BASF meeting with CPSC

June 22, 2009

Raymond David
Steven Goldberg
Patrick Harmon

BASF
The Chemical Company

Agenda

- Phthalate definitions under CPSIA
  - Chemistry and uses of Palatinol® DPHP and 911P
- Data protection issues due to REACH
- Toxicology of Hexamoll® DINCH
- Toxicology of Palatinol® DPHP

Clarification of definitions

BASF
The Chemical Company

- Commercial DINP and DIDP usually defined by specific CAS#'s depending on alcohol mixture used.
- Other phthalates may co-elute. Comments made to CPSC use DIOP, DPHP, and L9P as examples (Printing Industries of America, Bureau Veritas, ExxonMobil Chemical, SGIA).
- Staff interpretation (March 12, 2009 meeting slides) is inconsistent with standard practice and understanding by US NTP, CA OEHHA, Health Canada, and the EU.
  - Specific CAS#'s used
  - Separate registrations required for DPHP and 911P in EU
  - OECD SIDS review of high-molecular weight phthalates category recognized the distinctions between the products

Use and characterization

- DPHP and 911P (and others) may be qualitatively distinguished from the regulated products
- BASF does not promote either for use in toys and childcare articles as defined by the statute.
- DPHP is a general purpose plasticizer developed for technical markets such as automotive, roofing, and wire & cable.
- 911P is a specialty linear plasticizer for applications requiring low temperature performance as well as high temperature stability.

Definition of DINP

BASF
The Chemical Company

- US National Toxicology Program and the EU:
  - CAS# 68515-48-0 “Polygas” based
  - CAS# 28553-12-0 Butene dimer based

- Alcohol structures:

	68515-48-0	28553-12-0
Methyl ethyl hexanols	5 - 10%	5 - 10%
Dimethyl heptanols	45 - 55	40 - 45
Methyl octanols	5 - 20	35 - 40
n-Nonanol	0 - 1	0 - 10
Isodecanol	15 - 25	-

Definition of DIDP

- US National Toxicology Program, CA OEHHA, and the EU:
  - CAS# 68515-49-1
  - CAS# 26761-40-0

- Alcohol structures:

	68515-49-1 & 26761-40-0
Trimethyl heptanols	0 - 10%
Dimethyl octanols	70 - 80
Methyl nonanols	0 - 10
n-Decanol	0

911P and DPHP

- 911P, alcohol structures

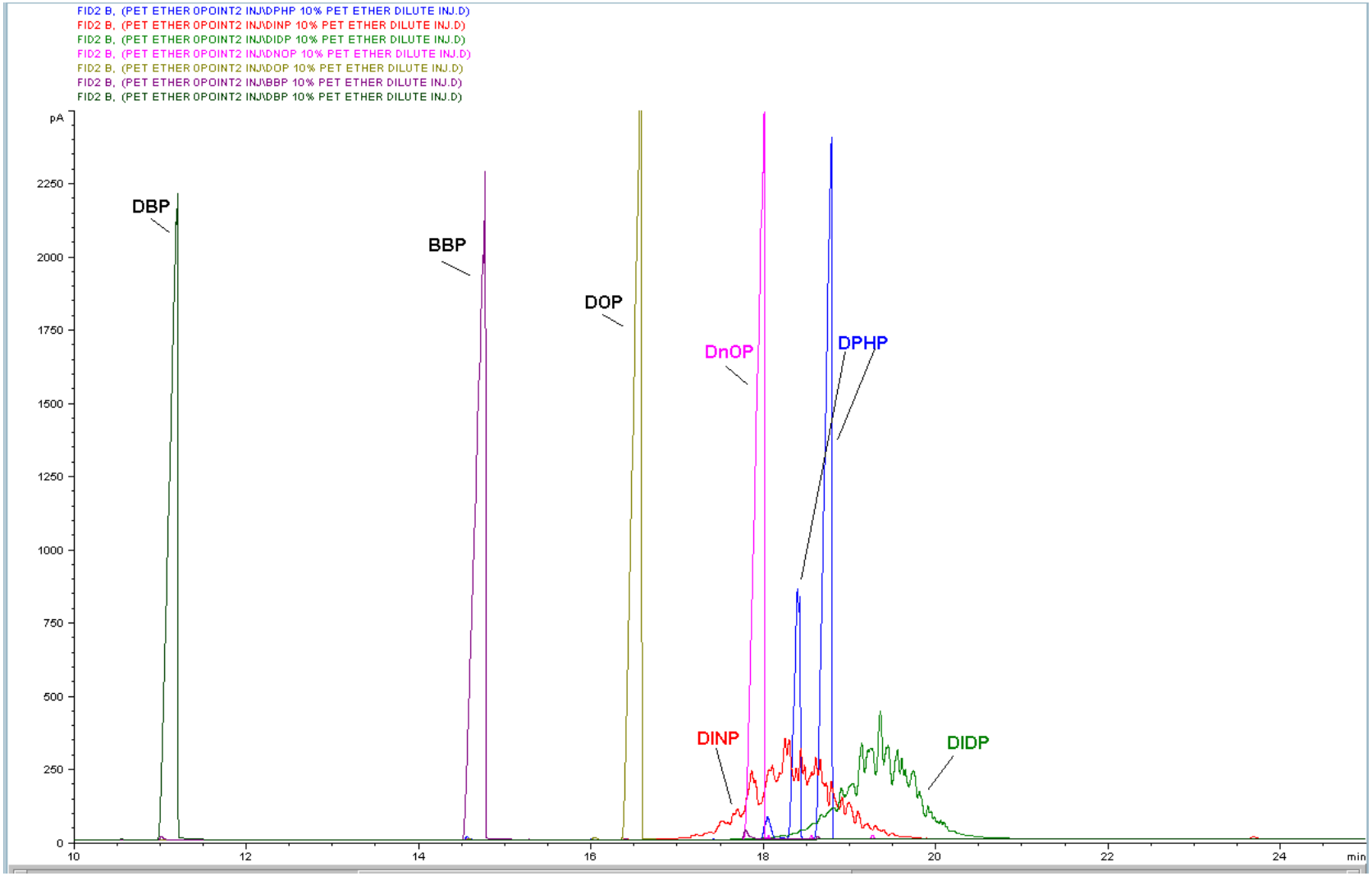
	68515-43-5
Nonanol (>80% linear)	18%
Decanol (>80% linear)	42
Undecanol (>80% linear)	40

- DPHP, alcohol structures

2-Propyl heptan-1-ol	>85%
1-Hexanol, 4-methyl-2-propyl-	0 - 15
1-Hexanol, 5-methyl-2-propyl-	0 - 15

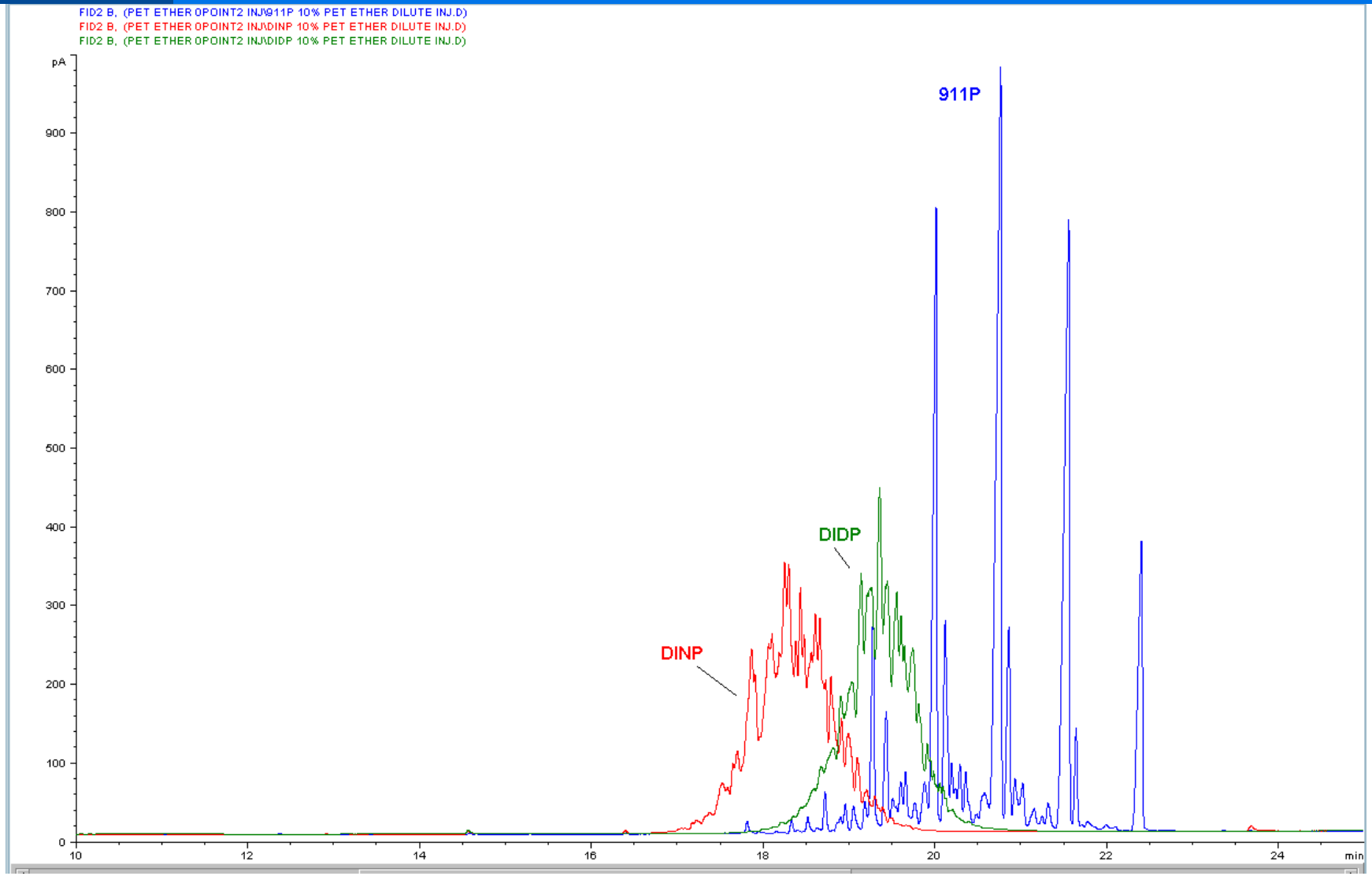
Qualitative analysis of DPHP

BASF
The Chemical Company



Qualitative analysis of 911P

BASF
The Chemical Company



Palatinol® DPHP and 911P

Plasticizers for demanding technical applications

Important markets needing a durable plasticizer:

Automotive, outdoor (e.g., roofing, pond liners), wire & cable

Palatinol® 911P also adds excellent low temperature performance.

Performance in flexible vinyl:

10 = best performance

	Efficiency	Fogging	Low Temp	Outdoor	Processing	UL aging
DEHP	9	3 [1]	5	8	9	4
911P	6	9	9	10	6	9
DPHP	6	8	5	9	6	7
DIDP	6	8	5	6	6	8
DINP [2]	8	6 [1]	7	8	7	6

[1] Does not pass
[2] Palatinol® N (butene-dimer)