Section 1. Identification

1.1 Product identifier
Product name: Operator Training Samples for FID Instruments, Part Number 18801-60700
Part No. (Chemical Kit): 18801-60700
Part No.: Flame Ionization Detector Sample A, Part Number 18801-60700A
Flame Ionization Detector Sample B, Part Number 18801-60700B

Validation date: 05/16/2014.

1.2 Relevant identified uses of the substance or mixture and uses advised against
Material uses:
Analytical chemistry.

1.3 Details of the supplier of the safety data sheet
Supplier/Manufacturer: Agilent Technologies, Inc.
Logistics Center - Americas
500 Ships Landing Way
New Castle, Delaware 19720
800-227-9770

1.4 Emergency telephone number
In case of emergency: CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

2.1 Classification of the substance or mixture
OSHA/HCS status:
Flame Ionization Detector Sample A, Part Number 18801-60700A: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Flame Ionization Detector Sample B, Part Number 18801-60700B: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture
Flame Ionization Detector Sample A, Part Number 18801-60700A
H225 FLAMMABLE LIQUIDS - Category 2
H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
H361 TOXIC TO REPRODUCTION (Unborn child) - Category 2
H336 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

Flame Ionization Detector Sample B, Part Number 18801-60700B

Date of issue: 05/16/2014
Section 2. Hazards identification

**Signal word**

- Flame Ionization Detector Sample A, Part Number 18801-60700A: Danger
- Flame Ionization Detector Sample B, Part Number 18801-60700B: Danger

**Hazard statements**

- Flame Ionization Detector Sample A, Part Number 18801-60700A:
  - H225 - Highly flammable liquid and vapor.
  - H319 - Causes serious eye irritation.
  - H361 - Suspected of damaging the unborn child.
  - H336 - May cause drowsiness and dizziness.
- Flame Ionization Detector Sample B, Part Number 18801-60700B:
  - H225 - Highly flammable liquid and vapor.
  - H319 - Causes serious eye irritation.
  - H361 - Suspected of damaging the unborn child.
  - H336 - May cause drowsiness and dizziness.

**Precautionary statements**

**Prevention**

- Flame Ionization Detector Sample A, Part Number 18801-60700A:
  - P201 - Obtain special instructions before use.
  - P202 - Do not handle until all safety precautions have been read and understood.
  - P281 - Use personal protective equipment as required.
  - 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.
  - P242 - Use only non-sparking tools.
  - P243 - Take precautionary measures against static discharge.
  - P233 - Keep container tightly closed.
  - P271 - Use only outdoors or in a well-ventilated area.
  - P261 - Avoid breathing vapor.
  - P264 - Wash hands thoroughly after handling.
  - P201 - Obtain special instructions before use.
  - P202 - Do not handle until all safety precautions have been read and understood.
  - P281 - Use personal protective equipment as required.
  - 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.
  - P242 - Use only non-sparking tools.
  - P243 - Take precautionary measures against static discharge.
- Flame Ionization Detector Sample B, Part Number 18801-60700B:
  - P201 - Obtain special instructions before use.
  - P202 - Do not handle until all safety precautions have been read and understood.
  - P281 - Use personal protective equipment as required.
  - 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.
  - P242 - Use only non-sparking tools.
  - P243 - Take precautionary measures against static discharge.
Section 2. Hazards identification

**Response**

Flame Ionization Detector Sample A, Part Number 18801-60700A

- P233 - Keep container tightly closed.
- P271 - Use only outdoors or in a well-ventilated area.
- P261 - Avoid breathing vapor.
- P264 - Wash hands thoroughly after handling.
- P308 + P313 - IF exposed or concerned: Get medical attention.
- P304 + P340 + P312 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.
- P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337 + P313 - If eye irritation persists: Get medical attention.

Flame Ionization Detector Sample B, Part Number 18801-60700B

- P233 - Keep container tightly closed.
- P271 - Use only outdoors or in a well-ventilated area.
- P261 - Avoid breathing vapor.
- P264 - Wash hands thoroughly after handling.
- P308 + P313 - IF exposed or concerned: Get medical attention.
- P304 + P340 + P312 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.
- P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337 + P313 - If eye irritation persists: Get medical attention.

**Storage**

Flame Ionization Detector Sample A, Part Number 18801-60700A

- P405 - Store locked up.
- P403 - Store in a well-ventilated place.
- P235 - Keep cool.

Flame Ionization Detector Sample B, Part Number 18801-60700B

- P405 - Store locked up.
- P403 - Store in a well-ventilated place.
- P235 - Keep cool.

**Disposal**

Flame Ionization Detector Sample A, Part Number 18801-60700A

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

Flame Ionization Detector Sample B, Part Number 18801-60700B

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

**Supplemental label elements**

Flame Ionization Detector Sample A, Part Number 18801-60700A

- Avoid contact with skin and clothing. Wash thoroughly after handling.

Flame Ionization Detector Sample B, Part Number 18801-60700B

- Avoid contact with skin and clothing. Wash thoroughly after handling.

**2.3 Other hazards**

Flame Ionization Detector Sample A, Part Number 18801-60700A

- Defatting to the skin. Prolonged or repeated contact may dry skin and cause irritation.

Flame Ionization Detector Sample B, Part Number 18801-60700B

- Defatting to the skin. Prolonged or repeated contact may dry skin and cause irritation.

**Date of issue**: 05/16/2014
Section 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Substance/mixture</th>
<th>Flame Ionization Detector Sample A, Part Number 18801-60700A</th>
<th>Mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Flame Ionization Detector Sample B, Part Number 18801-60700B</td>
<td>Mixture</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flame Ionization Detector Sample A, Part Number 18801-60700A</td>
<td>60 - 100</td>
<td>67-64-1</td>
</tr>
<tr>
<td>Acetone</td>
<td>0.1 - 1</td>
<td>108-88-3</td>
</tr>
<tr>
<td>Toluene</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flame Ionization Detector Sample B, Part Number 18801-60700B</td>
<td>60 - 100</td>
<td>67-64-1</td>
</tr>
<tr>
<td>Acetone</td>
<td>0.1 - 1</td>
<td>108-88-3</td>
</tr>
<tr>
<td>Toluene</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

4.1 Description of necessary first aid measures

Eye contact

| Flame Ionization Detector Sample A, Part Number 18801-60700A | 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. |
| Flame Ionization Detector Sample B, Part Number 18801-60700B | 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

| Flame Ionization Detector Sample A, Part Number 18801-60700A | 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. |
| Flame Ionization Detector Sample B, Part Number 18801-60700B | 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. |
Section 4. First aid measures

Skin contact

Flame Ionization Detector Sample A, Part Number 18801-60700A
Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Flame Ionization Detector Sample B, Part Number 18801-60700B
Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

Flame Ionization Detector Sample A, Part Number 18801-60700A
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.

Flame Ionization Detector Sample B, Part Number 18801-60700B
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.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact

Flame Ionization Detector Sample A, Part Number 18801-60700A
Causes serious eye irritation.

Flame Ionization Detector Sample B, Part Number 18801-60700B
Causes serious eye irritation.

Date of issue : 05/16/2014
## Section 4. First aid measures

<table>
<thead>
<tr>
<th>Inhalation</th>
<th>Flame Ionization Detector Sample A, Part Number 18801-60700A</th>
<th>Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. FlameIonization Detector Sample B, Part Number 18801-60700B</th>
<th>Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin contact</td>
<td>Flame Ionization Detector Sample A, Part Number 18801-60700A</td>
<td>Defatting to the skin. May cause skin dryness and irritation. Flame Ionization Detector Sample B, Part Number 18801-60700B</td>
<td>Defatting to the skin. May cause skin dryness and irritation.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Flame Ionization Detector Sample A, Part Number 18801-60700A</td>
<td>Can cause central nervous system (CNS) depression. Irritating to mouth, throat and stomach. Flame Ionization Detector Sample B, Part Number 18801-60700B</td>
<td>Can cause central nervous system (CNS) depression. Irritating to mouth, throat and stomach.</td>
</tr>
<tr>
<td>Over-exposure signs/symptoms</td>
<td>Flame Ionization Detector Sample A, Part Number 18801-60700A</td>
<td>Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness reduced fetal weight increase in fetal deaths skeletal malformations Flame Ionization Detector Sample B, Part Number 18801-60700B</td>
<td>Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness reduced fetal weight increase in fetal deaths skeletal malformations</td>
</tr>
<tr>
<td>Eye contact</td>
<td>Flame Ionization Detector Sample A, Part Number 18801-60700A</td>
<td>Adverse symptoms may include the following: pain or irritation watering redness Flame Ionization Detector Sample B, Part Number 18801-60700B</td>
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</tr>
<tr>
<td>Skin contact</td>
<td>Flame Ionization Detector Sample A, Part Number 18801-60700A</td>
<td>Adverse symptoms may include the following: irritation dryness cracking reduced fetal weight increase in fetal deaths skeletal malformations Flame Ionization Detector Sample B, Part Number 18801-60700B</td>
<td>Adverse symptoms may include the following: irritation dryness cracking reduced fetal weight increase in fetal deaths skeletal malformations</td>
</tr>
</tbody>
</table>
Section 4. First aid measures

**Ingestion**
- Flame Ionization Detector Sample A, Part Number 18801-60700A
- Flame Ionization Detector Sample B, Part Number 18801-60700B

Adverse symptoms may include the following:
- reduced fetal weight
- increase in fetal deaths
- skeletal malformations

**Protection of first-aiders**
- Flame Ionization Detector Sample A, Part Number 18801-60700A
- Flame Ionization Detector Sample B, Part Number 18801-60700B

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.

**Notes to physician**
- Flame Ionization Detector Sample A, Part Number 18801-60700A
- Flame Ionization Detector Sample B, Part Number 18801-60700B

Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments**
- Flame Ionization Detector Sample A, Part Number 18801-60700A
- Flame Ionization Detector Sample B, Part Number 18801-60700B

No specific treatment.

**Specific treatments**
- Flame Ionization Detector Sample A, Part Number 18801-60700A
- Flame Ionization Detector Sample B, Part Number 18801-60700B

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.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

**5.1 Extinguishing media**

**Suitable extinguishing media**
- Flame Ionization Detector Sample A, Part Number 18801-60700A
- Flame Ionization Detector Sample B, Part Number 18801-60700B

Use dry chemical, CO₂, water spray (fog) or foam.

**Unsuitable extinguishing media**
- Flame Ionization Detector Sample A, Part Number 18801-60700A
- Flame Ionization Detector Sample B, Part Number 18801-60700B

Do not use water jet.

**5.2 Special hazards arising from the substance or mixture**

**Specific hazards arising from the chemical**
- Flame Ionization Detector Sample A, Part Number 18801-60700A

Highly flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or
Section 5. Fire-fighting measures

Flame Ionization Detector Sample B, Part Number 18801-60700B

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.

Hazardous thermal decomposition products:
Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

5.3 Advice for firefighters

Special protective actions for fire-fighters:
Flame Ionization Detector Sample A, Part Number 18801-60700A
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:
Flame Ionization Detector Sample A, Part Number 18801-60700A
Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Flame Ionization Detector Sample B, Part Number 18801-60700B
Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

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 spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor 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".

6.2 Environmental precautions:
Flame Ionization Detector Sample A, Part Number 18801-60700A
Avoid dispersal of spilled 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).

Flame Ionization Detector Sample B, Part Number 18801-60700B
Avoid dispersal of spilled 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).
Section 6. Accidental release measures

6.3 Methods and materials for containment and cleaning up

Flame Ionization Detector Sample A, Part Number 18801-60700A
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.

Flame Ionization Detector Sample B, Part Number 18801-60700B
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.

Section 7. Handling and storage

7.1 Precautions for safe handling

Protective measures : Flame Ionization Detector Sample A, Part Number 18801-60700A
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 ingest. Avoid breathing vapor or mist. 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.

Flame Ionization Detector Sample B, Part Number 18801-60700B
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 ingest. Avoid breathing vapor or mist. 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
Section 7. Handling and storage

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

Flame Ionization Detector Sample A, Part Number 18801-60700A

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 unlabeled containers. Use appropriate containment to avoid environmental contamination.

Flame Ionization Detector Sample B, Part Number 18801-60700B

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 unlabeled containers. Use appropriate containment to avoid environmental contamination.

7.3 Specific end use(s)

Industrial applications, Professional applications.

Recommendations

Flame Ionization Detector Sample A, Part Number 18801-60700A

Industrial applications, Professional applications.

Flame Ionization Detector Sample B, Part Number 18801-60700B

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>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flame Ionization Detector Sample A, Part Number 18801-60700A</td>
<td>ACGIH TLV (United States, 6/2013). STEL: 1782 mg/m³ 15 minutes. STEL: 750 ppm 15 minutes. TWA: 1188 mg/m³ 8 hours. TWA: 500 ppm 8 hours. NIOSH REL (United States, 10/2013). TWA: 590 mg/m³ 10 hours. TWA: 250 ppm 10 hours. OSHA PEL (United States, 2/2013). TWA: 2400 mg/m³ 8 hours. TWA: 1000 ppm 8 hours. OSHA PEL 1989 (United States, 3/1989). STEL: 2400 mg/m³ 15 minutes. STEL: 1000 ppm 15 minutes. TWA: 1800 mg/m³ 8 hours. TWA: 750 ppm 8 hours.</td>
</tr>
<tr>
<td>Acetone</td>
<td>NIOSH REL (United States, 10/2013). STEL: 560 mg/m³ 15 minutes. STEL: 150 ppm 15 minutes. TWA: 375 mg/m³ 10 hours. TWA: 100 ppm 10 hours. OSHA PEL 1989 (United States, 3/1989). STEL: 560 mg/m³ 15 minutes. STEL: 150 ppm 15 minutes. TWA: 375 mg/m³ 8 hours. TWA: 100 ppm 8 hours. OSHA PEL Z2 (United States, 2/2013). AMP: 500 ppm 10 minutes. CEIL: 300 ppm TWA: 200 ppm 8 hours. ACGIH TLV (United States, 6/2013). TWA: 20 ppm 8 hours.</td>
</tr>
<tr>
<td>Toluene</td>
<td></td>
</tr>
<tr>
<td>Flame Ionization Detector Sample B, Part Number 18801-60700B</td>
<td>ACGIH TLV (United States, 6/2013). STEL: 1782 mg/m³ 15 minutes. STEL: 750 ppm 15 minutes. TWA: 1188 mg/m³ 8 hours. TWA: 500 ppm 8 hours. NIOSH REL (United States, 10/2013). TWA: 590 mg/m³ 10 hours. TWA: 250 ppm 10 hours. OSHA PEL (United States, 2/2013). TWA: 2400 mg/m³ 8 hours. TWA: 1000 ppm 8 hours. OSHA PEL 1989 (United States, 3/1989). STEL: 2400 mg/m³ 15 minutes. STEL: 1000 ppm 15 minutes. TWA: 1800 mg/m³ 8 hours. TWA: 750 ppm 8 hours. NIOSH REL (United States, 10/2013). STEL: 560 mg/m³ 15 minutes. STEL: 150 ppm 15 minutes. TWA: 375 mg/m³ 10 hours.</td>
</tr>
<tr>
<td>Acetone</td>
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<td>Toluene</td>
<td></td>
</tr>
</tbody>
</table>
## Section 8. Exposure controls/personal protection

<table>
<thead>
<tr>
<th>Exposure controls</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TWA:</strong> 100 ppm 10 hours. <strong>OSHA PEL 1989 (United States, 3/1989).</strong></td>
<td>STEL: 560 mg/m³ 15 minutes. <strong>OSHA PEL Z2 (United States, 2/2013).</strong> AMP: 500 ppm 10 minutes. CEIL: 300 ppm</td>
</tr>
<tr>
<td><strong>STEL:</strong> 150 ppm 15 minutes. <strong>TWA:</strong> 375 mg/m³ 8 hours. <strong>ACGIH TLV (United States, 6/2013).</strong></td>
<td>TWA: 200 ppm 8 hours. <strong>ACGIH TLV (United States, 6/2013).</strong> TWA: 20 ppm 8 hours.</td>
</tr>
</tbody>
</table>

### 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, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**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.

### 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**

**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.

**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.

---

**Date of issue:** 05/16/2014
### Section 9. Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Flame Ionization Detector Sample A, Part Number 18801-60700A</th>
<th>Flame Ionization Detector Sample B, Part Number 18801-60700B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid.</td>
<td>Liquid.</td>
</tr>
<tr>
<td>Color</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Odor</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>pH</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Melting point</td>
<td>-95°C (-139°F)</td>
<td>-95°C (-139°F)</td>
</tr>
<tr>
<td>Boiling point</td>
<td>56°C (132.8°F)</td>
<td>56°C (132.8°F)</td>
</tr>
<tr>
<td>Flash point</td>
<td>Closed cup: -18°C (-0.4°F)</td>
<td>Closed cup: -18°C (-0.4°F)</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Lower and upper explosive (flammable) limits</td>
<td>Lower: 2.2%          Upper: 13%</td>
<td>Lower: 2.2%          Upper: 13%</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>24 kPa (180 mm Hg) [room temperature]</td>
<td>24 kPa (180 mm Hg) [room temperature]</td>
</tr>
<tr>
<td>Vapor density</td>
<td>2 [Air = 1]</td>
<td>2 [Air = 1]</td>
</tr>
</tbody>
</table>
Section 9. Physical and chemical properties

Relative density:
- Flame Ionization Detector Sample A, Part Number 18801-60700A: Not available.
- Flame Ionization Detector Sample B, Part Number 18801-60700B: Not available.

Solubility:
- Flame Ionization Detector Sample A, Part Number 18801-60700A: Easily soluble in the following materials: cold water and hot water.
- Flame Ionization Detector Sample B, Part Number 18801-60700B: Easily soluble in the following materials: cold water and hot water.

Solubility in water: Not available.

Partition coefficient: n-octanol/water:
- Flame Ionization Detector Sample A, Part Number 18801-60700A: Not available.
- Flame Ionization Detector Sample B, Part Number 18801-60700B: Not available.

Auto-ignition temperature:
- Flame Ionization Detector Sample A, Part Number 18801-60700A: Not available.
- Flame Ionization Detector Sample B, Part Number 18801-60700B: Not available.

Decomposition temperature:
- Flame Ionization Detector Sample A, Part Number 18801-60700A: Not available.
- Flame Ionization Detector Sample B, Part Number 18801-60700B: Not available.

Viscosity:
- Flame Ionization Detector Sample A, Part Number 18801-60700A: Not available.
- Flame Ionization Detector Sample B, Part Number 18801-60700B: Not available.

Section 10. Stability and reactivity

10.1 Reactivity:
- Flame Ionization Detector Sample A, Part Number 18801-60700A: No specific test data related to reactivity available for this product or its ingredients.
- Flame Ionization Detector Sample B, Part Number 18801-60700B: No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability:
- Flame Ionization Detector Sample A, Part Number 18801-60700A: The product is stable.
- Flame Ionization Detector Sample B, Part Number 18801-60700B: The product is stable.

10.3 Possibility of hazardous reactions:
- Flame Ionization Detector Sample A, Part Number 18801-60700A: Under normal conditions of storage and use, hazardous reactions will not occur.
- Flame Ionization Detector Sample B, Part Number 18801-60700B: Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid:
- Flame Ionization Detector Sample A, Part Number 18801-60700A: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
- Flame Ionization Detector Sample B, Part Number 18801-60700B: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.

Date of issue: 05/16/2014
Section 10. Stability and reactivity

10.5 Incompatible materials

- Flame Ionization Detector Sample A, Part Number 18801-60700A
- Flame Ionization Detector Sample B, Part Number 18801-60700B

Reactive or incompatible with the following materials: oxidizing materials

10.6 Hazardous decomposition products

- Flame Ionization Detector Sample A, Part Number 18801-60700A
- Flame Ionization Detector Sample B, Part Number 18801-60700B

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>Flame Ionization Detector Sample A, Part Number 18801-60700A</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>5800 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Acetone</td>
<td>LC50 Inhalation Vapor</td>
<td>Rat</td>
<td>49 g/m³</td>
<td>4 hours</td>
</tr>
<tr>
<td>Toluene</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>636 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Flame Ionization Detector Sample B, Part Number 18801-60700B</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>5800 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Acetone</td>
<td>LC50 Inhalation Vapor</td>
<td>Rat</td>
<td>49 g/m³</td>
<td>4 hours</td>
</tr>
<tr>
<td>Toluene</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>636 mg/kg</td>
<td>-</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>Flame Ionization Detector Sample A, Part Number 18801-60700A</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>10 microliters</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 20 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>395 milligrams</td>
<td>-</td>
</tr>
<tr>
<td>Toluene</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>0.5 minutes 100 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>870 Micrograms</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>435 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 20 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>500 milligrams</td>
<td>-</td>
</tr>
</tbody>
</table>

Date of issue : 05/16/2014
## Section 11. Toxicological information

**Flame Ionization Detector Sample B, Part Number 18801-60700B**

<table>
<thead>
<tr>
<th>Acetone</th>
<th>Eyes - Mild irritant</th>
<th>Rabbit</th>
<th>-</th>
<th>10 microliters</th>
<th>-</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 20 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>395 milligrams</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Toluene</th>
<th>Eyes - Mild irritant</th>
<th>Rabbit</th>
<th>-</th>
<th>0.5 minutes 100 milligrams</th>
<th>-</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>870 Micrograms</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>435 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 20 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>500 milligrams</td>
<td>-</td>
</tr>
</tbody>
</table>

**Sensitization**
Not available.

**Mutagenicity**
Not available.

**Carcinogenicity**
Not available.

**Classification**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>OSHA</th>
<th>IARC</th>
<th>NTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flame Ionization Detector Sample A, Part Number 18801-60700A</td>
<td>-</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>Toluene</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flame Ionization Detector Sample B, Part Number 18801-60700B</td>
<td>-</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>Toluene</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Reproductive toxicity**
Not available.

**Teratogenicity**
Not available.

**Specific target organ toxicity (single exposure)**

---

Date of issue: 05/16/2014
### Section 11. Toxicological information

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flame Ionization Detector Sample A, Part Number 18801-60700A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acetone</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Narcotic effects</td>
</tr>
<tr>
<td>Toluene</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation and Narcotic effects</td>
</tr>
<tr>
<td>Flame Ionization Detector Sample B, Part Number 18801-60700B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acetone</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Narcotic effects</td>
</tr>
<tr>
<td>Toluene</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation and Narcotic effects</td>
</tr>
</tbody>
</table>

#### Specific target organ toxicity (repeated exposure)

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flame Ionization Detector Sample A, Part Number 18801-60700A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toluene</td>
<td>Category 2</td>
<td>Oral</td>
<td>kidneys and liver</td>
</tr>
<tr>
<td>Flame Ionization Detector Sample B, Part Number 18801-60700B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toluene</td>
<td>Category 2</td>
<td>Oral</td>
<td>kidneys and liver</td>
</tr>
</tbody>
</table>

#### Aspiration hazard

<table>
<thead>
<tr>
<th>Name</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flame Ionization Detector Sample A, Part Number 18801-60700A</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
<tr>
<td>Toluene</td>
<td></td>
</tr>
<tr>
<td>Flame Ionization Detector Sample B, Part Number 18801-60700B</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
<tr>
<td>Toluene</td>
<td></td>
</tr>
</tbody>
</table>

Information on the likely routes of exposure: Not available.

#### Potential acute health effects

##### Eye contact

- Flame Ionization Detector Sample A, Part Number 18801-60700A
  - Acetone: Causes serious eye irritation.
  - Toluene: Causes serious eye irritation.

- Flame Ionization Detector Sample B, Part Number 18801-60700B
  - Acetone: Causes serious eye irritation.
  - Toluene: Causes serious eye irritation.

##### Inhalation

- Flame Ionization Detector Sample A, Part Number 18801-60700A
  - Acetone: Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness.
  - Toluene: Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness.

- Flame Ionization Detector Sample B, Part Number 18801-60700B
  - Acetone: Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness.
  - Toluene: Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness.

##### Skin contact

- Flame Ionization Detector Sample A, Part Number 18801-60700A
  - Acetone: Defatting to the skin. May cause skin dryness and irritation.
  - Toluene: Defatting to the skin. May cause skin dryness and irritation.

- Flame Ionization Detector Sample B, Part Number 18801-60700B
  - Acetone: Defatting to the skin. May cause skin dryness and irritation.
  - Toluene: Defatting to the skin. May cause skin dryness and irritation.

##### Ingestion

- Flame Ionization Detector Sample A, Part Number 18801-60700A
  - Acetone: Can cause central nervous system (CNS) depression. Irritating to mouth, throat and stomach.
  - Toluene: Can cause central nervous system (CNS) depression. Irritating to mouth, throat and stomach.

- Flame Ionization Detector Sample B, Part Number 18801-60700B
  - Acetone: Can cause central nervous system (CNS) depression. Irritating to mouth, throat and stomach.
  - Toluene: Can cause central nervous system (CNS) depression. Irritating to mouth, throat and stomach.

**Date of issue:** 05/16/2014
## Section 11. Toxicological information

### Symptoms related to the physical, chemical and toxicological characteristics

#### Eye contact

<table>
<thead>
<tr>
<th>Sample</th>
<th>Adverse symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flame Ionization Detector Sample A, Part Number 18801-60700A</td>
<td>Adverse symptoms may include the following: pain or irritation, watering, redness</td>
</tr>
<tr>
<td>Flame Ionization Detector Sample B, Part Number 18801-60700B</td>
<td>Adverse symptoms may include the following: pain or irritation, watering, redness</td>
</tr>
</tbody>
</table>

#### Inhalation

<table>
<thead>
<tr>
<th>Sample</th>
<th>Adverse symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flame Ionization Detector Sample A, Part Number 18801-60700A</td>
<td>Adverse symptoms may include the following: nausea or vomiting, headache, drowsiness/fatigue, dizziness/vertigo, unconsciousness, reduced fetal weight, increase in fetal deaths, skeletal malformations</td>
</tr>
<tr>
<td>Flame Ionization Detector Sample B, Part Number 18801-60700B</td>
<td>Adverse symptoms may include the following: nausea or vomiting, headache, drowsiness/fatigue, dizziness/vertigo, unconsciousness, reduced fetal weight, increase in fetal deaths, skeletal malformations</td>
</tr>
</tbody>
</table>

#### Skin contact

<table>
<thead>
<tr>
<th>Sample</th>
<th>Adverse symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flame Ionization Detector Sample A, Part Number 18801-60700A</td>
<td>Adverse symptoms may include the following: irritation, dryness, cracking, reduced fetal weight, increase in fetal deaths, skeletal malformations</td>
</tr>
<tr>
<td>Flame Ionization Detector Sample B, Part Number 18801-60700B</td>
<td>Adverse symptoms may include the following: irritation, dryness, cracking, reduced fetal weight, increase in fetal deaths, skeletal malformations</td>
</tr>
</tbody>
</table>

#### Ingestion

<table>
<thead>
<tr>
<th>Sample</th>
<th>Adverse symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flame Ionization Detector Sample A, Part Number 18801-60700A</td>
<td>Adverse symptoms may include the following: reduced fetal weight, increase in fetal deaths, skeletal malformations</td>
</tr>
<tr>
<td>Flame Ionization Detector Sample B, Part Number 18801-60700B</td>
<td>Adverse symptoms may include the following: reduced fetal weight, increase in fetal deaths, skeletal malformations</td>
</tr>
</tbody>
</table>

### 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

- Not available.
Section 11. Toxicological information

**Potential immediate effects**
Not available.

**Potential delayed effects**
Not available.

**Potential chronic health effects**
Not available.

**General**
- Flame Ionization Detector Sample A, Part Number 18801-60700A
- Flame Ionization Detector Sample B, Part Number 18801-60700B

**Carcinogenicity**
- Flame Ionization Detector Sample A, Part Number 18801-60700A
- Flame Ionization Detector Sample B, Part Number 18801-60700B

**Mutagenicity**
- Flame Ionization Detector Sample A, Part Number 18801-60700A
- Flame Ionization Detector Sample B, Part Number 18801-60700B

**Teratogenicity**
- Flame Ionization Detector Sample A, Part Number 18801-60700A
- Flame Ionization Detector Sample B, Part Number 18801-60700B

**Developmental effects**
- Flame Ionization Detector Sample A, Part Number 18801-60700A
- Flame Ionization Detector Sample B, Part Number 18801-60700B

**Fertility effects**
- Flame Ionization Detector Sample A, Part Number 18801-60700A
- Flame Ionization Detector Sample B, Part Number 18801-60700B

**Numerical measures of toxicity**

**Acute toxicity estimates**
Not available.

**Other information**
- Flame Ionization Detector Sample A, Part Number 18801-60700A
- Flame Ionization Detector Sample B, Part Number 18801-60700B

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>Flame Ionization Detector Sample A, Part Number 18801-60700A Acetone</td>
<td>Acute EC50 20.565 mg/l Marine water Acute LC50 6000000 µg/l Fresh water Acute LC50 10000 µg/l Fresh water Acute LC50 100 mg/l Fresh water</td>
<td>Algae - Ulva pertusa Crustaceans - Gammarus pulex Daphnia - Daphnia magna Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)</td>
<td>96 hours 48 hours 48 hours 96 hours</td>
</tr>
</tbody>
</table>

**Date of issue:** 05/16/2014
### Section 12. Ecological information

<table>
<thead>
<tr>
<th>Substance</th>
<th>Chronic NOEC</th>
<th>Effect</th>
<th>Time</th>
<th>Acute EC50</th>
<th>Effect</th>
<th>Time</th>
<th>Acute LC50</th>
<th>Effect</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene</td>
<td>4.95 mg/l Marine water</td>
<td>Algae - Ulva pertusa</td>
<td>96 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.016 ml/l Fresh water</td>
<td>Crustaceans - Daphniidae</td>
<td>21 days</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.1 ml/l Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>21 days</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 µg/l Marine water</td>
<td>Fish - Gasterosteus aculeatus - Larvae</td>
<td>42 days</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acetone</td>
<td>20.565 mg/l Marine water</td>
<td>Algae - Ulva pertusa</td>
<td>96 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6000000 µg/l Fresh water</td>
<td>Daphnia - Daphnia magna</td>
<td>48 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>100 µg/l Fresh water</td>
<td>Algae - Daphnia magna - Neonate</td>
<td>21 days</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5000000 µg/l Fresh water</td>
<td>Algae - Daphnia magna</td>
<td>96 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>100 µg/l Fresh water</td>
<td>Algae - Pseudokirchneriella subcapitata</td>
<td>96 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5500 µg/l Fresh water</td>
<td>Fish - Oncorhynchus kisutch - Fry</td>
<td>96 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**12.2 Persistence and degradability**

Not available.

**12.3 Bioaccumulative potential**
Section 12. Ecological information

<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>Flame Ionization Detector Sample A, Part Number 18801-60700A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acetone</td>
<td>-0.23</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>Toluene</td>
<td>2.73</td>
<td>90</td>
<td>low</td>
</tr>
<tr>
<td>Flame Ionization Detector Sample B, Part Number 18801-60700B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acetone</td>
<td>-0.23</td>
<td>-</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.

12.5 Other adverse effects

: Flame Ionization Detector Sample A, Part Number 18801-60700A  No known significant effects or critical hazards.
: Flame Ionization Detector Sample B, Part Number 18801-60700B  No known significant effects or critical hazards.

Section 13. Disposal considerations

13.1 Waste treatment methods

Disposal methods : The generation of waste should be avoided or minimized 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. 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 spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Date of issue : 05/16/2014
Section 14. Transport information

Regulatory information

Additional information: Remarks
De minimis quantities

DOT / IMDG / IATA: Not regulated.

Section 15. Regulatory information

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

U.S. Federal regulations

TSCA 4(a) final test rules: Nonane
TSCA 8(a) PAIR: Nonane; p-Xylene; Heptane
United States inventory (TSCA 8b): All components are listed or exempted.
Clean Water Act (CWA) 307: Toluene
Clean Water Act (CWA) 311: m-Cresol; p-Xylene; m-Xylene; o-Xylene; Toluene

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)
Clean Air Act Section 602 Class I Substances: Not listed
Clean Air Act Section 602 Class II Substances: Not listed
DEA List I Chemicals (Precursor Chemicals): Not listed
DEA List II Chemicals (Essential Chemicals): Listed

SARA 302/304

Composition/information on ingredients
No products were found.

SARA 304 RQ: Not applicable.

SARA 311/312
Classification: Fire hazard
Immediate (acute) health hazard
Delayed (chronic) health hazard

Composition/information on ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>Fire hazard</th>
<th>Sudden release of pressure</th>
<th>Reactive</th>
<th>Immediate (acute) health hazard</th>
<th>Delayed (chronic) health hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flame Ionization Detector Sample A, Part Number 18801-60700A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acetone</td>
<td>60 - 100</td>
<td>Yes.</td>
<td>Yes.</td>
<td>No.</td>
<td>Yes.</td>
<td>No.</td>
</tr>
<tr>
<td>Toluene</td>
<td>0.1 - 1</td>
<td>Yes.</td>
<td>No.</td>
<td>No.</td>
<td>Yes.</td>
<td>No.</td>
</tr>
<tr>
<td>Flame Ionization Detector Sample B, Part Number 18801-60700B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acetone</td>
<td>60 - 100</td>
<td>Yes.</td>
<td>Yes.</td>
<td>No.</td>
<td>Yes.</td>
<td>No.</td>
</tr>
<tr>
<td>Toluene</td>
<td>0.1 - 1</td>
<td>Yes.</td>
<td>No.</td>
<td>No.</td>
<td>Yes.</td>
<td>No.</td>
</tr>
</tbody>
</table>

State regulations

Date of issue: 05/16/2014
Section 15. Regulatory information

Massachusetts: The following components are listed: ACETONE
New York: The following components are listed: Acetone; 2-Propanone
New Jersey: The following components are listed: ACETONE; 2-PROPANONE
Pennsylvania: The following components are listed: 2-PROPANONE

California Prop. 65
WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Cancer</th>
<th>Reproductive</th>
<th>No significant risk level</th>
<th>Maximum acceptable dosage level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flame Ionization Detector Sample A, Part Number 18801-60700A</td>
<td>No.</td>
<td>Yes.</td>
<td>No.</td>
<td>7000 µg/day (ingestion)</td>
</tr>
<tr>
<td>Toluene</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flame Ionization Detector Sample B, Part Number 18801-60700B</td>
<td>No.</td>
<td>Yes.</td>
<td>No.</td>
<td>7000 µg/day (ingestion)</td>
</tr>
<tr>
<td>Toluene</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Canada inventory: All components are listed or exempted.

International regulations
International lists:
- Australia inventory (AICS): All components are listed or exempted.
- China inventory (IECSC): All components are listed or exempted.
- Japan inventory: All components are listed or exempted.
- Korea inventory: All components are listed or exempted.
- Malaysia Inventory (EHS Register): Not determined.
- New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
- Philippines inventory (PICCS): All components are listed or exempted.
- Taiwan inventory (CSNN): Not determined.

Chemical Weapons Convention List Schedule I Chemicals: Not listed
Chemical Weapons Convention List Schedule II Chemicals: Not listed
Chemical Weapons Convention List Schedule III Chemicals: Not listed

Section 16. Other information

History
Date of issue: 05/16/2014.
Date of previous issue: 01/28/2014.
Version: 4.1

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