SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier
Product name: ASTM D5580 Valve Timing Calibration Blend, Part Number G3440-85004
Part No.: G3440-85004

1.2 Relevant identified uses of the substance or mixture and uses advised against

<table>
<thead>
<tr>
<th>Identified uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytical chemistry.</td>
</tr>
<tr>
<td>1 ml</td>
</tr>
</tbody>
</table>

1.3 Details of the supplier of the safety data sheet
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str. 8
76337 Waldbronn
Germany
0800 603 1000
e-mail address of person responsible for this SDS: pdl-msds_author@agilent.com

1.4 Emergency telephone number
Emergency telephone number (with hours of operation): CHEMTREC®: +(44)-870-8200418

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Product definition: Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]
- H225: FLAMMABLE LIQUIDS - Category 2
- H315: SKIN CORROSION/IRRITATION - Category 2
- H319: SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
- H340: GERM CELL MUTAGENICITY - Category 1B
- H350: CARCINOGENICITY - Category 1A
- H361fd: TOXIC TO REPRODUCTION (Fertility and Unborn child) - Category 2
- H336: SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
- H372: SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
- H400: ACUTE AQUATIC HAZARD - Category 1
- H410: LONG-TERM AQUATIC HAZARD - Category 1

Classification according to Directive 1999/45/EC [DPD]
The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification: F; R11
- Carc. Cat. 1; R45
- Muta. Cat. 2; R46
- Repr. Cat. 3; R62
- T; R48/23
- Xn; R20, R48/21/22
- Xi; R38
- N; R50/53

Physical/chemical hazards: Highly flammable.

Date of issue/Date of revision: 26/02/2014
SECTION 2: Hazards identification

Human health hazards:
May cause cancer. May cause heritable genetic damage. Possible risk of impaired fertility. Also toxic: danger of serious damage to health by prolonged exposure through inhalation. Also harmful by inhalation. Also harmful: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed. Irritating to skin.

Environmental hazards:
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

See Section 16 for the full text of the R phrases or H statements declared above.
See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms:

Signal word:
Danger

Hazard statements:
H225 - Highly flammable liquid and vapour.
H319 - Causes serious eye irritation.
H315 - Causes skin irritation.
H340 - May cause genetic defects.
H350 - May cause cancer.
H361fd - Suspected of damaging fertility. Suspected of damaging the unborn child.
H336 - May cause drowsiness or dizziness.
H372 - Causes damage to organs through prolonged or repeated exposure.
H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention:
P201 - Obtain special instructions before use.
P280 - Wear protective gloves. Wear eye or face protection.
P210 - Keep away from heat, sparks, open flames and hot surfaces. - No smoking.
P241 - Use explosion-proof electrical, ventilating, lighting and all material-handling equipment.
P273 - Avoid release to the environment.
P260 - Do not breathe vapour.

Response:
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

Storage:
P235 - Keep cool.

Disposal:
P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients:
2,2,4-trimethylpentane
Hexan-2-one
o-Xylene
Benzene
Toluene

Supplemental label elements:
Not applicable.

Special packaging requirements

Tactile warning of danger:
Not applicable.

2.3 Other hazards
Other hazards which do not result in classification:
Prolonged or repeated contact may dry skin and cause irritation.
## SECTION 3: Composition/information on ingredients

### Substance/mixture
- **Mixture**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Identifiers</th>
<th>%</th>
<th>Classification</th>
<th>Regulation (EC) No. 1272/2008 [CLP]</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,2,4-trimethylpentane</td>
<td>EC: 208-759-1 CAS: 540-84-1 Index: 601-009-00-8</td>
<td>&gt;=50 - &lt;75</td>
<td>F; R11 Xn; R65 Xi; R38 R67 N; R50/53</td>
<td>Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 (Narcotic effects) Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Flam. Liq. 3, H226 Repr. 2, H361f (Fertility) STOT SE 3, H336 (Narcotic effects) STOT RE 1, H372 Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 and H336 (Respiratory tract irritation and Narcotic effects) Aquatic Chronic 2, H411 Flam. Liq. 2, H225 Acute Tox. 4, H332</td>
<td>[1]</td>
</tr>
<tr>
<td>o-Xylene</td>
<td>EC: 202-422-2 CAS: 95-47-6 Index: 601-022-00-9</td>
<td>&gt;=5 - &lt;10</td>
<td>R10 Xn; R20/21 Xi; R38</td>
<td>Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 and H336 (Respiratory tract irritation and Narcotic effects) Aquatic Chronic 2, H411 Flam. Liq. 2, H225 Acute Tox. 4, H332</td>
<td>[1][2]</td>
</tr>
<tr>
<td>Benzene</td>
<td>EC: 200-753-7 CAS: 71-43-2 Index: 601-020-00-8</td>
<td>&gt;=1 - &lt;5</td>
<td>F; R11 Carc. Cat. 1; R45 Muta. Cat. 2; R46 T; R48/23/24/25 Xn; R65 Xi; R36/38</td>
<td>Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Muta. 1B, H340 Carc. 1A, H350 STOT RE 1, H372 Asp. Tox. 1, H304 Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361d (Unborn child) STOT SE 3, H336 (Narcotic effects) STOT RE 2, H373 Asp. Tox. 1, H304</td>
<td>[1][2]</td>
</tr>
<tr>
<td>Toluene</td>
<td>EC: 203-625-9 CAS: 108-88-3 Index: 601-021-00-3</td>
<td>&gt;=1 - &lt;5</td>
<td>F; R11 Repr. Cat. 3; R63 Xn; R48/20, R65 Xi; R38 R67</td>
<td>Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361d (Unborn child) STOT SE 3, H336 (Narcotic effects) STOT RE 2, H373 Asp. Tox. 1, H304</td>
<td>[1][2]</td>
</tr>
</tbody>
</table>

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

**Type**
- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [5] Substance of equivalent concern

Occupational exposure limits, if available, are listed in Section 8.
SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact
- Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation
- Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact
- Wash skin thoroughly with soap and water or use recognised skin cleanser. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion
- Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Protection of first-aiders
- No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact
- Causes serious eye irritation.

Inhalation
- Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

Skin contact
- Causes skin irritation. Defatting to the skin.

Ingestion
- Can cause central nervous system (CNS) depression. Irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

Eye contact
- Adverse symptoms may include the following: pain or irritation, watering, redness.

Inhalation
- Adverse symptoms may include the following: nausea or vomiting, headache, drowsiness/fatigue, dizziness/vertigo, unconsciousness, reduced foetal weight, increase in foetal deaths, skeletal malformations.
SECTION 4: First aid measures

**Skin contact**
- Adverse symptoms may include the following:
  - irritation
  - redness
  - dryness
  - cracking
  - reduced foetal weight
  - increase in foetal deaths
  - skeletal malformations

**Ingestion**
- Adverse symptoms may include the following:
  - reduced foetal weight
  - increase in foetal deaths
  - skeletal malformations

4.3 Indication of any immediate medical attention and special treatment needed

**Notes to physician**
- Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments**
- No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media
- **Suitable extinguishing media**: Use dry chemical, CO₂, water spray (fog) or foam.
- **Unsuitable extinguishing media**: Do not use water jet.

5.2 Special hazards arising from the substance or mixture

**Hazardous combustion products**
- Decomposition products may include the following materials:
  - carbon dioxide
  - carbon monoxide

5.3 Advice for firefighters
- **Special precautions for fire-fighters**: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- **Special protective equipment for fire-fighters**: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel**
- No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders**
- If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Date of issue/Date of revision: 26/02/2014
SECTION 6: Accidental release measures

6.2 Environmental precautions
Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up
Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

6.4 Reference to other sections
See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures
Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities
Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

7.3 Specific end use(s)

Recommendations
Industrial applications, Professional applications.

Industrial sector specific solutions
Not applicable.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Occupational exposure limits
### SECTION 8: Exposure controls/personal protection

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Exposure limit values</th>
</tr>
</thead>
<tbody>
<tr>
<td>o-Xylene</td>
<td>EU OEL (Europe, 12/2009). Absorbed through skin. Notes: list of indicative occupational exposure limit values</td>
</tr>
<tr>
<td></td>
<td>STEL: 442 mg/m³ 15 minutes.</td>
</tr>
<tr>
<td></td>
<td>STEL: 100 ppm 15 minutes.</td>
</tr>
<tr>
<td></td>
<td>TWA: 221 mg/m³ 8 hours.</td>
</tr>
<tr>
<td></td>
<td>TWA: 50 ppm 8 hours.</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>EU OEL (Europe, 12/2009). Absorbed through skin. Notes: list of indicative occupational exposure limit values</td>
</tr>
<tr>
<td></td>
<td>STEL: 884 mg/m³ 15 minutes.</td>
</tr>
<tr>
<td></td>
<td>STEL: 200 ppm 15 minutes.</td>
</tr>
<tr>
<td></td>
<td>TWA: 442 mg/m³ 8 hours.</td>
</tr>
<tr>
<td></td>
<td>TWA: 100 ppm 8 hours.</td>
</tr>
<tr>
<td>Benzene</td>
<td>EU OEL (Europe, 12/2009). Absorbed through skin.</td>
</tr>
<tr>
<td></td>
<td>TWA: 3.25 mg/m³ 8 hours.</td>
</tr>
<tr>
<td></td>
<td>TWA: 1 ppm 8 hours.</td>
</tr>
<tr>
<td>Toluene</td>
<td>EU OEL (Europe, 12/2009). Absorbed through skin. Notes: list of indicative occupational exposure limit values</td>
</tr>
<tr>
<td></td>
<td>STEL: 384 mg/m³ 15 minutes.</td>
</tr>
<tr>
<td></td>
<td>STEL: 100 ppm 15 minutes.</td>
</tr>
<tr>
<td></td>
<td>TWA: 192 mg/m³ 8 hours.</td>
</tr>
<tr>
<td></td>
<td>TWA: 50 ppm 8 hours.</td>
</tr>
</tbody>
</table>

**Recommended monitoring procedures**

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**Derived effect levels**

No DNELs available.

**Predicted effect concentrations**

No PNECs available.

### 8.2 Exposure controls

**Appropriate engineering controls**

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**Individual protection measures**

**Hygiene measures**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection**

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

**Skin protection**

### Date of issue/Date of revision

26/02/2014
SECTION 8: Exposure controls/personal protection

- **Hand protection**: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

- **Body protection**: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

- **Other skin protection**: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

- **Respiratory protection**: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

- **Environmental exposure controls**: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- **Appearance**
  - **Physical state**: Liquid. [Clear.]
  - **Colour**: Colourless.
  - **Odour**: Not available.
  - **Odour threshold**: Not available.
  - **pH**: Not available.
  - **Melting point/freezing point**: -116°C
  - **Initial boiling point and boiling range**: 99°C
  - **Flash point**: Not available.
  - **Evaporation rate**: >1 (butyl acetate = 1)
  - **Flammability (solid, gas)**: Not available.
  - **Upper/lower flammability or explosive limits**: Lower: 1.1%  
  
  Upper: 6%
  - **Vapour pressure**: <5.5 kPa [room temperature]
  - **Vapour density**: Not available.
  - **Relative density**: 0.69
  - **Solubility(ies)**: Easily soluble in the following materials: acetone.  
  
  Insoluble in the following materials: cold water and hot water.
  - **Partition coefficient: n-octanol/water**: Not available.
  - **Auto-ignition temperature**: Not available.
  - **Decomposition temperature**: Not available.
  - **Viscosity**: Not available.
  - **Explosive properties**: Slightly explosive in the presence of the following materials or conditions: oxidizing materials.

9.2 Other information

No additional information.
SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

10.5 Incompatible materials : Reactive or incompatible with the following materials:
oxidizing materials, alkalis
Other: alkalis.

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,2,4-trimethylpentane</td>
<td>LC50 Inhalation Vapour</td>
<td>Rat</td>
<td>47.4 mg/l</td>
<td>1 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>&gt;2500 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Hexan-2-one</td>
<td>LC50 Inhalation Gas.</td>
<td>Rat</td>
<td>800 ppm</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>4800 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>2590 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>o-Xylene</td>
<td>LC50 Inhalation Gas.</td>
<td>Rat</td>
<td>5300 ppm</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>&gt;20000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>3000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>LC50 Inhalation Gas.</td>
<td>Rat</td>
<td>4000 ppm</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>&gt;5000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>3500 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Benzene</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>930 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Toluene</td>
<td>LC50 Inhalation Vapour</td>
<td>Rat</td>
<td>49 g/m²</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>636 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

Acute toxicity estimates

<table>
<thead>
<tr>
<th>Route</th>
<th>Score</th>
<th>ATE value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dermal</td>
<td></td>
<td>12222.2 mg/kg</td>
</tr>
<tr>
<td>Inhalation (gases)</td>
<td></td>
<td>25328.6 ppm</td>
</tr>
</tbody>
</table>

Irritation/Corrosion

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexan-2-one</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td></td>
<td>24 hours 500</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td></td>
<td>24 hours 500</td>
<td>-</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td></td>
<td>24 hours 15</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td></td>
<td>8 hours 60</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td></td>
<td>24 hours 15</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td></td>
<td>24 hours 20</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td></td>
<td>0.5 minutes</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td></td>
<td>100</td>
<td>-</td>
</tr>
<tr>
<td>Toluene</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td></td>
<td>24 hours 500</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td></td>
<td>24 hours 15</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td></td>
<td>24 hours 20</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td></td>
<td>0.5 minutes</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td></td>
<td>100</td>
<td>-</td>
</tr>
</tbody>
</table>

Date of issue/Date of revision : 26/02/2014
SECTION 11: Toxicological information

| Eyes - Mild irritant | Rabbit | - | 870 Micrograms |
| Skin - Mild irritant | Rabbit | - | 435 milligrams |
| Skin - Moderate irritant | Rabbit | - | 24 hours 20 milligrams |
| Skin - Moderate irritant | Rabbit | - | 500 milligrams |

Sensitiser

Conclusion/Summary : Not available.

Chronic toxicity / Carcinogenicity / Mutagenicity / Teratogenicity / Reproductive toxicity

Not available.

Specific target organ toxicity (single exposure)

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,2,4-trimethylpentane</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Narcotic effects</td>
</tr>
<tr>
<td>Hexan-2-one</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Narcotic effects</td>
</tr>
<tr>
<td>o-Xylene</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation and Narcotic effects</td>
</tr>
<tr>
<td>Toluene</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Narcotic effects</td>
</tr>
</tbody>
</table>

Specific target organ toxicity (repeated exposure)

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexan-2-one</td>
<td>Category 1</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
<tr>
<td>Benzene</td>
<td>Category 1</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
<tr>
<td>Toluene</td>
<td>Category 2</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

Aspiration hazard

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,2,4-trimethylpentane</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
<tr>
<td>Benzene</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
<tr>
<td>Toluene</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
</tbody>
</table>

Information on the likely routes of exposure : Not available.

Potential acute health effects

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

Ingestion : Can cause central nervous system (CNS) depression. Irritating to mouth, throat and stomach.

Skin contact : Causes skin irritation. Defatting to the skin.

Eye contact : Causes serious eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation : Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness reduced foetal weight increase in foetal deaths skeletal malformations

Ingestion : Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations

Date of issue/Date of revision : 26/02/2014

10/16
SECTION 11: Toxicological information

Skin contact: Adverse symptoms may include the following:
- irritation
- redness
- dryness
- cracking
- reduced foetal weight
- increase in foetal deaths
- skeletal malformations

Eye contact: Adverse symptoms may include the following:
- pain or irritation
- watering
- redness

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects: Not available.
Potential delayed effects: Not available.

Long term exposure

Potential immediate effects: Not available.
Potential delayed effects: Not available.

Potential chronic health effects

General: Causes damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Carcinogenicity: May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity: May cause genetic defects.

Teratogenicity: Suspected of damaging the unborn child.

Developmental effects: No known significant effects or critical hazards.

Fertility effects: Suspected of damaging fertility.

Other information: Not available.

SECTION 12: Ecological information

12.1 Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexan-2-one</td>
<td>Acute LC50 428000 µg/l Fresh water</td>
<td>Fish - Pimephales promelas</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 4700 µg/l Fresh water</td>
<td>Algae - Pseudokirchneriella subcapitata</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 12700 µg/l Fresh water</td>
<td>Crustaceans - Artemia sp. - Nauplii</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 1390 µg/l Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>48 hours</td>
</tr>
<tr>
<td>p-Xylene</td>
<td>Acute LC50 7600 µg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 4600 µg/l Fresh water</td>
<td>Algae - Pseudokirchneriella subcapitata</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 3600 µg/l Fresh water</td>
<td>Algae - Pseudokirchneriella subcapitata</td>
<td>96 hours</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>Acute EC50 2970 µg/l Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 5200 µg/l Marine water</td>
<td>Crustaceans - Americamysis bahia</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 4200 µg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 1000 µg/l Fresh water</td>
<td>Algae - Pseudokirchneriella subcapitata</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 29000 µg/l Fresh water</td>
<td>Algae - Pseudokirchneriella subcapitata</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 1360000 µg/l Fresh water</td>
<td>Algae - Scenedesmus abundans</td>
<td>96 hours</td>
</tr>
<tr>
<td>Benzene</td>
<td>Acute LC50 7600 µg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 4600 µg/l Fresh water</td>
<td>Algae - Pseudokirchneriella subcapitata</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 3600 µg/l Fresh water</td>
<td>Algae - Pseudokirchneriella subcapitata</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 2970 µg/l Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 5200 µg/l Marine water</td>
<td>Crustaceans - Americamysis bahia</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 4200 µg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 1000 µg/l Fresh water</td>
<td>Algae - Pseudokirchneriella subcapitata</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 29000 µg/l Fresh water</td>
<td>Algae - Pseudokirchneriella subcapitata</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 1360000 µg/l Fresh water</td>
<td>Algae - Scenedesmus abundans</td>
<td>96 hours</td>
</tr>
</tbody>
</table>

Date of issue/Date of revision: 26/02/2014
## ASTM D5580 Valve Timing Calibration Blend, Part Number G3440-85004

### Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II - Europe

### SECTION 12: Ecological information

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Acute EC50 9230 µg/l Fresh water</th>
<th>Acute LC50 21000 µg/l Marine water</th>
<th>Acute LC50 5.28 ul/L Fresh water</th>
<th>Chronic NOEC 1.5 to 5.4 ul/L Marine water</th>
<th>Daphnia - Daphnia magna - Neonate</th>
<th>Crustaceans - Artemia salina - Nauplii</th>
<th>Fish - Oncorhynchus gorbuscha - Fry</th>
<th>Fish - Morone saxatilis - Juvenile (Fledgling, Hatchling, Weanling)</th>
<th>48 hours</th>
<th>48 hours</th>
<th>96 hours</th>
<th>4 weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene</td>
<td>Acute EC50 433 ppm Marine water</td>
<td>Acute EC50 12500 µg/l Fresh water</td>
<td>Acute EC50 11600 µg/l Fresh water</td>
<td>Acute EC50 6000 µg/l Fresh water</td>
<td>Algae - Skeletonema costatum</td>
<td>Algae - Pseudokirchneriella subcapitata</td>
<td>Crustaceans - Gammarus pseudolimnaeus - Adult</td>
<td>Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)</td>
<td>96 hours</td>
<td>72 hours</td>
<td>48 hours</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 5500 µg/l Fresh water</td>
<td>Chronic NOEC 500000 µg/l Fresh water</td>
<td>Chronic NOEC 1000 µg/l Fresh water</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Daphnia - Daphnia magna</td>
<td>96 hours</td>
<td>96 hours</td>
<td>21 days</td>
<td>21 days</td>
</tr>
</tbody>
</table>

### 12.2 Persistence and degradability

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Result</th>
<th>Dose</th>
<th>Inoculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,2,4-trimethylpentane</td>
<td>-</td>
<td>0 to 84 % - 8 days</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

### 12.3 Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP&lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,2,4-trimethylpentane</td>
<td>4.08</td>
<td>231</td>
<td>low</td>
</tr>
<tr>
<td>Hexan-2-one</td>
<td>1.38</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>o-Xylene</td>
<td>3.12</td>
<td>8.1 to 25.9</td>
<td>low</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>3.6</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>Benzene</td>
<td>2.13</td>
<td>11</td>
<td>low</td>
</tr>
<tr>
<td>Toluene</td>
<td>2.73</td>
<td>90</td>
<td>low</td>
</tr>
</tbody>
</table>

### 12.4 Mobility in soil

| Soil/water partition coefficient (K<sub>OC</sub>) | Not available. |
| Mobility                                           | Not available. |

### 12.5 Results of PBT and vPvB assessment

| PBT       | Not applicable. |
| vPvB      | Not applicable. |

### 12.6 Other adverse effects

No known significant effects or critical hazards.
SECTION 13: Disposal considerations

13.1 Waste treatment methods

**Product**

**Methods of disposal**: The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste**

**Packaging**

**Methods of disposal**: The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions**: This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

**Regulatory information**

**ADR/RID / IMDG / IATA**: Not regulated.

**Additional information**: Remarks
- De minimis quantities

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**: Not available.

SECTION 15: Regulatory information

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

**EU Regulation (EC) No. 1907/2006 (REACH)**

**Annex XIV - List of substances subject to authorisation**

**Substances of very high concern**

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**

- Restricted to professional users.

**Other EU regulations**

**Europe inventory**: All components are listed or exempted.

**Black List Chemicals**: Not listed

**Priority List Chemicals**: Not listed

**Integrated pollution prevention and control list (IPPC) - Air**: Not listed

**Integrated pollution prevention and control list (IPPC) - Water**: Not listed

Date of issue/Date of revision: 26/02/2014
SECTION 15: Regulatory information

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Carcinogenic effects</th>
<th>Mutagenic effects</th>
<th>Developmental effects</th>
<th>Fertility effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexan-2-one</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Repr. 2, H361f (Fertility)</td>
</tr>
<tr>
<td>Benzene</td>
<td>Carc. 1A, H350</td>
<td>Muta. 1B, H340</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Toluene</td>
<td>-</td>
<td>-</td>
<td>- Repr. 2, H361d (Unborn child)</td>
<td>-</td>
</tr>
</tbody>
</table>

15.2 Chemical Safety Assessment: This product contains substances for which Chemical Safety Assessments might still be required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms:
- ATE = Acute Toxicity Estimate
- CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
- DNEL = Derived No Effect Level
- EUH statement = CLP-specific Hazard statement
- PNEC = Predicted No Effect Concentration
- RRN = REACH Registration Number

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flam. Liq. 2, H225</td>
<td>On basis of test data</td>
</tr>
<tr>
<td>Skin Irrit. 2, H315</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Eye Irrit. 2, H319</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Muta. 1B, H340</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Carc. 1A, H350</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Rep. 2, H361fd (Fertility and Unborn child)</td>
<td>Calculation method</td>
</tr>
<tr>
<td>STOT SE 3, H336 (Narcotic effects)</td>
<td>Calculation method</td>
</tr>
<tr>
<td>STOT RE 1, H372</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Aquatic Acute 1, H400</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Aquatic Chronic 1, H410</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

Full text of abbreviated H statements:
- H225: Highly flammable liquid and vapour.
- H226: Flammable liquid and vapour.
- H304: May be fatal if swallowed and enters airways.
- H312 (dermal): Harmful in contact with skin.
- H315: Causes skin irritation.
- H319: Causes serious eye irritation.
- H332 (inhalation): Harmful if inhaled.
- H335 and H336 (Respiratory tract irritation and Narcotic effects): May cause respiratory irritation. May cause drowsiness or dizziness. (Respiratory tract irritation and Narcotic effects)
- H336 (Narcotic effects): May cause drowsiness or dizziness. (Narcotic effects)
- H340: May cause genetic defects.
- H350: May cause cancer.
- H361d (Unborn child) | Suspected of damaging the unborn child.
- H361f (Fertility) | Suspected of damaging fertility.
- H361fd (Fertility and Unborn child) | Suspected of damaging fertility. Suspected of damaging the unborn child.
- H372: Causes damage to organs through prolonged or repeated exposure.
- H373: May cause damage to organs through prolonged or repeated exposure.
- H400: Very toxic to aquatic life.
- H410: Very toxic to aquatic life with long lasting effects.
- H411: Toxic to aquatic life with long lasting effects.
SECTION 16: Other information

Full text of classifications [CLP/GHS]
- Acute Tox. 4, H312: ACUTE TOXICITY (dermal) - Category 4
- Acute Tox. 4, H332: ACUTE TOXICITY (inhalation) - Category 4
- Aquatic Acute 1, H400: ACUTE AQUATIC HAZARD - Category 1
- Aquatic Chronic 1, H410: LONG-TERM AQUATIC HAZARD - Category 1
- Aquatic Chronic 2, H411: LONG-TERM AQUATIC HAZARD - Category 2
- Asp. Tox. 1, H304: ASPIRATION HAZARD - Category 1
- Carc. 1A, H350: CARCINOGENICITY - Category 1A
- Eye Irrit. 2, H319: SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
- Flam. Liq. 2, H225: FLAMMABLE LIQUIDS - Category 2
- Flam. Liq. 3, H226: FLAMMABLE LIQUIDS - Category 3
- Muta. 1B, H340: GERM CELL MUTAGENICITY - Category 1B
- Repr. 2, H361d (Unborn child): TOXIC TO REPRODUCTION (Unborn child) - Category 2
- Repr. 2, H361f (Fertility): TOXIC TO REPRODUCTION (Fertility) - Category 2
- Repr. 2, H361f (Fertility and Unborn child): TOXIC TO REPRODUCTION (Fertility and Unborn child) - Category 2
- Skin Irrit. 2, H315: SKIN CORROSION/IRRITATION - Category 2
- STOT RE 1, H372: SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
- STOT RE 2, H373: SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
- STOT SE 3, H335 and H336: SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation and Narcotic effects) - Category 3
- STOT SE 3, H336: SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

Full text of abbreviated R phrases
- R11: Highly flammable.
- R10: Flammable.
- R45: May cause cancer.
- R46: May cause heritable genetic damage.
- R62: Possible risk of impaired fertility.
- R63: Possible risk of harm to the unborn child.
- R48/23-: Also toxic: danger of serious damage to health by prolonged exposure through inhalation.
- R48/23/24/25-: Also toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.
- R20: Also harmful by inhalation.
- R20/21: Also harmful by inhalation and in contact with skin.
- R48/20-: Also harmful: danger of serious damage to health by prolonged exposure through inhalation.
- R48/21/22-: Also harmful: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed.
- R56: Also harmful: may cause lung damage if swallowed.
- R38: Irritating to skin.
- R36/38: Irritating to eyes and skin.
- R67: Vapours may cause drowsiness and dizziness.
- R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Full text of classifications [DSD/DPD]
- F - High-ly flammable
- Carc. Cat. 1 - Carcinogen category 1
- Muta. Cat. 2 - Mutagen category 2
- Repr. Cat. 3 - Toxic to reproduction category 3
- T - Toxic
- Xn - Harmful
- Xi - Irritant
- N - Dangerous for the environment

Date of issue/Date of revision: 26/02/2014
Date of previous issue: 13/02/2012.
Version: 2
Notice to reader
SECTION 16: Other information

Disclaimer: The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.