW 202.25

Matrix	Cat. No.	Unit
NEAT	PLAS-PL-043N	50 mg

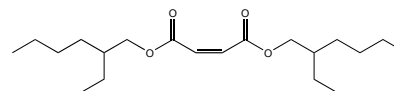
Di(2-ethylhexyl) azelate NEW



CAS 103-24-2 MF C₂₅H₄₈O₄ MW 412.66

Matrix	Cat. No.	Unit
1000 µg/mL in Acetone	PLAS-PL-081S-A	1 mL

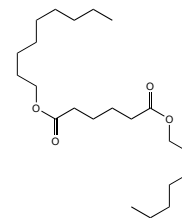
Di(2-ethylhexyl) maleate NEW



CAS 142-16-5 MF C₂₀H₃₆O₄ MW 340.50

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-090S	1 mL

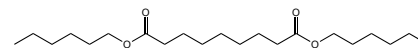
Di(n-heptyl, n-nonyl) adipate NEW



CAS 68515-75-3 MF C₂₂H₄₂O₄ MW 370.57

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-080S	1 mL

Di-n-hexyl azelate NEW

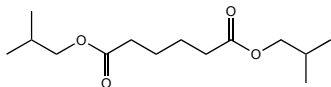


CAS 109-31-9 MF C₂₁H₄₀O₄ MW 356.54

Matrix	Cat. No.	Unit
1000 µg/mL in Acetone	PLAS-PL-078S-A	1 mL

Plasticizers (continued)

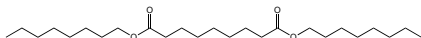
Diisobutyl adipate **NEW**



CAS 141-04-8 MF C₁₄H₂₆O₄ MW 258.35

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-082S	1 mL

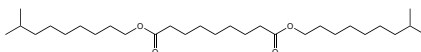
Diisooctyl azelate **NEW**



CAS 26544-17-2 MF C₂₅H₄₈O₄ MW 412.65

Matrix	Cat. No.	Unit
1000 µg/mL in Acetone	PLAS-PL-076S-A	1 mL

Diisodecyl azelate **NEW**

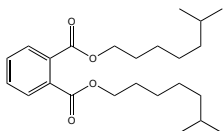


CAS 28472-97-1 MF C₂₉H₅₆O₄ MW 468.75

Matrix	Cat. No.	Unit
1000 µg/mL in Acetone	PLAS-PL-075S-A	1 mL

Diisooctyl phthalate

bis(6-Methylheptyl)-1,2-benzenedicarboxylate

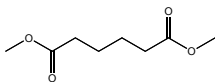


CAS 27554-26-3 MF C₂₄H₃₈O₄ MW 390.56

Matrix	Cat. No.	Unit
NEAT	PLAS-PL-071N	50 mg

Dimethyl adipate

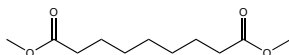
Dimethyl hexanedioate



CAS 627-93-0 MF C₈H₁₄O₄ MW 174.19

Matrix	Cat. No.	Unit
NEAT	PLAS-PL-070N	50 mg

Dimethyl azelate **NEW**

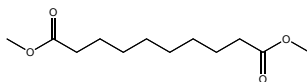


CAS 1732-10-1 MF C₁₁H₂₀O₄ MW 216.27

Matrix	Cat. No.	Unit
1000 µg/mL in Acetone	PLAS-PL-077S-A	1 mL

Dimethyl sebacate

Dimethyl decanedioate

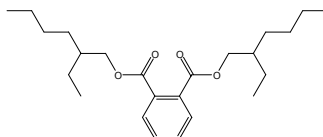


CAS 106-79-6 MF C₁₂H₂₂O₄ MW 230.30

Matrix	Cat. No.	Unit
NEAT	PLAS-PL-061N	50 mg

Diocetyl phthalate (DOP)

bis(2-Ethylhexyl)-1,2-benzenedicarboxylate

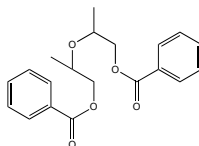


Houghton Chemical

CAS 117-81-7 MF C₂₄H₃₈O₄ MW 390.56

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-019S	1 mL
NEAT	PLAS-PL-019N	50 mg

Di(propylene glycol) dibenzoate **NEW**

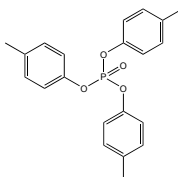


CAS 27138-31-4 MF C₂₀H₂₂O₅ MW 342.39

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-101S	1 mL

Disflamoll® TKP

Tricresyl phosphate

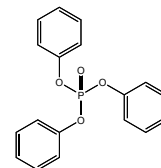


CAS 1330-78-5 MF C₂₁H₂₁O₄P MW 368.36

Matrix	Cat. No.	Unit
NEAT	PLAS-PL-073N	50 mg

Disflamoll TP

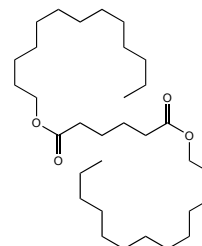
Triphenyl phosphate



CAS 115-86-6 MF C₁₈H₁₅O₄P MW 326.28

Matrix	Cat. No.	Unit
NEAT	PLAS-PL-069N	50 mg

Di(tridecyl) adipate **NEW**



CAS 16958-92-2 MF C₃₂H₆₂O₄ MW 510.83

Matrix	Cat. No.	Unit
1000 µg/mL in Acetone	PLAS-PL-079S-A	1 mL

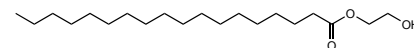
Epoxidized linseed oil **NEW**

N/A

CAS 8016-11-3 MF N/A MW N/A

Matrix	Cat. No.	Unit
1000 µg/mL in Toluene	PLAS-PL-085S-T	1 mL

Ethylene glycol monostearate **NEW**

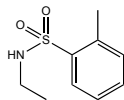


CAS 111-60-4 MF C₂₀H₄₀O₃ MW 328.53

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-112S	1 mL

Plasticizers (continued)

N-Ethyl-o,p-toluenesulfonamide **NEW**



CAS 8047-99-2 MF C₉H₁₃NO₂S MW 199.27

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-111S	1 mL

2-Ethylhexyl epoxy tallate **NEW**

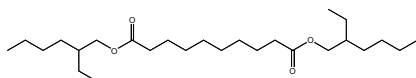
N/A

CAS 61789-01-3 MF N/A MW N/A

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-086S	1 mL

2-Ethylhexyl sebacate

bis(2-Ethylhexyl) decanedioate

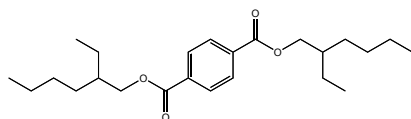


CAS 122-62-3 MF C₂₆H₅₀O₄ MW 426.67

Matrix	Cat. No.	Unit
NEAT	PLAS-PL-064N	50 mg

bis(2-Ethylhexyl) terephthalate **NEW**

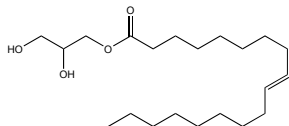
bis(2-Ethylhexyl)-1,4-benzenedicarboxylate



CAS 6422-86-2 MF C₂₄H₃₈O₄ MW 390.56

Matrix	Cat. No.	Unit
NEAT	PLAS-PL-065N	50 mg

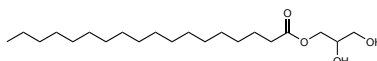
Glycerol monooleate **NEW**



CAS 25496-72-4 MF C₂₁H₄₀O₄ MW 356.54

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-096S	1 mL

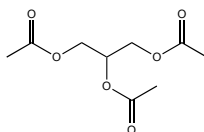
Glycerol monostearate **NEW**



CAS 31566-31-1 MF C₂₁H₄₂O₄ MW 358.56

Matrix	Cat. No.	Unit
1000 µg/mL in Toluene	PLAS-PL-115S-T	1 mL

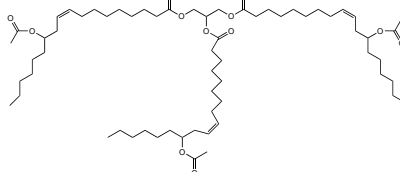
Glycerol triacetate **NEW**



CAS 102-76-1 MF C₉H₁₄O₆ MW 218.20

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-088S	1 mL

Glyceryl (triacyl) ricinoleate **NEW**

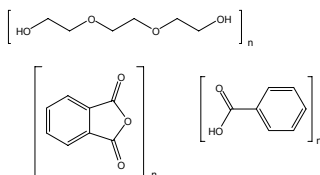


CAS 101-34-8 MF C₆₃H₁₁₀O₁₂ MW 1059.54

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-106S	1 mL

Hercoflex® 900

1,3-Isobenzofurandione, polymer with 2,2'-(1,2-ethanediylbis(oxy))bis(ethanol), benzoate



CAS 68186-30-1 MF (C₈H₄O₃)_n (C₆H₁₄O₄)_n (C₇H₆O₂)_n MW N/A

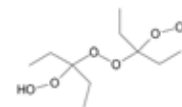
Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-038S	1 mL
NEAT	PLAS-PL-038N	50 mg

Property Key

CAS	Chemical Abstract Service Number	MF	Molecular Formula
MW		MW	Molecular Weight

Hi-Point PD-1

Methyl ethyl ketone peroxide



CAS 1338-23-4 MF C₈H₁₈O MW 210.23

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-024S	1 mL
NEAT	PLAS-PL-024N	50 mg

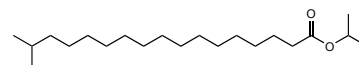
bis(2-Hydroxyethyl) dimerate **NEW**

N/A

CAS 68855-78-7 MF (C₂H₄O₂)_x unspecified)x MW N/A

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-084S	1 mL

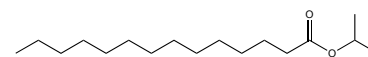
Isopropyl isostearate **NEW**



CAS 68171-33-5 MF C₂₁H₄₂O₂ MW 326.56

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-113S	1 mL

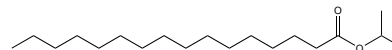
Isopropyl myristate **NEW**



CAS 110-27-0 MF C₁₇H₃₄O₂ MW 270.45

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-095S	1 mL

Isopropyl palmitate **NEW**



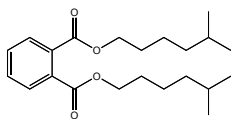
CAS 142-91-6 MF C₁₉H₃₈O₂ MW 298.50

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-100S	1 mL

Plasticizers (continued)

Jayflex® 77

Diisooheptyl phthalate

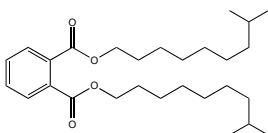


CAS 71888-89-6 MF $C_{22}H_{34}O_4$ MW 362.50

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-017S	1 mL
NEAT	PLAS-PL-017N	50 mg

Jayflex® DIDP

Diisodecyl phthalate

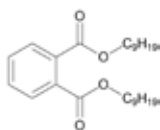


CAS 68515-49-1 MF $C_{28}H_{46}O_4$ MW 446.66

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-016S	1 mL
NEAT	PLAS-PL-016N	50 mg

Jayflex® DINP

Diisononyl phthalate

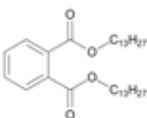


CAS 68515-48-0 MF $C_{26}H_{42}O_4$ MW 418.61

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-018S	1 mL
NEAT	PLAS-PL-018N	50 mg

Jayflex® DTDp

Ditridecyl phthalate

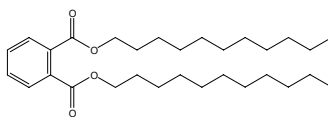


CAS 68515-47-9 MF $C_{34}H_{58}O_4$ MW 530.82

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-020S	1 mL
NEAT	PLAS-PL-020N	50 mg

Jayflex® L11P-E

Diundecyl phthalate

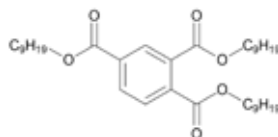


CAS 3648-20-2 MF $C_{30}H_{50}O_4$ MW 474.72

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-021S	1 mL
NEAT	PLAS-PL-021N	50 mg

Jayflex® TINTM

Triisononyl trimellitate

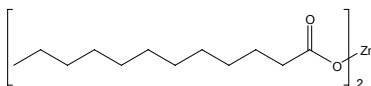


CAS 53894-23-8 MF $C_{36}H_{60}O_6$ MW 588.96

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-029S	1 mL
NEAT	PLAS-PL-029N	50 mg

Laurex®

Zinc salt of lauric and related fatty acids

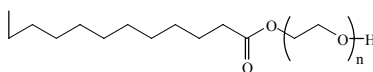


CAS MF $C_{24}H_{46}O_4Zn$ MW 464.01

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane:Toluene 80:20	PLAS-PL-032S	1 mL
NEAT	PLAS-PL-032N	50 mg

Markstat® 51

Poly(ethylene glycol) monolaurate

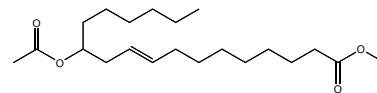


CAS 9004-81-3 MF $(C_2H_4O)_n C_{12}H_{24}O_2$ MW N/A

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane:Toluene 90:10	PLAS-PL-003S	1 mL
NEAT	PLAS-PL-003N	50 mg

Methyl O-acetylricinoleate

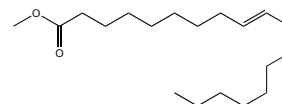
Methyl (Z)-12-acetyloxyoctadec-9-enoate



CAS 140-03-4 MF $C_{21}H_{38}O_4$ MW 354.52

Matrix	Cat. No.	Unit
NEAT	PLAS-PL-063N	50 mg

Methyl oleate NEW

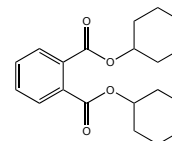


CAS 112-62-9 MF $C_{19}H_{36}O_2$ MW 296.49

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-097S	1 mL

Morflex® 150

Dicyclohexyl phthalate

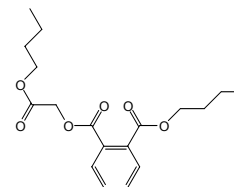


CAS 84-61-7 MF $C_{20}H_{26}O_4$ MW 330.46

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-014S	1 mL
NEAT	PLAS-PL-014N	50 mg

Morflex® 190

Butylphthalyl butyl glycolate



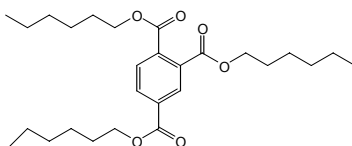
CAS 85-70-1 MF $C_{18}H_{24}O_6$ MW 336.38

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-008S	1 mL
NEAT	PLAS-PL-008N	50 mg

Plasticizers (continued)

Morflex® 560

Tri-n-hexyl trimellitate

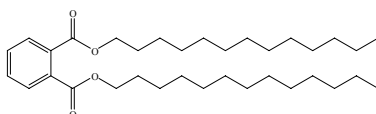


CAS 1528-49-0 MF C₂₇H₄₂O₆ MW 462.62

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-031S	1 mL
NEAT	PLAS-PL-031N	50 mg

Morflex® x-1125

Diitridecyl phthalate



CAS 119-06-2 MF C₃₄H₅₈O₄ MW 530.83

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-033S	1 mL
NEAT	PLAS-PL-033N	50 mg

Paraplex® G-30

proprietary dibasic acid polyester mixture

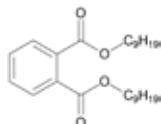
N/A

CAS MF MW

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane:Toluene 88:12	PLAS-PL-027S	1 mL
NEAT	PLAS-PL-027N	50 mg

Plasthall® DINP plasticizer

Diisononyl phthalate



CAS 28553-12-0 MF C₂₆H₄₂O₄ MW 418.61

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-072S	1 mL
NEAT	PLAS-PL-072N	50 mg

Plasthall® ESO

Epoxidized soybean oil

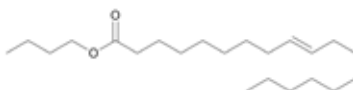
N/A

CAS 8013-07-8 MF N/A MW N/A

Matrix	Cat. No.	Unit
NEAT	PLAS-PL-035N	50 mg

Polycizer® butyl oleate

Butyl oleate

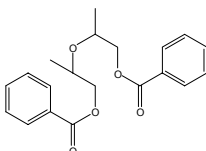


CAS 142-77-8 MF C₂₂H₄₂O₂ MW 338.57

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-007S	1 mL
NEAT	PLAS-PL-007N	50 mg

Polycizer® DP 500

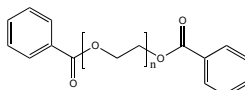
Dipropylene glycol dibenzoate



CAS 27138-31-4 MF C₂₀H₂₂O₅ MW 342.39

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-011S	1 mL
NEAT	PLAS-PL-011N	50 mg

Polyethylene glycol 200 dibenzoate NEW



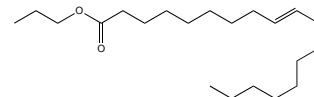
CAS 9004-86-8 MF N/A MW N/A

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-102S	1 mL

Property Key

CAS Chemical Abstract Service Number MF MW Molecular Formula Molecular Weight

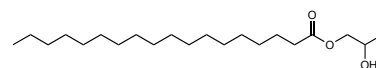
n-Propyl oleate NEW



CAS 111-59-1 MF C₂₁H₄₀O₂ MW 324.54

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-098S	1 mL

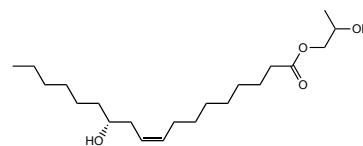
Propylene glycol monostearate NEW



CAS 1323-39-3 MF C₂₁H₄₂O₃ MW 342.56

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-116S	1 mL

Propylene glycol ricinoleate NEW

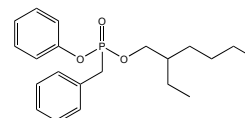


CAS 26402-31-3 MF C₂₁H₄₀O₄ MW 356.54

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-108S	1 mL

Santicizer® 141

2-Ethylhexyl diphenyl phosphate

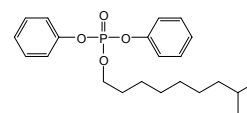


CAS 1241-94-7 MF C₂₀H₂₇O₄P MW 362.4

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-026S	1 mL
NEAT	PLAS-PL-026N	50 mg

Santicizer® 148

Mixture: isodecylidiphenyl phosphate (80-90%) / triphenyl phosphate



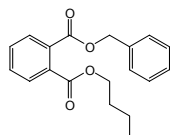
CAS 29761-21-5 MF C₂₂H₃₁O₄P MW 390.46

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-022S	1 mL
NEAT	PLAS-PL-022N	50 mg

Plasticizers (continued)

Santicizer® 160

Benzyl butyl phthalate

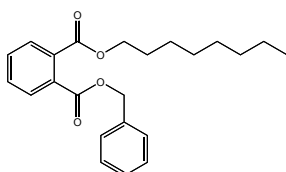


CAS 85-68-7 MF C₁₉H₂₀O₄ MW 312.37

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-004S	1 mL
NEAT	PLAS-PL-004N	50 mg

Santicizer® 261

Benzyl octyl phthalate

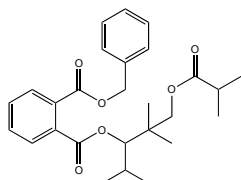


CAS 68515-40-2 MF C₂₃H₂₈O₄ MW 368.47

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-005S	1 mL
NEAT	PLAS-PL-005N	50 mg

Santicizer® 278

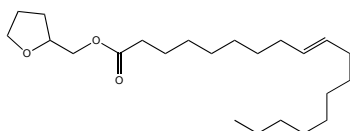
Benzyl 3-isobutyryloxy-1-isopropyl-2,2-dimethylpropyl phthalate



CAS 16883-83-3 MF C₂₇H₃₄O₆ MW 454.56

Matrix	Cat. No.	Unit
NEAT	PLAS-PL-074N	50 mg

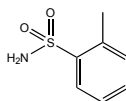
Tetrahydrofurfuryl oleate NEW



CAS 5420-17-7 MF C₂₃H₄₂O₃ MW 366.31

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-099S	1 mL

o,p-Toluenesulfonamide NEW

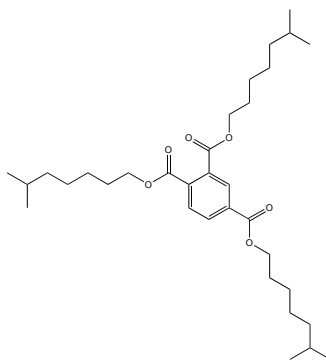


CAS 8013-74-9 MF C₇H₉NO₂S MW 171.22

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-110S	1 mL

Tricapryl trimellitate NEW

tris(6-Methylheptyl)-1,2,4-benzenetricarboxylate

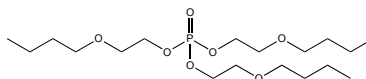


CAS 27251-75-8 MF C₃₃H₅₄O₆ MW 546.78

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-092S	1 mL

Tri-butoxyethyl phosphate NEW

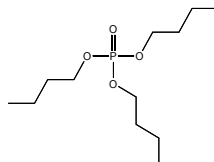
tris(2-Butoxyethyl) phosphate



CAS 78-51-3 MF C₁₈H₃₉O₇P MW 398.47

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-104S	1 mL

Tributyl phosphate

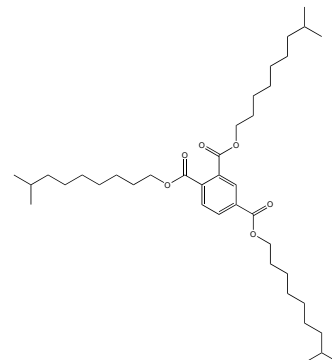


CAS 126-73-8 MF C₁₂H₂₇O₄P MW 266.31

Matrix	Cat. No.	Unit
NEAT	PLAS-PL-068N	50 mg

Triisodecyl trimellitate NEW

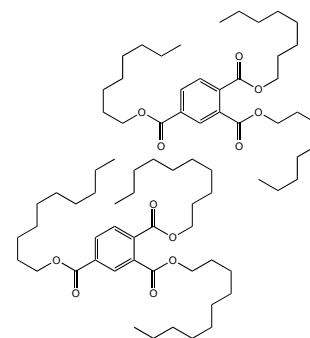
tris(8-Methylnonyl)-1,2,4-benzenetricarboxylate



CAS 36631-30-8 MF C₃₉H₆₆O₆ MW 630.94

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-093S	1 mL

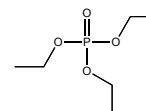
Tri(n-octyl, n-decyl) trimellitate NEW



CAS 67989-23-5 MF C₇₂H₁₂₀O₁₂ MW 1177.72

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-094S	1 mL

Triethyl phosphate

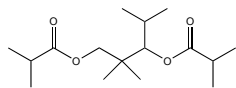


CAS 78-40-0 MF C₆H₁₅O₄P MW 182.15

Matrix	Cat. No.	Unit
NEAT	PLAS-PL-067N	50 mg

Plasticizers (continued)

2,2,4-Trimethyl-1,3-pentanediol-diisobutyrate **NEW**

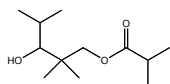


CAS 6846-50-0 MF C₁₆H₃₀O₄ MW 286.41

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PL-089S	1 mL

2,2,4-Trimethyl-1,3-pentanediol-isobutyrate

3-Hydroxy-2,2,4-trimethylpentyl 2-methylpropanoate

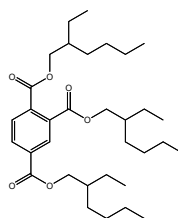


CAS 25265-77-4 MF C₁₂H₂₄O₃ MW 216.32

Matrix	Cat. No.	Unit
NEAT	PLAS-PL-066N	50 mg

Trimellitate

tris(2-Ethylhexyl)-1,2,4-benzenetricarboxylic acid



CAS 3319-31-1 MF C₃₃H₅₄O₆ MW 546.78

Matrix	Cat. No.	Unit
NEAT	PLAS-PL-060N	50 mg

Vinsol® powder

N/A

CAS 8050-09-7

Matrix	Cat. No.	Unit
1000 µg/mL in CH ₂ Cl ₂	PLAS-PL-037S-D	1 mL
NEAT	PLAS-PL-037N	50 mg

Vinsol® resin

gum rosin

N/A

CAS 8050-09-7

Matrix	Cat. No.	Unit
1000 µg/mL in CH ₂ Cl ₂	PLAS-PL-036S-D	1 mL
NEAT	PLAS-PL-036N	50 mg



Processing Aids

Processing aids are compounding materials that improve the processing of polymers by: creating better dispersion of dry materials, increasing extrusion rates, reducing powder consumption during mixing, promoting compound fusion, adding lubrication, improving knitting and creating a smoother surface on calendered and extruded products.

Akrochem® Ceresin Wax

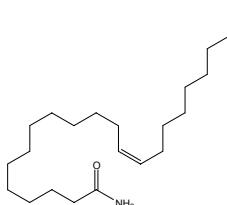
A complex combination of hydrocarbons produced by the purification of Ozocerite with Sulfuric acid and filtration through bone black to form waxy cakes

CAS 8001-75-0 MF N/A MW N/A

Matrix	Cat. No.	Unit
NEAT	PLAS-PA-002N	50 mg

Kemamide® E ultra

Erucamide



CAS 112-84-5 MF C₂₂H₄₃NO MW 337.58

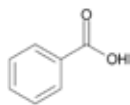
Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-PA-001S	1 mL
NEAT	PLAS-PA-001N	50 mg

Retarders

Retarders are used to delay the onset of crosslinking and can be used to allow for longer processing times. They are also used to reduce scorching.

Akrochem® Retarder BAX

Active ingredient benzoic acid (oil treated)

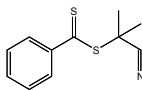


CAS 65-85-0 MF MW

Matrix	Cat. No.	Unit
NEAT	PLAS-RT-011N	50 mg

2-Cyano-2-propyl benzodithioate

Benzenecarbodithioic acid, 1-cyano-1-methylethyl ester

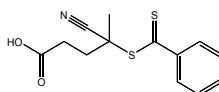


CAS 201611-85-0 MF C₁₁H₁₁NS₂ MW 221.34

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane:Acetone(50:50)	PLAS-RT-002S	1 mL
NEAT	PLAS-RT-002N	50 mg

4-Cyano-4-(phenylcarbonothioylthio)pentanoic acid

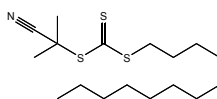
Pentanoic acid, 4-cyano-4-[(phenylthioxomethyl)thio]-



CAS 201611-92-9 MF C₁₃H₁₃NO₂S₂ MW 279.38

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-RT-003S	1 mL
NEAT	PLAS-RT-003N	50 mg

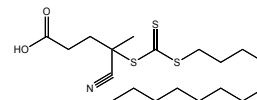
2-Cyano-2-propyl dodecyl trithiocarbonate



CAS 870196-83-1 MF C₁₇H₃₁NS₃ MW 345.63

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-RT-004S	1 mL
NEAT	PLAS-RT-004N	50 mg

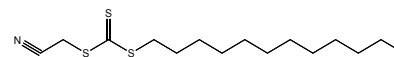
4-Cyano-4-[(dodecylsulfanylthiocarbonyl)sulfanyl]pentanoic acid



CAS 870196-80-8 MF C₁₉H₃₃NO₂S₃ MW 403.67

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-RT-005S	1 mL
NEAT	PLAS-RT-005N	50 mg

Cyanomethyl dodecyl trithiocarbonate

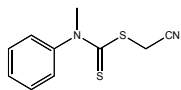


CAS 796045-97-1 MF C₁₅H₂₇NS₃ MW 317.58

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-RT-006S	1 mL
NEAT	PLAS-RT-006N	50 mg

Retarders (continued)

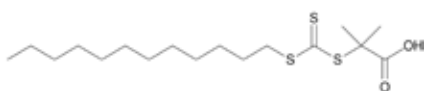
Cyanomethyl methyl(phenyl)carbamo-dithioate



CAS 76926-16-4 MF C₁₀H₁₀N₂S₂ MW 222.33

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-RT-009S	1 mL
NEAT	PLAS-RT-009N	50 mg

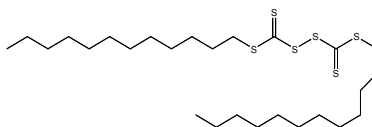
2-(Dodecylthiocarbonothioylthio)-2-methylpropionic acid



CAS 461642-78-4 MF C₁₇H₃₂O₂S₃ MW 364.63

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-RT-010S	1 mL

bis(Dodecylsulfanylthiocarbonyl) disulfide

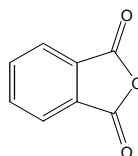


CAS 870532-86-8 MF C₂₆H₅₀S₆ MW 555.07

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-RT-008S	1 mL
NEAT	PLAS-PL-008N	50 mg

Retarder AK

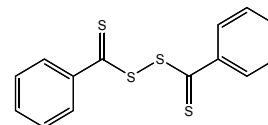
Phthalic anhydride



CAS 85-44-9 MF C₈H₄O₃ MW 148.12

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane:Acetone(60:40)	PLAS-RT-001S	1 mL
NEAT	PLAS-RT-001N	50 mg

bis(Thiobenzoyl) disulfide



CAS 5873-93-8 MF C₁₄H₁₀S₄ MW 306.49

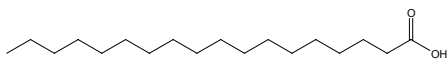
Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-RT-007S	1 mL
NEAT	PLAS-RT-007N	50 mg

Stearates

Stearic acid and the metallic salts of this acid are used for many different applications depending on the polymer system. Stearates can act as lubricants, acid scavengers, anti-tack compounds, vulcanization promoters/accelerators or mold release agents.

Stearic Acid RG (rubber grade)

Stearic acid

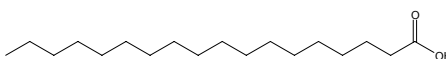


CAS 57-11-4 MF C₁₈H₃₆O₂ MW 284.48

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-ST-001S	1 mL
NEAT	PLAS-ST-001N	50 mg

Stearic Acid TP

Stearic acid



CAS 57-11-4 MF C₁₈H₃₆O₂ MW 284.48

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-ST-002S	1 mL
NEAT	PLAS-ST-002N	50 mg

Property Key

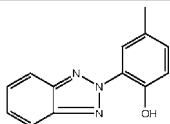
CAS	Chemical Abstract Service Number	MF	Molecular Formula
		MW	Molecular Weight

UV Stabilizers

UV stabilizers act to protect the plastic against UV or sunlight damage such as discoloration, cracking, brittleness or other loss of desirable physical properties.

Typical UV Stabilizers are benzophenones, hindered amines and benzotriazole. Also used, but not as effective, are salicylate esters, cyanoacrylates and bezilidenes.

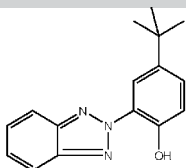
2-(2-Hydroxy-5-methylphenyl)benzotriazole



CAS 2440-22-4 MF $C_{13}H_{11}N_3O$ MW 225.25

Matrix	Cat. No.	Unit
1000 µg/mL in AcCN	PLAS-UV-006S-CN	1 mL
NEAT	PLAS-UV-006N	50 mg

2-(5-tert-Butyl-2-hydroxyphenyl)benzotriazole

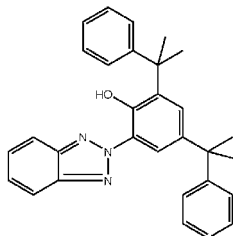


CAS 3147-76-0 MF $C_{16}H_{17}N_3O$ MW 267.33

Matrix	Cat. No.	Unit
1000 µg/mL in AcCN	PLAS-UV-007S-CN	1 mL
NEAT	PLAS-UV-007N	50 mg

2-(2-Hydroxy-3,5-di(1,1-dimethylbenzyl)phenyl)benzotriazole

2-(2-Hydroxy-3,5-di-tert-amylphenyl)benzotriazole

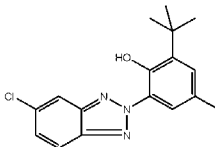


CAS 70321-86-7 MF $C_{30}H_{29}N_3O$ MW 447.57

Matrix	Cat. No.	Unit
1000 µg/mL in AcCN	PLAS-UV-008S-CN	1 mL
NEAT	PLAS-UV-008N	50 mg

2-tert-Butyl-6(5-chloro-2H-benzotriazol-2-yl)-4-methylphenol

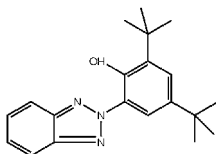
2-(2-Hydroxy-3-tert-butyl-5-methylphenyl)-5-benzotriazole



CAS 3896-11-5 MF $C_{17}H_{18}ClN_3O$ MW 315.80

Matrix	Cat. No.	Unit
1000 µg/mL in AcCN	PLAS-UV-009S-CN	1 mL
NEAT	PLAS-UV-009N	50 mg

2-(3,5-Di-tert-butyl-2-hydroxyphenyl)benzotriazole

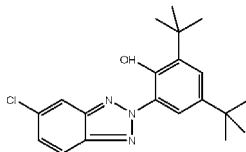


CAS 3846-71-7 MF $C_{20}H_{25}N_3O$ MW 323.43

Matrix	Cat. No.	Unit
1000 µg/mL in AcCN	PLAS-UV-010S-CN	1 mL
NEAT	PLAS-UV-010N	50 mg

2,4-Di-tert-butyl-6-(5-chloro-2H-benzotriazol-2-yl)phenol

2-(2-Hydroxy-3,5-di-tert-butylphenyl)-5-chlorobenzotriazole

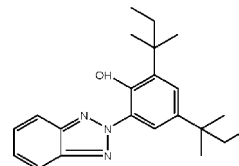


CAS 3864-99-1 MF $C_{20}H_{24}ClN_3O$ MW 357.88

Matrix	Cat. No.	Unit
1000 µg/mL in AcCN	PLAS-UV-011S-CN	1 mL
NEAT	PLAS-UV-011N	50 mg

2-(2H-Benzotriazol-2-yl)-4,6-di-tert-pentylphenol

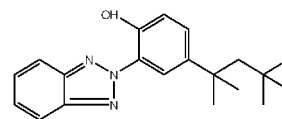
2-(2-Hydroxy-3,5-di-tert-amylphenyl)benzotriazole



CAS 25973-55-1 MF $C_{22}H_{29}N_3O$ MW 351.49

Matrix	Cat. No.	Unit
1000 µg/mL in AcCN	PLAS-UV-012S-CN	1 mL
NEAT	PLAS-UV-012N	50 mg

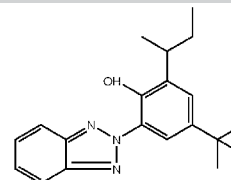
2-(2-Hydroxy-5-tert-octylphenyl)benzotriazole



CAS 3147-75-9 MF $C_{20}H_{25}N_3O$ MW 323.43

Matrix	Cat. No.	Unit
1000 µg/mL in AcCN	PLAS-UV-013S-CN	1 mL
NEAT	PLAS-UV-013N	50 mg

2-(3-sec-Butyl-5-tert-butyl-2-hydroxyphenyl)benzotriazole

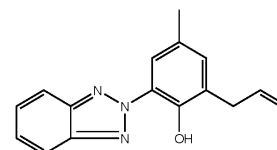


CAS 36437-37-3 MF $C_{20}H_{25}N_3O$ MW 323.43

Matrix	Cat. No.	Unit
1000 µg/mL in AcCN	PLAS-UV-014S-CN	1 mL

2-(2H-Benzotriazol-2-yl)-4-methyl-6-(2-propenyl)phenol

2-(2-Hydroxy-3-allyl-5-methylphenyl)benzotriazole



CAS 2170-39-0 MF $C_{16}H_{15}N_3O$ MW 265.31

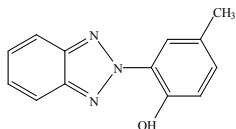
Matrix	Cat. No.	Unit
1000 µg/mL in AcCN	PLAS-UV-015S-CN	1 mL
NEAT	PLAS-UV-015N	50 mg

UV Stabilizer Set (Solutions)		10 x 1 mL
PLAS-UV-STAB-SET	PLAS-UV-006S-CN to 015S-CN	

UV Stabilizers (continued)

Tinuvin® PED

2-(2-Hydroxy-5-methylphenyl)benzotriazole

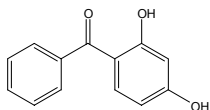


CAS 2440-22-4 MF C₁₃H₁₁N₃O MW 225.27

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-UV-005S	1 mL
NEAT	PLAS-UV-005N	50 mg

Uvinul® 3000

2,4-Dihydroxybenzophenone

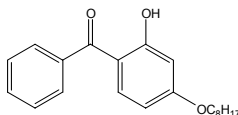


CAS 131-56-6 MF C₁₃H₁₀O₃ MW 214.22

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane:Acetone (80:20)	PLAS-UV-001S	1 mL
NEAT	PLAS-UV-001N	50 mg

Uvinul® 3008

2-Hydroxy-4-octyloxybenzophenone

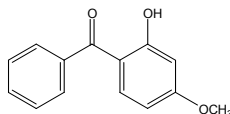


CAS 1843-05-6 MF C₂₁H₂₆O₃ MW 326.43

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-UV-002S	1 mL
NEAT	PLAS-UV-002N	50 mg

Uvinul® 3040

2-Hydroxy-4-methoxybenzophenone

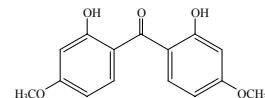


CAS 131-57-7 MF C₁₄H₁₂O₃ MW 228.26

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane	PLAS-UV-003S	1 mL
NEAT	PLAS-UV-003N	50 mg

Uvinul® 3049

2,2'-Dihydroxy-4,4'-dimethoxybenzophenone



CAS 131-54-4 MF C₁₅H₁₄O₅ MW 274

Matrix	Cat. No.	Unit
1000 µg/mL in Hexane:Acetone (80:20)	PLAS-UV-004S	1 mL
NEAT	PLAS-UV-004N	50 mg

Vegetable Oils

Vegetable oils, typically the epoxide or the ester of the parent oil, are used as plasticizers. They offer the advantage of not only providing flexibility in the final plastic, but also add heat and light stabilizing advantages without the requirements for additional additives. Vegetable oil plasticizers are generally less toxic than their petrochemical counterparts, which makes them very attractive for certain applications like food or toys.

Some of their disadvantages are that they may not mix properly at higher concentrations, may cause brittleness in some applications and often are only suitable as secondary plasticizers.

Akrofax™ A

Vulcanized vegetable oil

N/A

CAS 68952-47-6 MF N/A MW N/A

Matrix	Cat. No.	Unit
NEAT	PLAS-VA-001N	50 mg

Akrofax™ B

Vulcanized vegetable oil

N/A

CAS N/A MF N/A MW N/A

Matrix	Cat. No.	Unit
NEAT	PLAS-VA-002N	50 mg

Plastic Packaging Testing

ASTM Method D6042-92 Plastic Packaging Testing Standards

This method is used by both pharmaceutical companies and plastics manufacturers to ensure the quality of the plastic product during the manufacturing process. Compounds are often added to the method's analyte list by pharmaceutical companies.

Calibration Mix

PLAS-CAL-001
PLAS-CAL-001-PAK **SAVE 20%**
50 µg/mL each in Isopropanol

1 x 1 mL
5 x 1 mL
7 comps.

BHT	Irganox 3114
Erucamide Slip	Irganox 1010
Vitamin E	Irganox 1076
Irgafos 168	

Internal Standard Mix

PLAS-IS-001
PLAS-IS-001-PAK **SAVE 20%**
51.8 µg/mL in Isopropanol

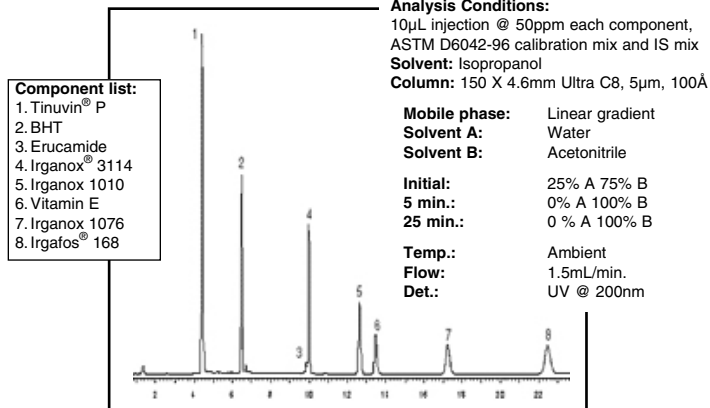
1 x 1 mL
5 x 1 mL

Tinuvin P

Expanded List of Additives

Each at 50 µg/mL in Isopropanol

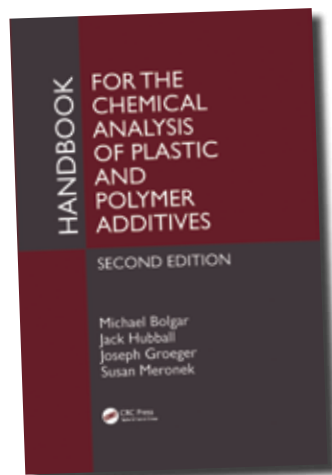
Ultranox 626	PLAS-CAL-002-1	1 mL
Santanox R	PLAS-CAL-002-2	1 mL
Ethanol 330	PLAS-CAL-002-3	1 mL
Ethanol 323	PLAS-CAL-002-4	1 mL
Ethanol 702	PLAS-CAL-002-5	1 mL
Ethanol 703	PLAS-CAL-002-6	1 mL
Irganox 1035	PLAS-CAL-002-7	1 mL



The figure shows the separation of the compounds on the method's analyte list, as analyzed by our HPLC specialists. The primary calibration standard mixture contains the common antioxidants and slips listed in ASTM D6042-96.

The perfect companion for your analysis!

This reference book contains the compounds in this catalog, with important reference data to aid in testing and compliance.



Each Compound has:

Chemical Information

- Structure
- CAS Number (where applicable)
- RTECS Number (where available)
- Formula
- Molecular Weight
- IUPAC Name, other common names and some popular brand names

Physical Properties

- Appearance
- Melting and Boiling Points
- Stability
- Solubilities in several common solvents

Other Important Information

- Application
- Regulatory
- Environmental Impact
- Point of Release
- Toxicological Data

Analytical Data

- Mass Spectrum with key ions tabulated
- Chromatogram with conditions

Handbook for the Chemical Analysis of Plastic and Polymer Additives, 2nd Ed.

The Second Edition of this handbook provides the necessary tools for chemists to obtain a more complete listing of additives present in a particular polymeric matrix. This edition features:

- Updated material to include the most recent additives available
- Contains actual analytical data for each chemical along with the description and methods used for obtaining the results
- Highlights the toxicological and environmental impact of each product
- Summarizes regulatory and health information in a convenient "one-step" format

With 50 additional compounds, this 2nd edition nearly doubles the number of additives in several categories including processing aids, anti-static compounds, mold release products and blowing agents. It includes a listing that can be cross-referenced by trade name, chemical name, CAS number and even key mass unit ions from the GC/MS run. Also included are case studies related to "real-world" issues, tips for analysis in challenging matrices and more.

Bisphenol Analogs

Bisphenol Analog Standards

Bisphenol A (2,2'-bis(4-Hydroxyphenyl)propane, BPA) has been used in commercial and industrial applications since the 1970's. It has been the subject of numerous toxicological studies due to human exposure from leachate originating from polycarbonate plastics and epoxy-lined food and drink containers.

The evidence of the toxic effects of BPA has led to restrictions and regulations, resulting in its replacement in commercial products with related compounds. Several chemicals with structural similarity to BPA (ie. two hydroxyl phenyl moieties) have been used as alternatives in the manufacture of polycarbonate plastics and epoxy resins. 4,4-Sulfonyldiphenol (BPS) and 4,4-Dihydroxydiphenylmethane (BPF) are the two main substitutes. However, their similarity to BPA has led to their monitoring and testing for human exposure and toxicity as well.

In addition to the BPA analogs, there has been increased scrutiny of bisphenol A diglycidyl ether (BADGE) which is a widely used building block of epoxy resin. Studies have shown that it also might be linked to adverse human health effects.

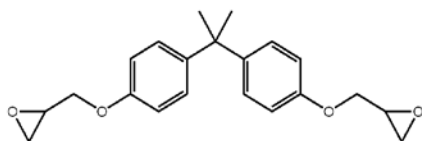
AccuStandard has recognized the need for a comprehensive product line of these BPA related compounds and is offering reference standards for eight BPA analogs as well as the BADGE starting material.

References:

1. Environ. Sci. Technol. 2012, 46, 9138-9145
2. Environ. Sci. Technol. 2012, 46, 12968-12976
3. Environ. Sci. Technol. 2012, 46, 11558-11565

Bisphenol A diglycidyl ether (BADGE)

2,2-bis(4-Glycidyloxyphenyl)propane

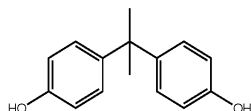


CAS 1675-54-3 **MF** C₂₁H₂₄O₄ **MW** 340.41
log Kow 3.8 **PS** L **SOL** MeOH **SG** 1.16 g/cm³
MP N/A **BP** >200 °C **FP** N/A

Matrix	Cat. No.	Unit
NEAT	BADGE-001N	50 mg
10 mg/mL in MeOH	BADGE-001S	1 mL

Bisphenol A (BPA)

2,2-bis(4-Hydroxyphenyl)propane

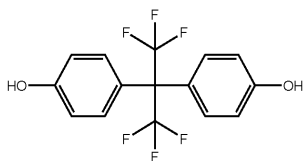


CAS 80-05-7 **MF** C₁₅H₁₆O₂ **MW** 228.29
log Kow 3.43 **PS** S **SOL** Acetone, Benzene, Ether
SG 1.14 g/cm³ **MP** 156 °C **BP** 220 °C **FP** 192 °C

Matrix	Cat. No.	Unit
NEAT	BPA-A-N	50 mg
10 mg/mL in MeOH	BPA-A-S	1 mL

Bisphenol AF

2,2-bis(4-Hydroxyphenyl)-1,1,1,3,3,3-hexafluoropropane

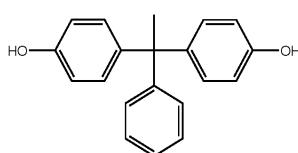


CAS 1478-61-1 **MF** C₁₅H₁₀F₆O₂ **MW** 336.23
log Kow 4.47 **PS** S **SG** 1.45 g/cm³ **MP** 159-162 °C
BP 400 °C **FP** 162 °C

Matrix	Cat. No.	Unit
NEAT	BPA-AF-N	50 mg
10 mg/mL in MeOH	BPA-AF-S	1 mL

Bisphenol AP

1,1-bis(4-Hydroxyphenyl)-1-phenylethane

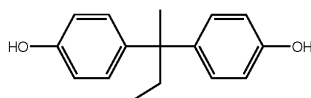


CAS 1571-75-1 **MF** C₂₀H₁₈O₂ **MW** 290.36
log Kow 4.86 **PS** S **SG** 1.18 g/cm³ **MP** 182-183 °C
BP 473-475 °C **FP** 222 °C

Matrix	Cat. No.	Unit
NEAT	BPA-AP-N	50 mg
10 mg/mL in MeOH	BPA-AP-S	1 mL

Bisphenol B

2,2-bis(4-Hydroxyphenyl)butane

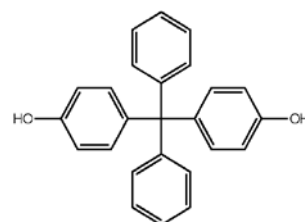


CAS 77-40-7 **MF** C₁₆H₁₈O₂ **MW** 242.31
log Kow 4.13 **PS** S **SG** 1.12 g/cm³ **MP** 126 °C
BP 412-414 °C **FP** 196 °C

Matrix	Cat. No.	Unit
NEAT	BPA-B-N-10MG	10 mg
10 mg/mL in MeOH	BPA-B-S	1 mL

Bisphenol BP NEW

bis(4-Hydroxyphenyl)diphenylmethane

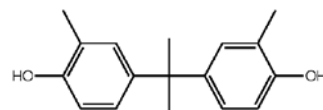


CAS 1844-01-5 **MF** C₂₅H₂₀O₂ **MW** 352.43
log Kow 6.08 **PS** S **SG** 1.20 g/cm³ **MP** 216-217 °C
BP 508-510 °C **FP** 241 °C

Matrix	Cat. No.	Unit
NEAT	BPA-BP-N	50 mg
10 mg/mL in MeOH	BPA-BP-S	1 mL

Bisphenol C NEW

2,2-bis(4-Hydroxy-3-methylphenyl)propane



CAS 79-97-0 **MF** C₁₇H₂₀O₂ **MW** 256.34
log Kow 4.74 **PS** S **SG** 1.15 g/cm³ **MP** 139 °C
BP 390 °C **FP** >190 °C

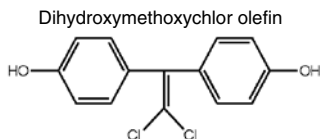
Matrix	Cat. No.	Unit
NEAT	BPA-C-N	50 mg
10 mg/mL in MeOH	BPA-C-S	1 mL

Property Key

CAS	Chemical Abstract Service Number
MF	Molecular Formula
MW	Molecular Weight
PS	Physical State (Solid, Liquid)
SOL	Solubility
SG	Specific Gravity (g/cm ³)
MP	Melting Point (°C)
BP	Boiling Point (°C)
FP	Flash Point (°C)

Bisphenol Analogs

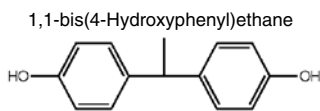
Bisphenol C-dichloride **NEW**



CAS 14868-03-2 **MF** C₁₄H₁₀Cl₂O₂ **MW** 281.13
log Kow 3.75 **PS** S **SG** 1.45 g/cm³ **MP** 216 °C
BP 395-398 °C **FP** >200 °C

Matrix	Cat. No.	Unit
NEAT	BPA-C2-N	20 mg
10 mg/mL in MeOH	BPA-C2-S	1 mL

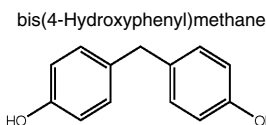
Bisphenol E **NEW**



CAS 2081-08-5 **MF** C₁₄H₁₄O₂ **MW** 214.26
log Kow 3.19 **PS** S **SG** 1.25 g/cm³ **MP** 125 °C
BP 350-370 °C **FP** >180 °C

Matrix	Cat. No.	Unit
NEAT	BPA-E-N	50 mg
10 mg/mL in MeOH	BPA-E-S	1 mL

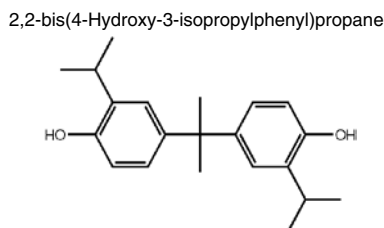
Bisphenol F



CAS 620-92-8 **MF** C₁₃H₁₂O₂ **MW** 200.23
log Kow 2.91 **PS** S **SG** 1.21 g/cm³ **MP** 163 °C
BP 389-390 °C **FP** 193 °C

Matrix	Cat. No.	Unit
NEAT	BPA-F-N-10MG	10 mg
10 mg/mL in MeOH	BPA-F-S	1 mL

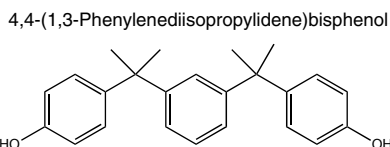
Bisphenol G **NEW**



CAS 127-54-8 **MF** C₂₁H₂₈O₂ **MW** 312.45
log Kow 6.55 **PS** S **SG** 1.05 g/cm³ **MP** 98 °C
BP 419-420 °C **FP** 185 °C

Matrix	Cat. No.	Unit
NEAT	BPA-G-N	20 mg
10 mg/mL in MeOH	BPA-G-S	1 mL

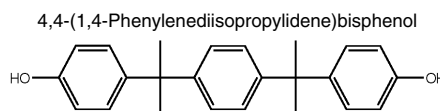
Bisphenol M **NEW**



CAS 13595-25-0 **MF** C₂₄H₂₆O₂ **MW** 346.46
log Kow 6.25 **PS** S **SG** 1.15 g/cm³ **MP** 138 °C
BP >495 °C **FP** >200 °C

Matrix	Cat. No.	Unit
NEAT	BPA-M-N	20 mg
10 mg/mL in MeOH	BPA-M-S	1 mL

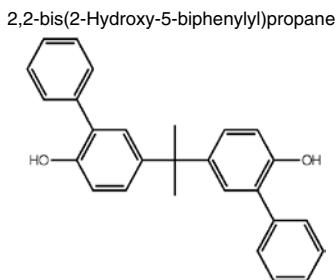
Bisphenol P



CAS 2167-51-3 **MF** C₂₄H₂₆O₂ **MW** 346.46
log Kow 6.25 **PS** S **SG** 1.11 g/cm³ **MP** 199-200 °C
BP 514-515 °C **FP** 230 °C

Matrix	Cat. No.	Unit
NEAT	BPA-P-N	50 mg
10 mg/mL in MeOH	BPA-P-S	1 mL

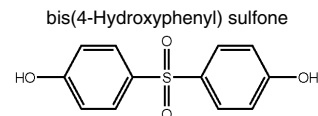
Bisphenol PH **NEW**



CAS 24038-68-4 **MF** C₂₄H₂₄O₂ **MW** 380.48
log Kow 7.17 **PS** S **SG** 1.20 g/cm³ **MP** 118 °C
BP 567-568 °C **FP** 250 °C

Matrix	Cat. No.	Unit
NEAT	BPA-PH-N	20 mg
10 mg/mL in MeOH	BPA-PH-S	1 mL

Bisphenol S

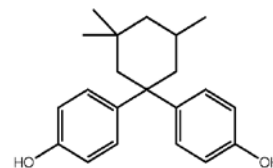


CAS 80-09-1 **MF** C₁₂H₁₀O₄S **MW** 250.27
log Kow 1.65 **PS** S **SG** 1.43 g/cm³ **MP** 245-250 °C
BP 505-506 °C **FP** 259 °C

Matrix	Cat. No.	Unit
NEAT	BPA-S-N	50 mg
10 mg/mL in MeOH	BPA-S-S	1 mL

Bisphenol TMC **NEW**

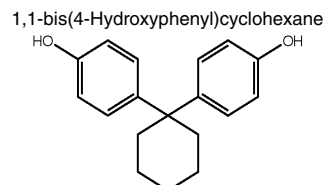
1,1-bis(4-Hydroxyphenyl)-3,3,5-trimethylcyclohexane



CAS 129188-99-4 **MF** C₂₁H₂₆O₂ **MW** 310.43
log Kow 6.29 **PS** S **SG** 1.10 g/cm³ **MP** 204-207 °C
BP 450 °C **FP** 203 °C

Matrix	Cat. No.	Unit
NEAT	BPA-TMC-N-10MG	10 mg
10 mg/mL in MeOH	BPA-TMC-S	1 mL

Bisphenol Z



CAS 843-55-0 **MF** C₁₈H₂₀O₂ **MW** 268.35
log Kow 5.00 **PS** S **SG** 1.17 g/cm³ **MP** 189-192 °C
BP 440-441 °C **FP** 207 °C

Matrix	Cat. No.	Unit
NEAT	BPA-Z-N	50 mg
10 mg/mL in MeOH	BPA-Z-S	1 mL



Phthalate Background

Benzene dicarboxylic acid is equivalent to phthalic acid. Reacting phthalic acid with a variety of alcohols results in the synthesis of a group of chemicals designated as phthalic acid esters or phthalates.

Phthalates are used primarily as plasticizers. Plasticizers lower the glass transition temperature of a plastic/polymer and impart flexibility, durability and longevity to these types of products by acting as softening agents.

Due to their low-cost, versatility and effectiveness, phthalates are widely used in plastics manufacturing, pharmaceutical coatings, all types of packaging, inks, textiles and as gelling agents. They are end-use components of electronics, paints, adhesives, building materials, cleaning products and toys to name just a few.

Phthalates are now separated into two distinct classes according to the length of the precursor alcohol. The lower molecular weight (LMW) phthalates, including dibutyl, benzyl butyl and diethyl hexyl are made from alcohols with three to six carbon backbones.

Unfortunately, the LMW phthalates are easily released into the environment because there is no chemical bond between the phthalates and the plastic/polymer matrix. Leaching and atmospheric release of these compounds increases as the substrate ages and/or weathers has resulted in phthalates becoming a major environmental contaminant. This is important because phthalates are considered to be potential endocrine-disrupting agents (1). Human exposure to phthalates may be through direct contact, ingestion or inhalation. Concern over the adverse health effects has prompted regulatory changes and lead to a permanent ban of these plasticizers in baby-care products and toys (2).

Such a large-scale health concern has lead to the development of analytical methods for phthalates in a variety of matrices. The majority of these methods focus on the analysis of the LMW phthalates ranging from mono/diethyl to mono/dioctyl and, in particular, dibutyl and bis(2-ethylhexyl)phthalate (3). Bis(2-ethylhexyl)phthalate has been the dominant plasticizer and is the largest volume phthalate in the global market. It is used as a standard for comparison for the performance of other types of plasticizers.

All of the above-mentioned phthalates are single isomer compounds which can be analyzed via straight-forward GC/MS methods yielding a single chromatographic peak for each compound.

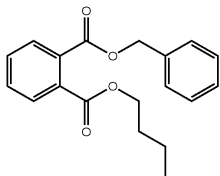
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1. S. Jobling et al., *Environ. Health Perspect.*, **103** (6), 582-587 (1995)
2. Chemical & Engineering News, vol. 89, no 22, page 28 (May 30 2011)
3. H. Fromme et al., *Water Research*, **36** (6), 1429-1438 (2002)



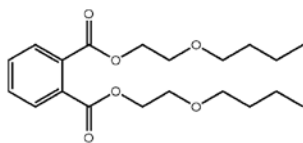
Benzyl butyl phthalate



CAS 85-68-7 MF C₁₉H₂₀O₄ MW 312.26 PS L
SG 1.13 g/cm³ MP N/A BP 370-380 °C
FP 198 °C

Matrix	Cat. No.	Unit
NEAT	ALR-082N	100 mg
100 µg/mL in MeOH	ALR-082S	1 mL
5 mg/mL in MeOH	AS-E0065	1 mL

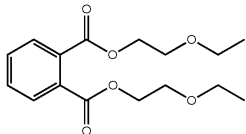
bis(2-n-Butoxyethyl)phthalate



CAS 117-83-9 MF C₂₀H₃₀O₆ MW 366.45 PS L
SG 1.06 g/cm³ MP N/A BP 270 °C FP 205 °C

Matrix	Cat. No.	Unit
NEAT	J-112	100 mg

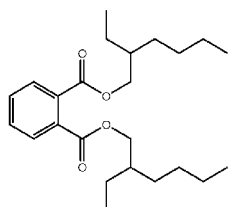
bis(2-Ethoxyethyl)phthalate



CAS 605-54-9 MF C₁₆H₂₂O₆ MW 310.34 PS S
SG 1.12 g/cm³ MP 34 °C BP 345 °C FP N/A

Matrix	Cat. No.	Unit
NEAT	J-111	100 mg

bis(2-Ethylhexyl)phthalate (DEHP)



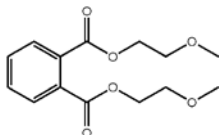
CAS 117-81-7 MF C₂₄H₃₈O₄ MW 390.56 PS L
SG 0.98 g/cm³ MP N/A BP 385 °C FP 218 °C

Matrix	Cat. No.	Unit
NEAT	ALR-097N	100 mg
100 µg/mL in MeOH	ALR-097S	1 mL
1 mg/mL in MeOH	APP-9-029-10X	1 mL

Property Key

CAS	Chemical Abstract Service Number	SG	Specific Gravity (g/cm ³)
MF	Molecular Formula	MP	Melting Point (°C)
MW	Molecular Weight	BP	Boiling Point (°C)
PS	Physical State (Solid, Liquid)	FP	Flash Point (°C)

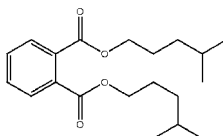
bis(2-Methoxyethyl)phthalate



CAS 117-82-8 MF C₁₄H₁₈O₆ MW 282.29 PS L
SG 1.17 g/cm³ MP N/A BP 340 °C FP 185 °C

Matrix	Cat. No.	Unit
NEAT	J-106	100 mg

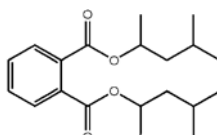
bis(4-Methylpentyl)phthalate



CAS 71850-09-4 MF C₂₀H₃₀O₄ MW 334.45 PS S
SG N/A BP N/A FP N/A

Matrix	Cat. No.	Unit
NEAT	PHTH-022N	100 mg
100 µg/mL in MeOH	PHTH-022S	1 mL

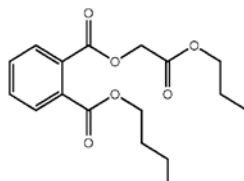
bis(4-Methyl-2-pentyl)phthalate



CAS 84-63-9 MF C₂₀H₃₀O₄ MW 334.45 PS L
SG 1.01 g/cm³ BP 370-380 °C FP 180 °C

Matrix	Cat. No.	Unit
NEAT	J-109	100 mg

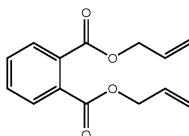
2-Butoxy-2-oxoethyl butyl phthalate



CAS 85-70-1 MF C₁₈H₂₄O₆ MW 336.38 PS L
SG 1.10 g/cm³ MP N/A BP 345 °C FP 199 °C

Matrix	Cat. No.	Unit
NEAT	J-115	100 mg

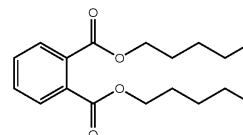
Diallyl phthalate



CAS 131-17-9 MF C₁₄H₁₄O₄ MW 246.26 PS L
SG 1.11 g/cm³ MP N/A BP 165 °C FP 165 °C

Matrix	Cat. No.	Unit
NEAT	J-002	100 mg

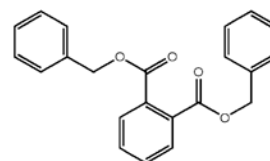
Diamyl phthalate



CAS 131-18-0 MF C₁₈H₂₆O₄ MW 306.40 PS L
SG 1.03 g/cm³ BP 342 °C FP 118 °C

Matrix	Cat. No.	Unit
NEAT	ALR-098N	100 mg
100 µg/mL in MeOH	ALR-098S	1 mL

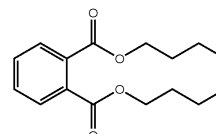
Dibenzyl phthalate



CAS 523-31-9 MF C₂₂H₁₈O₄ MW 346.38 PS S
SG 1.25 g/cm³ MP 40-42 °C BP >400 °C
FP >150 °C

Matrix	Cat. No.	Unit
NEAT	J-104	100 mg

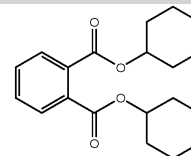
Dibutyl phthalate



CAS 84-74-2 MF C₁₆H₂₂O₄ MW 278.34 PS L
SG 1.05 g/cm³ MP N/A BP 337-340 °C
FP 157 °C

Matrix	Cat. No.	Unit
NEAT	J-003	100 mg
100 µg/mL in MeOH	APP-9-063	1 mL
1 mg/mL in MeOH	APP-9-063-10X	1 mL
5 mg/mL in MeOH	AS-E0066	1 mL

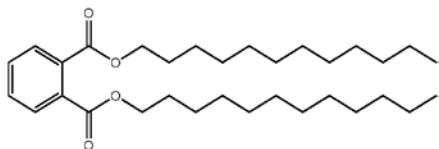
Dicyclohexyl phthalate



CAS 84-61-7 MF C₂₀H₂₆O₄ MW 330.42 PS S
SG 1.14 g/cm³ MP 61-66 °C BP 235 °C
FP 207 °C

Matrix	Cat. No.	Unit
NEAT	J-004	100 mg
100 µg/mL in MeOH	ALR-099S	1 mL
1 mg/mL in AcCN	AS-E0318	1 mL

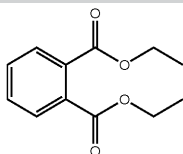
Didodecyl phthalate



CAS 2432-90-8 **MF** C₃₂H₅₄O₄ **MW** 502.77
PS L or S **SG** 1.05 g/cm³ **MP** 21-23 °C **BP** 256 °C
FP >200 °C

Matrix	Cat. No.	Unit
NEAT	PHTH-018N	100 mg
100 µg/mL in MeOH	PHTH-018S	1 mL

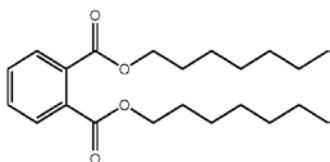
Diethyl phthalate



CAS 84-66-2 **MF** C₁₂H₁₄O₄ **MW** 222.24 **PS** L
SG 1.12 g/cm³ **MP** N/A **BP** 298-299 °C **FP** 160 °C

Matrix	Cat. No.	Unit
NEAT	J-005	100 mg
100 µg/mL in MeOH	APP-9-081	1 mL
1 mg/mL in MeOH	APP-9-081-10X	1 mL
5 mg/mL in MeOH	AS-E0068	1 mL

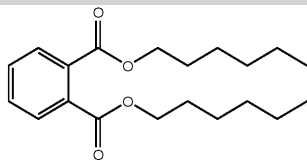
Di-n-heptyl phthalate



CAS 3648-21-3 **MF** C₂₂H₃₄O₄ **MW** 362.50 **PS** L
SG 0.99 g/cm³ **MP** N/A **BP** 360 °C **FP** 113 °C

Matrix	Cat. No.	Unit
NEAT	PHTH-020N	100 mg
100 µg/mL in MeOH	PHTH-020S	1 mL

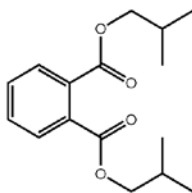
Dihexyl phthalate



CAS 84-75-3 **MF** C₂₀H₃₀O₄ **MW** 334.45 **PS** L
SG 1.01 g/cm³ **BP** 333 °C **FP** 177 °C

Matrix	Cat. No.	Unit
NEAT	ALR-100N	100 mg
100 µg/mL in MeOH	ALR-100S	1 mL

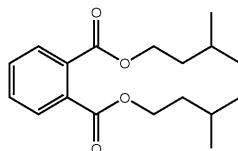
Diisobutyl phthalate



CAS 84-69-5 **MF** C₁₆H₂₂O₄ **MW** 278.34 **PS** L
SG 1.04 g/cm³ **MP** N/A **BP** 327 °C **FP** 180 °C

Matrix	Cat. No.	Unit
NEAT	J-113	100 mg

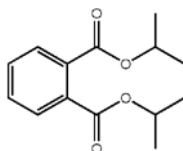
Diisopentyl phthalate



CAS 605-50-5 **MF** C₁₈H₂₆O₄ **MW** 306.40 **PS** L
SG 1.03 g/cm³ **FP** 167 °C

Matrix	Cat. No.	Unit
NEAT	J-127	100 mg

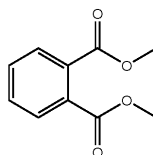
Diisopropyl phthalate



CAS 605-45-8 **MF** C₁₄H₁₈O₄ **MW** 250.29 **PS** L
MP N/A

Matrix	Cat. No.	Unit
NEAT	PHTH-019N	100 mg
100 µg/mL in MeOH	PHTH-019S	1 mL

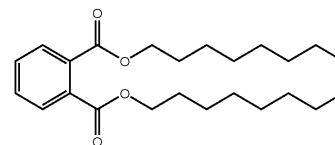
Dimethyl phthalate



CAS 131-11-3 **MF** C₁₀H₁₀O₄ **MW** 194.18 **PS** L
SG 1.19 g/cm³ **MP** N/A **BP** 282-284 °C
FP 156 °C

Matrix	Cat. No.	Unit
NEAT	J-010	100 mg
100 µg/mL in MeOH	APP-9-088	1 mL
1 mg/mL in MeOH	APP-9-088-10X	1 mL
5 mg/mL in MeOH	AS-E0069	1 mL
0.1 mg/mL in EtOAc	M-8032-IS	1 mL

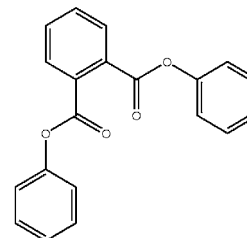
Di-n-octyl phthalate



CAS 117-84-0 **MF** C₂₄H₃₈O₄ **MW** 390.56 **PS** L
SG 0.98 g/cm³ **MP** N/A **FP** 109 °C

Matrix	Cat. No.	Unit
NEAT	J-011	100 mg
100 µg/mL in MeOH	ALR-105S	1 mL
5 mg/mL in MeOH	AS-E0067	1 mL

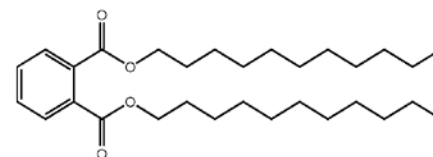
Diphenyl phthalate



CAS 84-62-8 **MF** C₂₀H₁₄O₄ **MW** 318.32 **PS** S
SG 1.24 g/cm³ **MP** 74-76 °C **BP** 255 °C **FP** 256 °C

Matrix	Cat. No.	Unit
NEAT	J-013	100 mg

Diundecyl phthalate



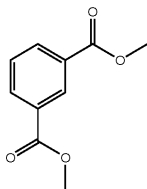
CAS 3648-20-2 **MF** C₃₀H₅₀O₄ **MW** 474.72 **PS** L
SG 0.95 g/cm³ **MP** N/A **BP** 472 °C **FP** 239 °C

Matrix	Cat. No.	Unit
NEAT	PHTH-021N	100 mg
100 µg/mL in MeOH	PHTH-021S	1 mL

Iso, Tere, and Mono Phthalates

Isophthalates

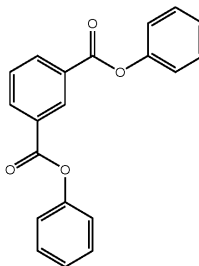
Dimethyl isophthalate



CAS 1459-93-4 MF C₁₀H₁₀O₄ MW 194.18 PS S
SG 1.18 g/cm³ MP 64-68 °C BP 282-285 °C
FP 138 °C

Matrix	Cat. No.	Unit
NEAT	J-009	100 mg

Diphenyl isophthalate

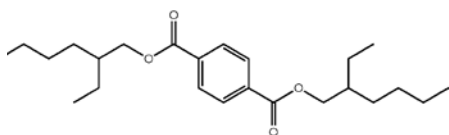


CAS 744-45-6 MF C₂₀H₁₄O₄ MW 318.32 PS S
SG 1.24 g/cm³ MP 136-138 °C FP 256 °C

Matrix	Cat. No.	Unit
NEAT	J-012	100 mg

Terephthalates

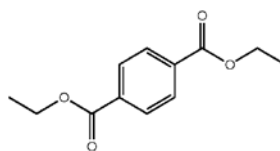
bis(2-Ethylhexyl) terephthalate



CAS 6422-86-2 MF C₂₄H₃₈O₄ MW 390.56 PS L
SG 0.99 g/cm³ MP N/A BP 400 °C FP 238 °C

Matrix	Cat. No.	Unit
NEAT	J-121	100 mg

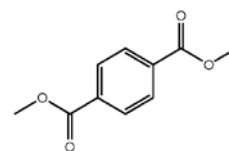
Diethyl terephthalate



CAS 636-09-9 MF C₁₂H₁₄O₄ MW 222.24 PS S
SG 1.15 g/cm³ MP 43-47 °C BP 142 °C
FP >150 °C

Matrix	Cat. No.	Unit
NEAT	J-123	100 mg

Dimethyl terephthalate



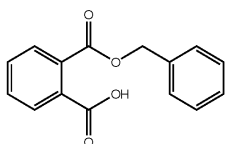
CAS 120-61-6 MF C₁₀H₁₀O₄ MW 194.18 PS S
SG 1.36 g/cm³ MP 139-141 °C BP 288 °C
FP 151 °C

Matrix	Cat. No.	Unit
NEAT	J-101	100 mg

Monophthalates

Mono-phthalate esters are the primary phthalate metabolites formed via hydrolysis of one ester bond. It is these compounds that are thought to be toxic agents and are receiving interest as a possible human health issue. Studies have shown that they can produce estrogenic and immune-suppressive effects in humans.

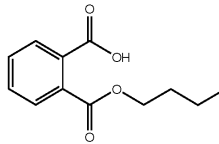
Monobenzyl phthalate (mBzP)



CAS 2528-16-7 MF C₁₅H₁₂O₄ MW 256.25 PS S
SG 1.28 g/cm³ MP 93-94 °C BP 441 °C FP 168 °C

Matrix	Cat. No.	Unit
NEAT	ALR-134N	100 mg
100 µg/mL in AcCN	ALR-134S-CN	1 mL

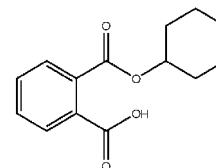
Monobutyl phthalate (mBP)



CAS 131-70-4 MF C₁₂H₁₄O₄ MW 222.24 PS S
SG 1.17 g/cm³ MP 65-66 °C BP 350-354 °C
FP 138 °C

Matrix	Cat. No.	Unit
NEAT	ALR-135N	100 mg
100 µg/mL in AcCN	ALR-135S-CN	1 mL

Monocyclohexyl phthalate (mBP) **NEW**



CAS 7517-36-4 MF C₁₄H₁₆O₄ MW 248.27 PS L
SG 1.24 g/cm³ MP N/A BP 410 °C FP 154 °C

Matrix	Cat. No.	Unit
NEAT	ALR-178N	100 mg
100 µg/mL in AcCN	ALR-178S-CN	1 mL

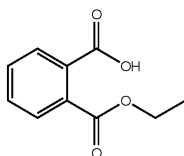
Technical Note

AccuStandard offers 13 mono-phthalates including the mono-ethylhexyl (mEHP) which is the metabolite of the plasticizer with the greatest yearly production and use on a global basis.

Monophthalates continued on next page

Monophthalates (Continued)

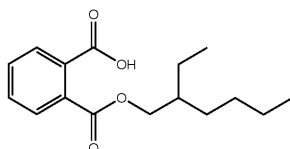
Monoethyl phthalate (mEP)



CAS 2306-33-4 **MF** C₁₀H₁₀O₄ **MW** 194.18 **PS** S
SG 1.24 g/cm³ **MP** 46-48 °C **BP** 339 °C **FP** 135 °C

Matrix	Cat. No.	Unit
NEAT	ALR-137N	100 mg
100 µg/mL in AcCN	ALR-137S-CN	1 mL

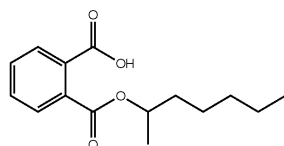
Mono-2-ethylhexyl phthalate (mEHP)



CAS 4376-20-9 **MF** C₁₆H₂₂O₄ **MW** 278.34 **PS** L
SG 1.09 g/cm³ **MP** N/A **BP** 408 °C
FP 144 °C

Matrix	Cat. No.	Unit
NEAT	ALR-138N	100 mg
100 µg/mL in AcCN	ALR-138S-CN	1 mL

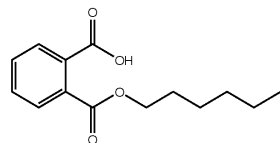
Mono-2-heptyl phthalate



CAS N/A **MF** C₁₅H₂₀O₄ **MW** 264.32 **PS** L **MP** N/A

Matrix	Cat. No.	Unit
NEAT	ALR-143N	100 mg
100 µg/mL in AcCN	ALR-143S-CN	1 mL

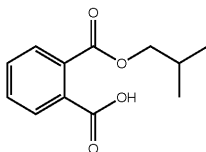
Monoethyl phthalate **NEW**



CAS 24539-57-9 **MF** C₁₄H₁₈O₄ **MW** 250.29 **PS** L
SG 1.12 g/cm³ **MP** N/A **BP** 375-380 °C
FP 142 °C

Matrix	Cat. No.	Unit
NEAT	ALR-175N	100 mg
100 µg/mL in AcCN	ALR-175S-CN	1 mL

Monoisobutyl phthalate

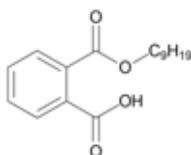


CAS 30833-53-5 **MF** C₁₂H₁₄O₄ **MW** 222.24 **PS** L
SG 1.17 g/cm³ **MP** N/A **BP** 356-357 °C
FP 135 °C

Matrix	Cat. No.	Unit
NEAT	ALR-176N	100 mg
100 µg/mL in AcCN	ALR-176S-CN	1 mL

Monoisononyl phthalate

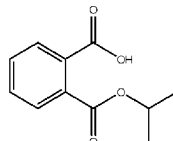
Mixture of C9 Isomers



CAS N/A **MF** C₁₇H₂₄O₄ **MW** 292.37 **PS** S
MP 37-38 °C

Matrix	Cat. No.	Unit
NEAT	ALR-142N	100 mg
100 µg/mL in AcCN	ALR-142S-CN	1 mL

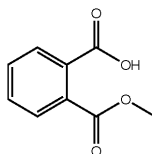
Monoisopropyl phthalate



CAS 35118-50-4 **MF** C₁₁H₁₂O₄ **MW** 208.21 **PS** S
SG 1.20 g/cm³ **MP** 100-104 °C **BP** 343-344 °C
FP 133 °C

Matrix	Cat. No.	Unit
NEAT	ALR-179N	100 mg
100 µg/mL in AcCN	ALR-179S-CN	1 mL

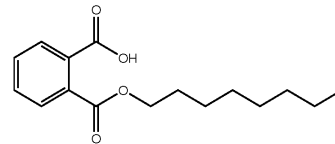
Monomethyl phthalate



CAS 4376-18-5 **MF** C₉H₈O₄ **MW** 180.16 **PS** S
SG 1.29 g/cm³ **MP** 81-84 °C **BP** 328 °C
FP 135 °C

Matrix	Cat. No.	Unit
NEAT	ALR-139N	100 mg
100 µg/mL in AcCN	ALR-139S-CN	1 mL

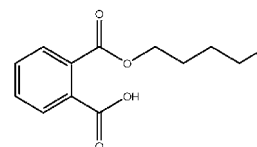
Monoethyl phthalate



CAS 5393-19-1 **MF** C₁₆H₂₂O₄ **MW** 278.34 **PS** L
SG 1.09 g/cm³ **MP** N/A **BP** 400 °C **FP** 146 °C

Matrix	Cat. No.	Unit
NEAT	ALR-141N	100 mg
100 µg/mL in AcCN	ALR-141S-CN	1 mL

Mono-n-pentyl phthalate **NEW**



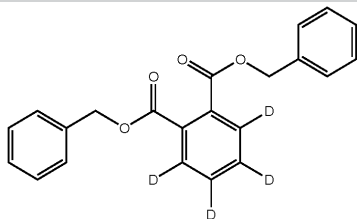
CAS 24539-56-8 **MF** C₁₃H₁₆O₄ **MW** 236.26 **PS** L
SG 1.48 g/cm³ **MP** N/A **BP** 376-377 °C
FP 140 °C

Matrix	Cat. No.	Unit
NEAT	ALR-177N	100 mg
100 µg/mL in AcCN	ALR-177S-CN	1 mL

Deuterated Phthalates

AccuStandard offers eleven deuterated phthalates which can be used as internal standards. To simplify the ordering process, the native and the corresponding deuterated compound are packaged as sets at a reduced price

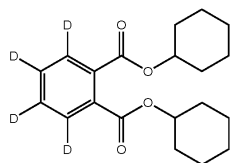
Dibenzylphthalate-3,4,5,6-d₄



CAS 1015854-62-2 MF C₂₂H₁₄D₄O₄ MW 350.40
PS S MP 40-42 °C BP 276-278 °C

Matrix	Cat. No.	Unit
NEAT only as Set	PHTH-D4-001N	5 mg
100 µg/mL in MeOH	PHTH-D4-001S	1 mL

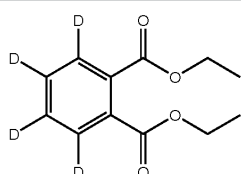
Dicyclohexyl phthalate-3,4,5,6-d₄



CAS 358731-25-6 MF C₂₀H₂₂D₄O₄ MW 334.44
PS S SG 1.16 g/cm³ MP 65-67 °C FP 207 °C
BP 426 °C

Matrix	Cat. No.	Unit
NEAT only as Set	PHTH-D4-004N	5 mg
100 µg/mL in MeOH	PHTH-D4-004S	1 mL

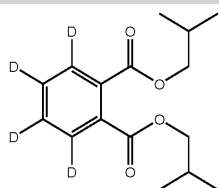
Diethyl phthalate-3,4,5,6-d₄



CAS 93952-12-6 MF C₁₂H₁₀D₄O₄ MW 226.26 PS L
SG 1.14 g/cm³ MP N/A FP 160 °C BP 298-299 °C

Matrix	Cat. No.	Unit
NEAT only as Set	PHTH-D4-005N	5 mg
100 µg/mL in MeOH	PHTH-D4-005S	1 mL

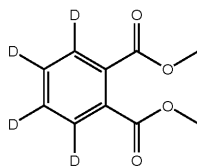
Diisobutyl phthalate-3,4,5,6-d₄



CAS 358730-88-8 MF C₁₆H₁₈D₄O₄ MW 282.37
PS L MP N/A BP 327 °C FP 109 °C

Matrix	Cat. No.	Unit
NEAT only as Set	PHTH-D4-003N	5 mg
100 µg/mL in MeOH	PHTH-D4-003S	1 mL

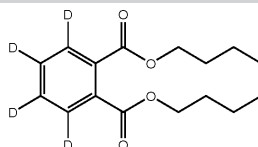
Dimethyl phthalate-3,4,5,6-d₄



CAS 93951-89-4 MF C₁₀H₈D₄O₄ MW 198.21 PS L
SG 1.20 g/cm³ MP N/A BP 282 °C FP 295 °C

Matrix	Cat. No.	Unit
NEAT only as Set	PHTH-D4-007N	5 mg
100 µg/mL in MeOH	PHTH-D4-007S	1 mL

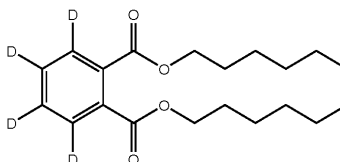
Di-n-butyl phthalate-3,4,5,6-d₄



CAS 93952-11-5 MF D₁₆H₁₈D₄O₄ MW 282.37 PS L
SG 1.07 g/cm³ MP N/A BP 336 °C FP 340 °C

Matrix	Cat. No.	Unit
NEAT only as Set	PHTH-D4-002N	5 mg
100 µg/mL in MeOH	PHTH-D4-002S	1 mL

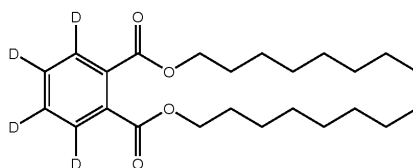
Di-n-hexyl phthalate-3,4,5,6-d₄



CAS 1015854-55-3 MF C₂₀H₂₆D₄O₄ MW 338.47
PS L SG 1.01 g/cm³ MP N/A BP 185-187 °C

Matrix	Cat. No.	Unit
NEAT only as Set	PHTH-D4-006N	5 mg
100 µg/mL in MeOH	PHTH-D4-006S	1 mL

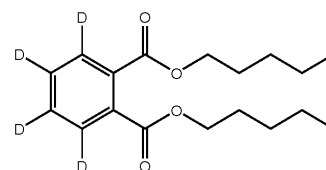
Di-n-octyl phthalate-3,4,5,6-d₄



CAS 93952-13-7 MF C₂₄H₃₄D₄O₄ MW 394.58 PS L
SG 0.96 g/cm³ MP N/A BP 384 °C FP 405 °C

Matrix	Cat. No.	Unit
NEAT only as Set	PHTH-D4-008N	5 mg
100 µg/mL in MeOH	PHTH-D4-008S	1 mL

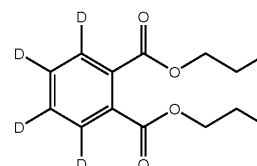
Di-n-pentyl phthalate-3,4,5,6-d₄



CAS 358730-89-9 MF C₁₈H₂₂D₄O₄ MW 310.42
PS L MP N/A BP 342 °C FP 118 °C

Matrix	Cat. No.	Unit
NEAT only as Set	PHTH-D4-009N	5 mg
100 µg/mL in MeOH	PHTH-D4-009S	1 mL

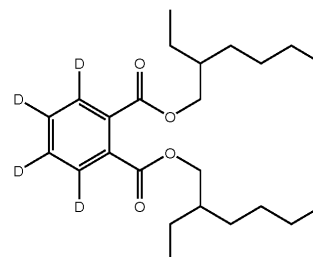
Di-n-propyl phthalate-3,4,5,6-d₄



CAS 358731-29-0 MF C₁₄H₁₄D₄O₄ MW 254.31
PS L SG 1.08 g/cm³ MP N/A BP 317-318 °C
FP >110 °C

Matrix	Cat. No.	Unit
NEAT only as Set	PHTH-D4-010N	5 mg
100 µg/mL in MeOH	PHTH-D4-010S	1 mL

bis(2-Ethylhexyl) phthalate-3,4,5,6-d₄



CAS 93951-87-2 MF C₂₄H₃₄D₄O₄ MW 394.58 PS L
SG 0.98 g/cm³ MP N/A BP 384 °C FP 207 °C

Matrix	Cat. No.	Unit
NEAT only as Set	PHTH-D4-011N	5 mg
100 µg/mL in MeOH	PHTH-D4-011S	1 mL

Set includes 11 Deuterated Phthalates

NEAT Set	PHTH-D4N-SET	11 x 5 mg
SOLUTION Set	PHTH-D4S-SET	11 x 1 mL

Other compounds are available.
contact our Technical Service if you
require additional deuterated or other
labeled compounds.

Phthalates - Industrial

The high molecular weight (HMW) phthalates have more than six carbons in the backbone and are synthesized from phthalic acid and mixtures of C9 and C10 alcohols. The two major HMW products are diisononyl phthalate (DINP) and diisodecyl phthalate (DIDP).

Attention has now turned to the analysis of these compounds as they are becoming major players in the plasticizer marketplace. However, due to the synthesis process, GC separation of DINP and DIDP results in a cluster of peaks corresponding to different isomers. Consequently, different analytical approaches based on soft ionization techniques and MS detection have been documented in the literature (1). These new approaches can provide another tool to scrutinize the amounts, environmental fate and potential health effects of these HMW plasticizers.

1. David, F., Sandra, P. and Hancock, P., *Current Trends in Mass Spectrometry*, May 2011)

Solutions in 1 mL

Compound	CAS No.	Conc.	Matrix	Cat. No.
Benzyl 2-ethylhexyl phthalate	27215-22-1	100 mg	NEAT	ALR-165N
		100 µg/mL	MeOH	ALR-165S
n-Butyl benzyl phthalate	85-68-7	10 mg	NEAT	PHTH-014N
		100 µg/mL	MeOH	PHTH-014S
Butyl cyclohexyl phthalate (Tech mix)	84-64-0	100 mg	NEAT	J-122
n-Butyl isobutyl phthalate (Tech mix)		10 mg	NEAT	PHTH-013N
		100 µg/mL	MeOH	PHTH-013S
Butyl octyl phthalate (Tech mix)	84-78-6	100 mg	NEAT	J-001
Decyl octyl phthalate (Tech mix)		10 mg	NEAT	PHTH-012N
		100 µg/mL	MeOH	PHTH-012S
Didecyl phthalate	84-77-5	100 mg	NEAT	J-120
Diisodecyl phthalate (Tech mix)	26761-40-0	100 mg	NEAT	ALR-101N
		100 µg/mL	MeOH	ALR-101S
Diisooheptyl phthalate	71888-89-6	100 mg	NEAT	PHTH-017N
		100 µg/mL	MeOH	PHTH-017S
Diisohexyl phthalate (Tech mix)	68515-50-4	100 mg	NEAT	J-007
Diisononyl phthalate (Tech mix) [C8 to C10 Isomers]	68515-48-0	100 mg	NEAT	ALR-102N
		100 µg/mL	MeOH	ALR-102S
Diisooctyl phthalate (Tech mix) [C8 Isomers]	27554-26-3	100 mg	NEAT	ALR-103N
		100 µg/mL	MeOH	ALR-103S
Dinonyl phthalate	84-76-4	100 mg	NEAT	J-105
Hexyl 2-ethylhexyl phthalate (Tech mix)	75673-16-4	100 mg	NEAT	J-016
Isobutyl benzyl phthalate (Tech mix)		10 mg	NEAT	PHTH-015N
		100 µg/mL	MeOH	PHTH-015S
Isobutyl cyclohexyl phthalate (Tech mix)	5334-09-8	100 mg	NEAT	J-014
n-Octyl n-decyl phthalate (Tech mix)	119-07-3	100 mg	NEAT	J-015
Pentyl isopentyl phthalate (Tech mix)	84777-06-0	10 mg	NEAT	PHTH-016N
		100 µg/mL	MeOH	PHTH-016S



Phthalate Replacements

World-wide concern over environmental and health-related factors associated with phthalates has led to restrictions of use in a wide array of products. This has resulted in the plastics industry generating a variety of alternatives.

In response, AccuStandard has developed a phthalate replacement product line comprised of 42 compounds representing 18 chemical classes.



See Plasticizer section,
pages 17-24, for
structures, molecular
formulas and molecular
weights.

Compound	CAS No.	Concentration	Cat. No.	Unit
Azelaic Acid Derivatives				
Diisodecyl azelate	28472-97-1	1000 µg/mL in Acetone	PLAS-PL-075S-A	1 mL
Diisooctyl azelate	26544-17-2	1000 µg/mL in Acetone	PLAS-PL-076S-A	1 mL
Dimethyl azelate	1732-10-1	1000 µg/mL in Acetone	PLAS-PL-077S-A	1 mL
Di-n-hexyl azelate	109-31-9	1000 µg/mL in Acetone	PLAS-PL-078S-A	1 mL
Di(2-ethyl hexyl) azelate	103-24-2	1000 µg/mL in Acetone	PLAS-PL-081S-A	1 mL
Adipic Acid Derivatives				
Di(tridecyl) adipate	16958-92-2	1000 µg/mL in Acetone	PLAS-PL-079S-A	1 mL
Di(n-heptyl, n-nonyl) adipate	68515-75-3	1000 µg/mL in Hexane	PLAS-PL-080S	1 mL
Diisobutyl adipate	141-04-8	1000 µg/mL in Hexane	PLAS-PL-082S	1 mL
Diisodecyl adipate	27178-16-1	1000 µg/mL in Hexane	PLAS-PL-083S	1 mL
Dimer Acid Derivatives				
bis(2-Hydroxyethyl) dimerate	68855-78-7	1000 µg/mL in Hexane	PLAS-PL-084S	1 mL
Epoxy Derivatives				
Epoxidized linseed oil	8016-11-3	1000 µg/mL in Toluene	PLAS-PL-085S-T	1 mL
2-Ethylhexyl epoxy tallate	61789-01-3	1000 µg/mL in Hexane	PLAS-PL-086S	1 mL
Fumaric Acid Derivative				
Dibutyl fumarate	105-75-9	1000 µg/mL in Hexane	PLAS-PL-087S	1 mL
Glycerol Derivative				
Glycerol triacetate	102-76-1	1000 µg/mL in Hexane	PLAS-PL-088S	1 mL
Isobutyrate Derivative				
2,2,4-Trimethyl-1,3-pentanediol-diisobutyrate	6846-50-0	1000 µg/mL in Hexane	PLAS-PL-089S	1 mL
Maleic Acid Derivatives				
Di(2-ethylhexyl)maleate (Diocetyl maleate)	142-16-5	1000 µg/mL in Hexane	PLAS-PL-090S	1 mL
Di-n-butyl maleate	105-76-0	1000 µg/mL in Hexane	PLAS-PL-091S	1 mL
Mellitates				
Tricapryl trimellitate	27251-75-8	1000 µg/mL in Hexane	PLAS-PL-092S	1 mL
Triisodecyl trimellitate	36631-30-8	1000 µg/mL in Hexane	PLAS-PL-093S	1 mL
Tri(n-octyl, n-decyl) trimellitate	67989-23-5	1000 µg/mL in Hexane	PLAS-PL-094S	1 mL
Myristate				
Isopropyl myristate	110-27-0	1000 µg/mL in Hexane	PLAS-PL-095S	1 mL
Oleic Acid Derivatives				
Glycerol monooleate	25496-72-4	1000 µg/mL in Hexane	PLAS-PL-096S	1 mL
Methyl oleate	112-62-9	1000 µg/mL in Hexane	PLAS-PL-097S	1 mL
n-Propyl oleate	111-59-1	1000 µg/mL in Hexane	PLAS-PL-098S	1 mL
Tetrahydrofurfuryl oleate	5420-17-7	1000 µg/mL in Hexane	PLAS-PL-099S	1 mL
Palmitic Acid derivative				
Isopropyl palmitate	142-91-6	1000 µg/mL in Hexane	PLAS-PL-100S	1 mL
Benzoic Acid Derivatives				
Di(propylene glycol) dibenzoate	27138-31-4	1000 µg/mL in Hexane	PLAS-PL-101S	1 mL
Polyethylene glycol 200 dibenzoate	9004-86-8	1000 µg/mL in Hexane	PLAS-PL-102S	1 mL
Phosphoric Acid Derivatives				
t-Butylphenyl diphenyl phosphate	56803-37-3	1000 µg/mL in Hexane	PLAS-PL-103S	1 mL
tris(2-Butoxyethyl) phosphate	78-51-3	1000 µg/mL in Hexane	PLAS-PL-104S	1 mL
Ricinoleic Acid Derivatives				
Butyl ricinoleate	151-13-3	1000 µg/mL in Hexane	PLAS-PL-105S	1 mL
Glyceryl (triacetyl) ricinoleate	101-34-8	1000 µg/mL in Hexane	PLAS-PL-106S	1 mL
n-Butyl acetyl ricinoleate	140-04-5	1000 µg/mL in Hexane	PLAS-PL-107S	1 mL
Propylene glycol ricinoleate	26402-31-3	1000 µg/mL in Hexane	PLAS-PL-108S	1 mL
Succinic acid Derivatives				
Diethyl succinate	123-25-1	1000 µg/mL in Hexane	PLAS-PL-109S	1 mL
Sulfonic acid Derivatives				
o,p-Toluenesulfonamide	8013-74-9	1000 µg/mL in Hexane	PLAS-PL-110S	1 mL
N-Ethyl o,p-toluenesulfonamide	8047-99-2	1000 µg/mL in Hexane	PLAS-PL-111S	1 mL
Stearic acid Derivatives				
Ethylene glycol monostearate	111-60-4	1000 µg/mL in Hexane	PLAS-PL-112S	1 mL
Isopropyl isostearate	68171-33-5	1000 µg/mL in Hexane	PLAS-PL-113S	1 mL
n-Butyl stearate	123-95-5	1000 µg/mL in Hexane	PLAS-PL-114S	1 mL
Glycerol monostearate	31566-31-1	1000 µg/mL in Toluene	PLAS-PL-115S-T	1 mL
Propylene glycol monostearate	1323-39-3	1000 µg/mL in Hexane	PLAS-PL-116S	1 mL

EPA Methods - Phthalate Standards

Method 506 Phthalate Esters by PID

Phthalate Esters

M-506 1 x 1 mL
M-506-PAK 5 x 1 mL
 1.0 mg/mL each in Isooctane 7 comps.

Benzyl butyl phthalate	bis(2-Ethylhexyl)adipate
Dimethyl phthalate	bis(2-Ethylhexyl)phthalate
Diethyl phthalate	Di-n-octyl phthalate
Di-n-butyl phthalate	

M-506-QC 1 x 1 mL
M-506-QC-PAK 5 x 1 mL
 At stated conc. (mg/mL) in MeOH 7 comps.

Benzyl butyl phthalate	0.25	bis(2-Ethylhexyl)adipate	1.2
Dimethyl phthalate	0.1	bis(2-Ethylhexyl)phthalate	0.25
Diethyl phthalate	0.1	Di-n-octyl phthalate	0.65
Di-n-butyl phthalate	0.1		

Method 606 Phthalate Esters by GC/ECD

M-606 1 x 1 mL
M-606-PAK 5 x 1 mL
 0.2 mg/mL each in MeOH 6 comps.

Benzyl butyl phthalate	Di-n-butyl phthalate
Dimethyl phthalate	Di-n-octyl phthalate
Diethyl phthalate	bis(2-Ethylhexyl)phthalate

Method 8060 Phthalate Esters by GC/ECD

Phthalate Esters

M-8060 1 x 1 mL
M-8060-PAK 5 x 1 mL
 2.0 mg/mL each in Isooctane 6 comps.

Benzyl butyl phthalate	Di-n-butyl phthalate
Diethyl phthalate	Di-n-octyl phthalate
Dimethyl phthalate	bis(2-Ethylhexyl)phthalate

M-8060-QC 1 x 1 mL
M-8060-QC-PAK 5 x 1 mL
 At stated conc. (mg/mL) in MeOH 6 comps.

Benzyl butyl phthalate	0.1	Di-n-butyl phthalate	0.25
Diethyl phthalate	0.25	Di-n-octyl phthalate	0.5
Dimethyl phthalate	0.25	bis(2-Ethylhexyl)phthalate	0.5

Method 8061A Phthalate Esters by GC/ECD

Phthalate Esters

M-8061-R1 1 x 1 mL
M-8061-R1-PAK 5 x 1 mL
 1.0 mg/mL each in Hexane 15 comps.

bis(2-n-Butoxyethyl)phthalate	Dimethyl phthalate
Butyl benzyl phthalate	Dinonyl phthalate
Diamyl phthalate	Di-n-octyl phthalate
Di-n-butyl phthalate	bis(2-Ethoxyethyl)phthalate
Dicyclohexyl phthalate	bis(2-Ethylhexyl)phthalate
Diethyl phthalate	bis(2-Methoxyethyl)phthalate
Dihexyl phthalate	bis(4-Methyl-2-pentyl)phthalate
Diisobutyl phthalate	

M-8061A 1 x 1 mL
M-8061A-PAK 5 x 1 mL
 1.0 mg/mL each in Hexane 6 comps.

Butyl benzyl phthalate	Diethyl phthalate
bis(2-Ethylhexyl)phthalate	Dimethyl phthalate
Di-n-butyl phthalate	Di-n-octyl phthalate

Matrix Spike Solution

M-8061A-MS 1 x 1 mL
M-8061A-MS-PAK 5 x 1 mL
 2.0 mg/mL each in Acetone 2 comps.

Butyl benzyl phthalate	bis(2-Ethylhexyl)phthalate
------------------------	----------------------------

Internal Standard

M-8061-IS 1 x 1 mL
M-8061-IS-PAK 5 x 1 mL
 5.0 mg/mL in Hexane

Benzyl benzoate

Surrogate Standards

M-8061-SS 1 x 1 mL
M-8061-SS-PAK 5 x 1 mL
 50 µg/mL each in Acetone

M-8061-SS-10X 1 x 1 mL
M-8061-SS-10X-PAK 5 x 1 mL
 500 µg/mL each in Acetone 3 comps.

Dibenzyl phthalate	Diphenyl phthalate
Diphenyl isophthalate	



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Dyes and Breakdown Products

Dyes and colorant products are one of the largest categories of plastic additives and are also used in textiles, leather goods, food and personal care products. They are used for both aesthetic purposes and to alter physical properties of the product, such as to repel light. Many dyes and their breakdown products have been determined to have both adverse health properties and adverse environmental properties, and as such, are being increasingly regulated. EU Directives 67/548/EEC and 2002/61/EC and 76/768/EEC are the most far-reaching regulations for this class of compounds.

EU Directive 67/548/EEC Dyes

Criterion #22 Regulated Dyes - Carcinogenic Each in 100 µg/mL in MeOH

Cat. No.	Unit
Disperse Blue 1	1 mL
Disperse Orange 11	1 mL
Disperse Yellow 3	1 mL
Basic Violet 14	1 mL
Direct Black 38	1 mL
Direct Blue 6	1 mL

Criterion #23 Regulated Dye - Disperse dyes, Sensitizing Each in 100 µg/mL in MeOH

Cat. No.	Unit
Disperse Blue 3	1 mL
Disperse Orange 1	1 mL
Disperse Orange 3	1 mL
Disperse Red 1	1 mL
Disperse Yellow 9	1 mL
Disperse Blue 35	1 mL
Disperse Blue 124	1 mL
Disperse Orange 37	1 mL
Disperse Blue 7	1 mL
Disperse Blue 26	1 mL
Disperse Blue 102	1 mL
Disperse Red 11	1 mL
Disperse Red 17	1 mL

EU Directive 2002/61/EC Determination of Aryl Amine Breakdown Products in Azo Dyes

Individual Aryl Amine Standards

Compound	100 µg/mL in AcCN 1 mL	1000 µg/mL in AcCN 1 mL	10 µg/mL in Ethyl acetate for 10 mL 10 mL
<i>o</i> -Aminoazotoluene	RAC-01	RAC-01-10X	RAC-01-EA-0.1X-10ML
4-Aminobiphenyl	RAC-02	RAC-02-10X	RAC-02-EA-0.1X-10ML
2-Amino-4-nitrotoluene	RAC-03	RAC-03-10X	RAC-03-EA-0.1X-10ML
Benzidine †	RAC-04	RAC-04-10X	RAC-04-EA-0.1X-10ML
4-Chloroaniline	RAC-05	RAC-05-10X	RAC-05-EA-0.1X-10ML
4-Chloro- <i>o</i> -toluidine	RAC-06	RAC-06-10X	RAC-06-EA-0.1X-10ML
<i>p</i> -Cresidine	RAC-07	RAC-07-10X	RAC-07-EA-0.1X-10ML
2,4-Diaminoanisole *	RAC-08	RAC-08-10X	RAC-08-EA-0.1X-10ML
4,4'-Diaminodiphenylmethane	RAC-09	RAC-09-10X	RAC-09-EA-0.1X-10ML
2,4-Diaminotoluene	RAC-10	RAC-10-10X	RAC-10-EA-0.1X-10ML
3,3'-Dichlorobenzidine †	RAC-11	RAC-11-10X	RAC-11-EA-0.1X-10ML
3,3'-Dimethoxybenzidine †	RAC-12	RAC-12-10X	RAC-12-EA-0.1X-10ML
3,3'-Dimethylbenzidine †	RAC-13	RAC-13-10X	RAC-13-EA-0.1X-10ML
3,3'-Dimethyl-4,4'-diaminodiphenylmethane	RAC-14	RAC-14-10X	RAC-14-EA-0.1X-10ML
4,4'-Methylenebis(2-chloroaniline)	RAC-15	RAC-15-10X	RAC-15-EA-0.1X-10ML
2-Naphthylamine	RAC-16	RAC-16-10X	RAC-16-EA-0.1X-10ML
4,4'-Oxydianiline	RAC-17	RAC-17-10X	RAC-17-EA-0.1X-10ML
4,4'-Thiodianiline	RAC-18	RAC-18-10X	RAC-18-EA-0.1X-10ML
<i>o</i> -Toluidine	RAC-19	RAC-19-10X	RAC-19-EA-0.1X-10ML
2,4,5-Trimethylaniline	RAC-20	RAC-20-10X	RAC-20-EA-0.1X-10ML
<i>p</i> -Aminoazobenzene	RAC-21	RAC-21-10X	RAC-21-EA-0.1X-10ML
2-Aminobiphenyl	RAC-22	RAC-22-10X	RAC-22-EA-0.1X-10ML
<i>o</i> -Anisidine	RAC-23	RAC-23-10X	RAC-23-EA-0.1X-10ML
3-Chloro- <i>o</i> -toluidine	RAC-24	RAC-24-10X	RAC-24-EA-0.1X-10ML

RAC-R1-SET 24 x 1 mL

100 µg/mL * In the form of the Sulfate hydrate 171 µg/mL in Pyridine (100 µg/mL as the base)

RAC-R1-10X-SET 24 x 1 mL

1000 µg/mL * In the form of the Sulfate hydrate 1,710 µg/mL in Pyridine (1000 µg/mL as the base)

† Subject to oxidation

Carcinogenic Aryl Amine Mix

AE-00049-R1 1 x 1 mL
10 µg/mL in Ethyl acetate 23 comps.

AE-00049-R1-10ML 1 x 10 mL
10 µg/mL in Ethyl acetate 23 comps.

o-Aminoazotoluene
4-Aminobiphenyl
2-Amino-4-nitrotoluene
Benzidine †
4-Chloroaniline
4-Chloro-*o*-toluidine
p-Cresidine
4,4'-Diaminodiphenylmethane
2,4-Diaminotoluene
3,3'-Dichlorobenzidine †
3,3'-Dimethoxybenzidine †
3,3'-Dimethylbenzidine †
3,3'-Dimethyl-4,4'-diaminodiphenylmethane
4,4'-Methylenebis(2-chloroaniline)
2-Naphthylamine
4,4'-Oxydianiline
4,4'-Thiodianiline
o-Toluidine
2,4,5-Trimethylaniline
p-Aminoazobenzene
2-Aminobiphenyl
o-Anisidine
3-Chloro-*o*-toluidine

Internal Standards

RAC-IS 1 x 1 mL
1000 µg/mL in AcCN

RAC-IS-EA 1 x 1 mL
1000 µg/mL in Ethyl acetate

3,3',5,5'-Tetramethylbenzidine †

AE-00049-SET 2 x 1 mL
AE-00049-R1, RAC-08

A

Accelerator BBTS 1
 Accelerator CBTS 1
 Accelerator EZ & EZ-SP 1
 Accelerator MBT, MBT/MG 1
 Activator OT Urea 1
 Akrochem Antiox 12 2
 Akrochem® Ceresin Wax 25
 Akrochem® NIBUD 11
 Akrochem® Retarder BAX 25
 Akrofax™ A 28
 Akrofax™ B 28
 Akroform ETU-22 PM 1
 Akrowax™ 195 11
 Alkanox® P27 3
 Alkanox® TNPP 3
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 2-Aminobiphenyl 41
 4-Aminobiphenyl 41
 2-Amino-4-nitrotoluene 41
 o-Aminoazotoluene 41
 o-Anisidine 41
 Anox® PP18 3
 Antioxidant 60 3
 Antioxidant S 3
 Aroclor® 1016 14
 Aroclor® 1221 14
 Aroclor® 1232 14
 Aroclor® 1242 14
 Aroclor® 1248 15
 Aroclor® 1254 15
 Aroclor® 1260 15
 Aroclor® 1262 15
 Aroclor® 1268 15
 Aroclor® 5432 15
 Aroclor® 5442 15
 Aroclor® 5460 15
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B

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 2-(2H-Benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol 3
 Benzyl 2-ethylhexyl phthalate 38
 Benzyl benzoate 40
 Benzyl butyl phthalate 33
 bis(2-n-Butoxyethyl)phthalate 33
 Bisphenol A (BPA) 17, 30
 Bisphenol A diglycidyl ether (BADGE) 30
 Bisphenol AF 30
 Bisphenol AP 30
 Bisphenol B 30
 Bisphenol BP 30
 Bisphenol C 30
 Bisphenol C-dichloride 31
 Bisphenol E 31
 Bisphenol F 31
 Bisphenol G 31
 Bisphenol M 31
 Bisphenol P 31
 Bisphenol PH 31
 Bisphenol S 31
 Bisphenol TMC 31
 Bisphenol Z 31
 BLS® 234 3
 BLS® 292 3
 BLS® 1622 3
 BLS® 1944 4
 BNX 1077 4
 BNX 1225 4
 tris(2-Butoxyethyl) phosphate 39
 2-tert-Butyl-6-(5-chloro-2H-benzotriazol-2-yl)-4-methylphenol 4
 Butyl cyclohexyl phthalate 38
 4,4'-Butylidenebis(6-tert-butyl-m-cresol) 4

n-Butyl acetyl ricinoleate 17, 39
 n-Butyl benzyl phthalate 38
 n-Butyl isobutyl phthalate 38
 Butyl octyl phthalate 38
 t-Butylphenyl diphenyl phosphate 39
 Butyl ricinoleate 17, 39
 n-Butyl stearate 17, 39

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 Celogen® RA 12
 Celogen® SD-125 17
 4-Chloroaniline 41
 3-Chloro-o-toluidine 41
 4-Chloro-o-toluidine 41
 Citroflex 2 17
 Citroflex 4 17
 Citroflex A-2 17
 Citroflex A-4 18
 Citroflex B-6 18
 CPW-100 12
 p-Cresidine 41
 Cresyl diphenyl phosphate 18
 Cure-Rite® IBT 1
 Cyanomethyl dodecyl trithiocarbonate 25
 Cyanomethyl methyl(phenyl)carbomodithioate 26
 2-Cyano-2-propyl benzodithioate 25
 4-Cyano-4-[(dodecylsulfanythiocarbonyl)sulfanyl]pentanoic acid 25
 4-Cyano-4-(phenylcarbonothioylthio)pentanoic acid 25
 2-Cyano-2-propyl dodecyl trithiocarbonate 25
 Cyanox® 425 4
 Cyanox® 1212 4
 Cyanox® 1790 4
 Cyanox® 2246 4
 Cyanox® LTDP 5
 Cyanox® STDP 5

D

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 Decyl octyl phthalate 38
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 Diallyl phthalate 33
 Diamyl phthalate 33
 2,4-Diaminoanisole 41
 4,4'-Diaminodiphenylmethane 41
 2,4-Diaminotoluene 41
 N,N'-Dibutylthiourea 5
 Dibenzylhydroxylamine 5
 Dibenzyl phthalate 33
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 Didodecyl phthalate 34
 Diethyl 3,5-di-tert-butyl-4-hydroxybenzylphosphonate 5
 Diethyl adipate 18
 Diethyl phthalate 34
 Diethyl phthalate-3,4,5,6-d4 37
 Diethyl succinate 18, 39
 Diethyl terephthalate 35
 N,N'-Diethylthiourea 5
 Dihexyl phthalate 34
 Diisobutyl adipate 19, 39
 Diisobutyl phthalate 34
 Di-isobutyl phthalate-3,4,5,6-d4 37
 Diisooctyl azelate 19, 39
 Diisodecyl adipate 18, 39
 Diisodecyl azelate 19, 39
 Diisodecyl phthalate 38
 Diisoheptyl phthalate 38
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 Diisononyl phthalate (C8 to C10 Isomers) 38

Diisooctyl phthalate (C8 Isomers) 19, 38
 Diisopentyl phthalate 34
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 3,3'-Dimethoxybenzidine 41
 3,3'-Dimethylbenzidine 41
 3,3'-Dimethyl-4,4'-diaminodiphenylmethane 41
 Dimethyl adipate 19
 Dimethyl azelate 19, 39
 Dimethyl isophthalate 35
 Dimethyl phthalate 34
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 Dimethyl sebacate 19
 Dimethyl terephthalate 35
 Di-n-butyl maleate 18, 39
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 Di-n-heptyl phthalate 34
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 Di-n-pentyl phthalate-3,4,5,6-d4 37
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 Dipentamethylenethiuram tetrasulfide 1
 Diphenyl isophthalate 35
 Diphenyl phthalate 34
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 1,3-Diphenyl-2-thiourea 1, 5
 1,3-Di-o-tolylguanidine 1, 5
 bis(Dodecylsulfanythiocarbonyl) disulfide 26
 2-(Dodecylthiocarbonothioylthio)-2-methylpropionic acid 26
 Direct Black 38 41
 Direct Blue 6 41
 Disflamoll® TKP 19
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 Disperse Blue 1 41
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