AGENDA

1. About Mexichem and the Compounds Business Group
2. Plasticizers Utilized
3. PHTHALATE PHTHERAPY
4. Alternatives, Challenges, Considerations
Mexichem started as a producer of commodities and has evolved into a provider of innovative solutions to address global issues.

**MEXICHEM Today**

- Annual revenue of US $7.2 billion
- Sales in more than 100 countries
- Operations in 41 countries
- Over 22,000 employees
- 137 production facilities
- 2 fluorite mines
- 8 training academies
- 18 R&D laboratories
SHAPING FUTURE INNOVATION WITH COMPOUND SOLUTIONS

About our Specialty Compounds organization
The Specialty Compounds group operates from five (5) locations:

- Leominster, US
- Melton, UK
- Chinley, UK
- Denver, US
- Pineville, US
We offer a broad portfolio of materials to our customers...

PVC compounds
- general purpose
- regulated FDA, EU
- specialty FR

TPE compounds
- general purpose
- regulated FDA, EU
- specialty industrial

LSHF compounds
- general purpose
- regulated FDA, EU
- specialty industrial

TPU compounds
- regulated
- specialty industrial

CPE, PP compounds
- specialty industrial

EVA compounds
- regulated

... specifically designed for the markets we serve
Our PVC compound portfolio is available with a variety of plasticizer options:

- Phthalate
- Trimellitate
- Adipate
- Citrate

The variety we offer underlines our commitment to SOLUTIONS.
PVC compounds
general purpose
regulated FDA, EU
specialty FR

Phthalate plasticizers continue to be the most popular based on cost and performance

- BBP
- DEHP
- DINP
- DBP
- DnOP
- DIDP

But several have become reportable

Shaping future innovation with specialty compounds that are Purpose-Driven, Future Fit
Over the years, we have progressed in our conversations with customers and internal stakeholders, helping to understand the definitions of the available phthalate plasticizers:

- DEHP-free
- Phthalate-free
- Non-phthalate
- Non-ortho phthalate
Phthalate PhTherapy

The word PHTHALATE seems to be popping up everywhere. Manufacturers are increasingly alerting us to the absence of phthalates by making declarations on store posters, product packaging and merchandising labels. In our marketplace, there are reporting requirements from the EU/US toy industries, RoHS, REACH and Prop 65. We provide this information on our Safety Data Sheets (SDS) and we work hard to stay current with ever-evolving industry standards.

What are PHTHALATES?

Phthalates are substances (also called plasticizers) added to plastics to increase their flexibility. Phthalates are used in hundreds of products from garden hoses and vinyl flooring to medical tubing and blood-storage containers. You will also find them in personal care products such as soaps and shampoos as well as adhesives, detergents and lubricating oils.

Our Manufacturing Sites:

Mexichem Specialty Compounds
Coa, India (2016)
Massachusetts, USA
North Carolina, USA
Leicestershire, UK
Derbyshire, UK

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December 2017 status of reporting requirements:

<table>
<thead>
<tr>
<th>Chemical</th>
<th>New terminology</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOP-free</td>
<td>Formulated without DOP-P</td>
</tr>
<tr>
<td>Non Phthalate</td>
<td>Formulated without DBP, DBE, DEHP, DIBP</td>
</tr>
<tr>
<td>Phthalate-Free</td>
<td>Formulated without phthalate plasticizers</td>
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In the spirit of choosing compounds that comply with regulatory provisions, we are often asked for “DEHP-free” or “non-phthalate” or “phthalate-free” compounds. We have found that these terms are often used interchangeably which can cause confusion. To avoid confusion, here is our transparent NEW terminology:

Over the next few months, our literature and website will be updated to reflect these changes. We are happy to answer any questions and provide further clarification as needed to ensure the products our customers are purchasing address the regulatory standards of their particular marketplace.
Alternative offerings have included
1) Non-reportable phthalate plasticizers
2) Plasticizers that are not in the phthalate family
3) Compounds that do not contain plasticizer

The challenges our customers face:
- Performance difference, in some cases
- Cost difference
- Specifying requirements

We recognize these challenges to be our opportunity to provide SOLUTIONS
Phthalate Phtherapy

Alternative SOLUTIONS

• Linear phthalates
• Terephthalates
• Trimellitate
• Adipate
• Bio-based
Economic Considerations

Going toward a completely “phthalate-free” system has consequences

As alternatives to ‘traditional’ plasticizers are chosen, costs can significantly increase

Additionally, depending on the application, performance can suffer
SHAPING FUTURE INNOVATION WITH COMPOUND SOLUTIONS That are PURPOSE-DRIVEN and FUTURE FIT