

ASTM International Adjunct Product Number ADJD7823-EA

Title: Vinyl Plasticizer Library – Total Ion Chromatograms and Mass Spectra

Library List:

#	Product	Commercial Name	Chemical Name	CAS#	Producer	Comment	Alcohol	Acid
1	DBTP		1,4-Benzenedicarboxylic acid, 1,4-dibutyl ester	1962-75-0	Eastmn		linear	Teraphthalic
2	BOP		1,2-Benzenedicarboxylic acid, 1-butyl 2-octyl ester	84-78-6			linear / branched	Phthalic
3	DIBP	Eastman DIBP	1,2-Benzenedicarboxylic acid bis(2-methylpropyl) ester	84-69-5	Eastman		branched	Phthalic
4	DBP	Eastman DBP	1,2-Benzenedicarboxylic acid, 1,2-di-n-butyl ester	84-74-2	Eastman		linear	Phthalic
5	BBP	PLASTHALL® BBP/Santizer 160	Benzyl butyl phthalate	85-68-7	Halstar / Ferro		linear / aromatic	Phthalic
6	DIHP	Jayflex 77	1,2-Benzenedicarboxylic acid, esters, diisoheptyl	41451-28-9	ExxonMobil		branched	Phthalic
7	DOP(DEHP)	Palatinol® DOP	Bis(2-Ethylhexyl) Phthalate	117-81-7	BASF		branched	Phthalic
8	DnOP		n-Dioctyl phthalate	117-84-0				
9	DINP	Jayflex DINP	1,2-Benzenedicarboxylic acid, di-C8-10-branched alkyl esters, C9-rich	68515-48-0	ExxonMobil		branched	Phthalic
10	DINP	Palatinol® N	1,2-Benzenedicarboxylic acid, 1,2-diisononyl	28553-12-0	BASF		branched	Phthalic
11	DIDP	Jayflex DIDP	1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	68515-49-1	ExxonMobil		branched	Phthalic
12	DIDP		1,2-Benzenedicarboxylic acid, 1,2-diisodecyl	26761-40-0				
13	DPHP	Palatinol® DPHP	1,2-Benzenedicarboxylic acid, 1,2-bis(2-propylheptyl) ester	53306-54-0	BASF		branched	Phthalic
14	L711P	Jayflex L711P	1,2-Benzenedicarboxylic acid, di-C6-12-branched and linear alkyl esters	392662-40-7	ExxonMobil	Linears	linear	Phthalic
15	L9P	Jayflex L9P	Dinonyl Phthalate	68515-45-7	ExxonMobil	Linears	linear	Phthalic
16	L911P	Jayflex L911P	(C9-C11) Dialkyl phthalate	68515-43-5	ExxonMobil	Linears	linear	Phthalic
17	911P	Palatinol 911P	(C9-C11) Dialkyl phthalate	68515-43-5	BASF	Linears	linear	Phthalic
18	L11P	Jayflex L11P	1,2-Benzenedicarboxylic acid, 1,2-diundecyl	3648-20-2	ExxonMobil	Linears	linear	Phthalic
19	L11P	Palatinol® 111P-I	1,2-Benzenedicarboxylic acid, 1,2-diundecyl	3648-20-2	BASF	Linears	linear	Phthalic
20	610P	Palatinol® 610P	benzene-1,2-dicarboxylic acid; decan-1-ol; hexan-1-ol; octan-1-ol	68648-93-1	BASF	Linears	linear	Phthalic
21	DOTP	Eastman 168	1,4-Benzenedicarboxylic acid, 1,4-bis(2-ethylhexyl) ester/Dioctyl Teraphthalate	6422-86-2	Eastman		branched	Teraphthalic
22	DINCH	Hexamoll DINCH	1,2-Cyclohexanedicarboxylic acid, dinonyl ester, branched and linear	474919-59-0 (U.S.) 166412-78-8 (outside U.S.)	BASF		branched	
23	ATBC		Acetyl tri-n-butyl citrate	77-90-7	Morflex			citric
24	DOA	Plastomoll® DOA	Hexanedioic acid, 1,6-bis(2-ethylhexyl) ester	103-23-1	BASF		branched	adipic
25	DINA	Jayflex DINA	Hexanedioic acid, 1,6-diisononyl ester	33703-08-1	Exxonmobil		branched	adipic
26	DIDA	Jayflex DIDA	Hexanedioic acid, 1,6-diisodecyl ester	27178-16-1	Exxonmobil		branched	adipic
27	Plastomoll DNA	Plastomoll DNA	Hexanedioic acid, 1,6-diisononyl ester	33703-08-1	BASF		branched	adipic
28	DOS	Plasthall DOS	Hexanedioic acid, 1,6-bis(2-methylpropyl) ester	141-04-8			branched	sebacic
29	DOZ	Edenol 9058 DOZ	Nonanedioic acid, 1,9-di-ethylhexyl ester	103-24-2	cognis		branched	azelaic

30	<b>Benzoflex 9-88</b>	Benzoflex 9-88	Dipropylene glycol dibenzoate	27138-31-4	Genovique / Eastman			
31	<b>Benzoflex 2-45</b>	Benzoflex 2-45	2-[2-(benzoyloxy)ethoxy]ethyl benzoate/Diethylene glycol dibenzoate	120-55-8	Genovique / Eastman			
32	<b>Benzoflex 50</b>	Benzoflex 50	Diethylene glycol dibenzoate/Dipropylene glycol dibenzoate	120-55-8; 27138-31-4	Genovique / Eastman			
33	<b>Santicizer 2148</b>	Santicizer 2148	Phosphoric acid, mixed C12-16-alkyl and Ph triesters	159002-22-9	Ferro			phosphoric
34	<b>Santicizer 278</b>	Santicizer 278	1,2-Benzenedicarboxylic acid, 1-[2,2-dimethyl-1-(1-methylethyl)-3-(2-methyl-1-oxopropoxy)propyl]2-(phenylmethyl) ester	16883-83-3	Ferro			phosphoric
35	<b>Santicizer 148</b>	Santicizer 148	Phosphoric acid, esters, isodecyl diphenyl ester, mixt. with triphenyl phosphate	96300-95-7	Ferro		branched / aromatic	phosphoric
36	<b>Santicizer 261</b>	Santicizer 261	1,2-Benzenedicarboxylic acid, benzyl C7-9-branched and linear alkyl esters	68515-40-2	Ferro		linear / aromatic	phthalic
37	<b>Mesamoll</b>	Mesamoll II	Sulfonic acids, C10-21-alkane, Ph esters	91082-17-6	Lanxess / Era			sulfuric
38	<b>Mixed Adipate</b>	Plastomoll GA	Adipic Ester of Mixed C7,8,9,10,11 alcohols	215734-10-4	BASF			adipic
39	<b>610TM</b>	Palatinol 610TM	1,2,4-Benzenetricarboxylic acid, mixed decyl and hexyl and octyl esters	68130-50-7	BASF			trimellitate
40	<b>TOTM</b>	Palatinol TOTM	1,2,4-benzenetricarboxylic acid, tris(2-ethylhexyl)ester	3319-31-1	BASF		branched	trimellitate
41	<b>TBC</b>		Butyl citrate	77-94-1				trimellitate
42	<b>DOTP</b>	Palatinol DOTP	1,4-benzenedicarboxylic acid bis(2-ethylhexyl) ester	6422-86-2	BASF		branched	terephthalic
43	<b>TOP</b>		Phosphoric acid, tris(2-ethylhexyl) ester	78-42-2			Branched	Phosphate ester

### GC-MS

#### GC operating conditions - column or equivalent

Column	Capillary DB-5
Material	Dimethyl siloxane
Length	30 meter
Diameter	0.25 mm id
Loading	0.25 u film thickness
Phase	Methyl silicone
Temperature Max	300°C
Injection Port	Split less or on-column
Temperature, °C	325
Total Flow, mL/min	204
Column Pressure, psi	16.00
Carrier Gas	Helium

Injection volume, uL	1
Sample Concentration	5 w/w%
Column Temperature Program	
Initial Temperature, °C	40
Initial Time, min	10
Rate 1, deg/min	20
Temp 1, °C	300
Time 1, min	67
Run Time, min	90
Detector	MS

### Library

Product GC-MS library includes two type of information on a given product according to the specified GC-MS run condition. Each product profile represents an example of commercial products that are registered under the specific CAS number and the chemical name defined by that CAS number.

- TIC - Total Ion Chromatogram, 3 min to 50 min
  - Zoom in profile is provided for needed details.
- Key Mess Spectrum/Spectra of product