International GHS Implementation

Presented by:
Denese A. Deeds, CIH, FAIHA
Industrial Health & Safety Consultants, Inc. Shelton, CT
Mexico

- NOM-018-STPS-2015 was updated to the GHS
- Adopts rev 5 of the GHS but authorizes rev 3 and later versions of Purple Book
- Established criteria for classification and labelling of chemicals and SDS – 13 chapters and 6 annexes
- Applies to workplace chemicals only
- Does not apply to pharmaceuticals, cosmetics, food additives or pesticides in final form
Mexico GHS Details

- All hazard classes and categories are included
- Allows the GHS format for HDS (SDS)
- Classification according to NMX-R-019-SCFI-2011 or Rev 5 of the GHS
- Environmental Hazards are included
- No classification for mixtures in NOM and NMX contains both upper and lower classification cut-off concentrations on GHS
EU Implementation

• Regulation on Classification, Labelling and Packaging of Substances and Mixtures (Reg. No 1272/2008)
  – Adopted all GHS Hazard Classes
  – Did not adopt categories not in the current system
  – Added certain categories not covered by GHS (explosive when dry, defatting to skin, reacts violently with water)
  – Retained special labeling – EUH Phrases
  – Transition ended 6/1/2015

• Switzerland’s regulation follows the EU
EU Classification and Labeling

- CLP includes C&L Inventory requirement
- Includes both industry notified classifications and EU Harmonized classifications
- EU Harmonized classification for Carcinogens, Mutagens, Reproductive Toxins (CMR) – Categories 1 and 2, Respiratory Sensitizers – Category 1 and Active substances in pesticides/ biocides
- Use of EU Harmonized classification is Mandatory – found in Annex VI (Equivalent to previous Annex 1).
- Theoretically other agreed classifications should be used unless the ECHA is notified, must be substantiated.
- Inventory is available to the public on the ECHA website
# Summary of Classification and Labelling

Harmonised classification - Annex VI of Regulation (EC) No 1272/2008 (CLP Regulation)

## General Information

<table>
<thead>
<tr>
<th>Index Number</th>
<th>EC Number</th>
<th>CAS Number</th>
<th>International Chemical Identification</th>
</tr>
</thead>
<tbody>
<tr>
<td>649-474-00-6</td>
<td>265-169-7</td>
<td>64742-65-0</td>
<td>Distillates (petroleum), solvent-dewaxed heavy paraffinic baseoil - unspecified</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>[A complex combination of hydrocarbons obtained by removal of normal paraffins from a petroleum fraction by solvent crystallization. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C20 through C50 and produces a finished oil with a viscosity not less than 100 SUS at 100 °F (19°C at 40 °C).]</td>
</tr>
</tbody>
</table>

ATP Inserted / Updated: CLP00 CLP Classification (Table 3.1)

<table>
<thead>
<tr>
<th>Classification</th>
<th>Labelling</th>
<th>Specific Concentration Limits, M-Factors</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard Class and Category Code(s)</td>
<td>Hazard Statement Code(s)</td>
<td>Hazard Statement Code(s)</td>
<td>Supplementary Hazard Statement Code(s)</td>
</tr>
<tr>
<td>Carc. 1B</td>
<td>H350</td>
<td>H350</td>
<td>GHS08 D0r</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Signal Words</th>
<th>Pictograms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Danger</td>
<td><img src="image" alt="Health hazard" /></td>
</tr>
</tbody>
</table>
### Notified classification and labelling according to CLP criteria

<table>
<thead>
<tr>
<th>Classification</th>
<th>Hazard Class and Category Code(s)</th>
<th>Hazard Statement Code(s)</th>
<th>Hazard Statement Code(s)</th>
<th>Supplementary Hazard Statement Code(s)</th>
<th>Pictograms, Signal Word Code (S)</th>
<th>Specific Concentration limits, M-Factors</th>
<th>Notes</th>
<th>Classification affected by Impurities / Additives</th>
<th>Additional Notified Information</th>
<th>Number of Notifiers</th>
<th>Joint Entry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Classified</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>336</td>
<td></td>
</tr>
<tr>
<td>Carc. 1B</td>
<td>H350</td>
<td>H350</td>
<td></td>
<td></td>
<td>GHS08 Dgr</td>
<td></td>
<td></td>
<td>Note L</td>
<td>State/Form IUPAC Names</td>
<td>46</td>
<td></td>
</tr>
<tr>
<td>Carc. 1B</td>
<td>H350</td>
<td>H350</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repr. 2</td>
<td>H361 (Dermal) (Unborn child)</td>
<td>H361 (Unborn child, D...)</td>
<td></td>
<td></td>
<td>GHS08 Dgr</td>
<td></td>
<td></td>
<td>Note L</td>
<td>State/Form IUPAC Names</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>STOT RE 1</td>
<td>H372 (Adrenals, bone ...) (Dermal)</td>
<td>H372 (Adrenals, bone ...)</td>
<td>H372 (Adrenals, bone ...)</td>
<td></td>
<td>GHS08 Dgr</td>
<td></td>
<td></td>
<td></td>
<td>State/Form IUPAC Names</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>Asp. Tox. 1</td>
<td>H304</td>
<td>H304</td>
<td></td>
<td></td>
<td>GHS08 Dgr</td>
<td></td>
<td></td>
<td>Note L</td>
<td>State/Form IUPAC Names</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>Asp. Tox. 1</td>
<td>H304</td>
<td>H304</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carc. 1B</td>
<td>H350</td>
<td>H350</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repr. 2</td>
<td>H361 (Dermal) (Unborn child)</td>
<td>H361 (Unborn child)</td>
<td></td>
<td></td>
<td>GHS08 Dgr</td>
<td></td>
<td></td>
<td></td>
<td>State/Form IUPAC Names</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>STOT RE 1</td>
<td>H372 (Adrenals, bone ...) (Dermal)</td>
<td>H372 (Adrenals, bone ...)</td>
<td>H372 (Adrenals, bone ...)</td>
<td></td>
<td>GHS08 Dgr</td>
<td></td>
<td></td>
<td></td>
<td>State/Form IUPAC Names</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>Carc. 1B</td>
<td>H350</td>
<td>H350</td>
<td></td>
<td></td>
<td>GHS08 Dgr</td>
<td></td>
<td></td>
<td></td>
<td>State/Form IUPAC Names</td>
<td>585</td>
<td></td>
</tr>
<tr>
<td>Asp. Tox. 1</td>
<td>H304</td>
<td>H304</td>
<td></td>
<td></td>
<td>GHS08 Dgr</td>
<td></td>
<td></td>
<td></td>
<td>State/Form IUPAC Names</td>
<td>390</td>
<td></td>
</tr>
</tbody>
</table>
EU SDS

• SDS requirements in REACH regulation (Reg 1907/2006) Annex II (revised with Reg No 2015/830)
• SDS must have DSD/DPD Classification removed when updated or by 6/1/2017.
• Exposure Scenario from REACH registration are annexed to the SDS
Japan

- Adopted the GHS for labels and SDS under Industrial Safety and Health Law (ISHL) effective 12/1/2006.
  - Mandatory for chemicals and mixtures covered by the ISHL - ~640 chemicals and their mixtures in 2011
  - Also mandatory for 400 chemicals PRTR
  - Labeling and SDS 12/31/2010 (JIS Z 7253-2012 based on GHS rev 4)
  - Standard JISZ7253(SDS+Labellling) issued 2012
  - Published classifications are not mandatory
  - Aligns with Rev 4 (did not adopt Acute tox 5, skin irritation 3, aspiration 2)
Republic of Korea

- Korean laws/regulations affected:
  - Industrial Safety and Health Law (ISHL) MOL
  - Toxic Chemicals Control Law (TCCL) MOE
  - Firefighting Law
- SDS and labels must be GHS from 6/30/2011 – substances and 6/30/2013 - mixtures
- >13,000 substances with advisory classifications – not mandatory (available through inventory website)
- Certain MOE Classifications are mandatory
- Did not adopt Flam Liq 4, Acute Tox 5, Aqu Acute 2 & 3
- Aligns with Rev 4
China

- GB 30000.2 - 29 28 separate technical standards on classification based on GHS rev 4
- GB 15258-2009 – General rules for labels effective 2/1/09
- GB190-2009 Packaging labels for dangerous goods effective May 1, 2010
- GB/T 16483-2008: Safety Data Sheet (recommended standard)
- Revised in 2013 to Rev 4 effective 11/14
- Adopted complete purple book – all classes and categories.
- “Catalog” has mandatory classifications for China
Taiwan

- GHS implementation 12/31/2009; Updated in 2014, required for all chemicals end of 2016
- Adopted the complete GHS – all hazard classes and categories – based on rev 4
- Adopted GHS SDS (suggested format)
- CLA SDS and labeling for 1600 substances – not mandatory
- Website
Singapore

- Singapore – regulatory changes complete
- Effective for substances 12/10
- Mixtures 2016
- Adopted GHS Rev 4 (Updated in 2014)
- Did not adopt Flam Liq 4, Acute Tox 5, Skin Irrit 3, Aspiration 2, Aquatic Acute 2-3, Aquatic Chronic 3-4
- [https://www.wshc.sg/ghs](https://www.wshc.sg/ghs)
Thailand

- GHS law Feb 1, 2012, adopted 3/12/2012
  - Substances 3/11/2013
  - Mixtures 3/1/2017
- Based on GHS rev 3 – all classes/categories
- Developing non-mandatory classifications
Vietnam

- Adopted in 2008
- Two regulations – one that clarifies the laws the other adopting the GHS guidance of classification and labeling
- Adopted Revision 3 – did not adopt STOT and aspiration
- Switched Section 2 and 3 from normal GHS
Indonesia

• Started adoption in 2009
• Updated regulations in 2013
• Adopted Revision 4
• Substances in force, Mixtures mandatory December 31, 2016
• Have a Small-Medium Enterprise Exemption
Philippines

• Adopted in 2008
• Have Guidelines published March 2014
• Compliance:
  – 2016 Single substances and compounds covered by CCO and PCL
  – 2017 High Volume Toxic Chemicals
  – 2018 Toxic Chemicals under the IATA and IMDG list of Dangerous Goods
  – 2019 Mixtures
• Latest version of the GHS
Australia

- Model Work Health and Safety Regulations were amended 2012 to require classification and labeling under Rev 3 of the GHS
- Transition 5 years (2014 for substances, 2017 for mixtures
- Agency – Safe Work Australia
- Did not adopt Acute Tox 5, Skin Irrit 3, Eye Irrit 2B, Aspiration 2, Aquatic Tox or Ozone
- Australia has a list of hazardous materials with their non-mandatory classifications on their Hazardous Chemicals Information System website
New Zealand

- 2001 adopted the GHS classification framework
- 2006 made applicable to all chemicals produced in NZ
- 7/1/08 compliance required
- 2015 Published proposed changes to align more with AU adoption
- NZCIC (trade association) prepared GHS Code of Practice – available for purchase
- Unique classification for ecotoxic to soil environment, terrestrial vertebrates and terrestrial invertebrates
- Hazard Classes numbered based on transport hazard classes (1-9)
- Agency – Environmental Protection Authority
- Legislative Framework – HSNO (Hazardous Substances and New Organisms Act)
Brazil

- Aligns with GHS Rev 3
  - Not Hazardous to Ozone Layer
- SDS Standard ABNT NBR 14725-4
- Labeling Standard ABNT NBR 14725-3
Argentina

- Following EU CLP
- Adopted Rev 5 – for workplace chemicals only
- Effective April 15, 2016 substances, Jan 1, 2017 mixtures
Other Countries

• Many other countries have adopted the GHS as either a mandatory or an optional standard
  – Uruguay, Chile, Russia, South Africa, Turkey, United Arab Emirates, Malaysia,
Thank You – Questions?

Contact: d.deeds@ih-sc.com
203-929-3473 ext 1