

SAFETY DATA SHEET



CE Installation Qualification Kit, Part Number 5063-6514

Section 1. Identification

Product identifier : CE Installation Qualification Kit, Part Number 5063-6514
Part No. (Chemical Kit) : 5063-6514
Part No. : -(Hydroxy) Acetophenone Test Samples Test Samples
 20 mM Borate Buffer - pH9.3 8500-6782
 Sodium Hydroxide Solution 1.0N for HPCE 5062-8576

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

Analytical chemistry.

-(Hydroxy) Acetophenone Test Samples 1 x 3 ml
 20 mM Borate Buffer - pH9.3 1 x 100 ml
 Sodium Hydroxide Solution 1.0N for HPCE 1 x 250 ml

Supplier/Manufacturer : Agilent Technologies Australia Pty Ltd
 679 Springvale Road
 Mulgrave
 Victoria 3170, Australia
 1800 802 402

Emergency telephone number (with hours of operation) : CHEMTREC®: +(61)-290372994

Section 2. Hazard(s) identification

Classification of the substance or mixture

-(Hydroxy) Acetophenone

Test Samples

H302 ACUTE TOXICITY (oral) - Category 4
 H319 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A

Sodium Hydroxide Solution 1.0N for HPCE

H290 CORROSIVE TO METALS - Category 1
 H315 SKIN CORROSION/IRRITATION - Category 2
 H318 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
 H335 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3

GHS label elements

Hazard pictograms

-(Hydroxy) Acetophenone Test Samples



Sodium Hydroxide Solution 1.0N for HPCE



Section 2. Hazard(s) identification

| | | |
|--|--|--|
| Signal word | : 4-(Hydroxy) Acetophenone Test Samples 20 mM Borate Buffer - pH9.3 Sodium Hydroxide Solution 1.0N for HPCE | WARNING No signal word. DANGER |
| Hazard statements | : 4-(Hydroxy) Acetophenone Test Samples 20 mM Borate Buffer - pH9.3 Sodium Hydroxide Solution 1.0N for HPCE | H302 - Harmful if swallowed. H319 - Causes serious eye irritation. No known significant effects or critical hazards. H290 - May be corrosive to metals. H318 - Causes serious eye damage. H315 - Causes skin irritation. H335 - May cause respiratory irritation. |
| <u>Precautionary statements</u> | | |
| Prevention | : 4-(Hydroxy) Acetophenone Test Samples 20 mM Borate Buffer - pH9.3 Sodium Hydroxide Solution 1.0N for HPCE | P280 - Wear eye or face protection. P270 - Do not eat, drink or smoke when using this product. P264 - Wash hands thoroughly after handling. Not applicable. P280 - Wear protective gloves. Wear eye or face protection. P234 - Keep only in original container. P271 - Use only outdoors or in a well-ventilated area. P261 - Avoid breathing vapour. P264 - Wash hands thoroughly after handling. |
| Response | : 4-(Hydroxy) Acetophenone Test Samples 20 mM Borate Buffer - pH9.3 Sodium Hydroxide Solution 1.0N for HPCE | P301 + P312 + P330 - IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth. 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. Not applicable. P390 - Absorb spillage to prevent material damage. 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. P302 + P352 + P362 + P363 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. P332 + P313 - If skin irritation occurs: Get medical attention. P305 + P351 + P338 + P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician. |
| Storage | : 4-(Hydroxy) Acetophenone Test Samples 20 mM Borate Buffer - pH9.3 Sodium Hydroxide Solution 1.0N for HPCE | Not applicable. Not applicable. P405 - Store locked up. P406 - Store in corrosive resistant container with a resistant inner liner. |

Section 2. Hazard(s) identification

| | | |
|--|---|--|
| Disposal | : 4-(Hydroxy) Acetophenone Test Samples | P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| | 20 mM Borate Buffer - pH9.3 | Not applicable. |
| | Sodium Hydroxide Solution 1.0N for HPCE | P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| Supplemental label elements | | |
| Additional warning phrases | : 4-(Hydroxy) Acetophenone Test Samples | Not applicable. |
| | 20 mM Borate Buffer - pH9.3 | Not applicable. |
| | Sodium Hydroxide Solution 1.0N for HPCE | Not applicable. |
| | | |
| Other hazards which do not result in classification | : 4-(Hydroxy) Acetophenone Test Samples | None known. |
| | 20 mM Borate Buffer - pH9.3 | None known. |
| | Sodium Hydroxide Solution 1.0N for HPCE | Causes digestive tract burns. |
| | | |

Section 3. Composition and ingredient information

| | | |
|--------------------------|---|-----------|
| Substance/mixture | : 4-(Hydroxy) Acetophenone Test Samples | Substance |
| | 20 mM Borate Buffer - pH9.3 | Mixture |
| | Sodium Hydroxide Solution 1.0N for HPCE | Mixture |
| | | |

CAS number/other identifiers

| Ingredient name | % (w/w) | CAS number |
|--|---------|------------|
| 4-(Hydroxy) Acetophenone Test Samples acetophenone | 100 | 98-86-2 |
| Sodium Hydroxide Solution 1.0N for HPCE Sodium hydroxide | ≤5 | 1310-73-2 |

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

Description of necessary first aid measures

| | | |
|--------------------|---|--|
| Eye contact | : 4-(Hydroxy) Acetophenone Test Samples | 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. |
| | 20 mM Borate Buffer - pH9.3 | Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs. |
| | Sodium Hydroxide Solution 1.0N for HPCE | Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician. |

Section 4. First aid measures

Inhalation

- : ☒-(Hydroxy) Acetophenone Test Samples
Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 adverse health effects persist or are severe. 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.
- 20 mM Borate Buffer - pH9.3
Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
- Sodium Hydroxide Solution 1.0N for HPCE
Get medical attention immediately. Call a poison center or physician. 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. 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

- : ☒-(Hydroxy) Acetophenone Test Samples
Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- 20 mM Borate Buffer - pH9.3
Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
- Sodium Hydroxide Solution 1.0N for HPCE
Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. 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. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

- : ☒-(Hydroxy) Acetophenone Test Samples
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.
- 20 mM Borate Buffer - pH9.3
Wash out mouth with water. 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

Section 4. First aid measures

Sodium Hydroxide Solution 1.0N for HPCE

water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

1. Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a 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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

| | | |
|---------------------|---|---|
| Eye contact | : ☒ -(Hydroxy) Acetophenone Test Samples 20 mM Borate Buffer - pH9.3 Sodium Hydroxide Solution 1.0N for HPCE | Causes serious eye irritation. No known significant effects or critical hazards. Causes serious eye damage. |
| Inhalation | : ☒ -(Hydroxy) Acetophenone Test Samples 20 mM Borate Buffer - pH9.3 Sodium Hydroxide Solution 1.0N for HPCE | No known significant effects or critical hazards. No known significant effects or critical hazards. May cause respiratory irritation. |
| Skin contact | : ☒ -(Hydroxy) Acetophenone Test Samples 20 mM Borate Buffer - pH9.3 Sodium Hydroxide Solution 1.0N for HPCE | No known significant effects or critical hazards. No known significant effects or critical hazards. Causes skin irritation. |
| Ingestion | : ☒ -(Hydroxy) Acetophenone Test Samples 20 mM Borate Buffer - pH9.3 Sodium Hydroxide Solution 1.0N for HPCE | Harmful if swallowed. No known significant effects or critical hazards. Corrosive to the digestive tract. Causes burns. |

Over-exposure signs/symptoms

| | | |
|--------------------|---|---|
| Eye contact | : ☒ -(Hydroxy) Acetophenone Test Samples 20 mM Borate Buffer - pH9.3 Sodium Hydroxide Solution 1.0N for HPCE | Adverse symptoms may include the following: pain or irritation watering redness No specific data. Adverse symptoms may include the following: pain watering redness |
|--------------------|---|---|

Section 4. First aid measures

| | | | |
|---------------------|---|-----------------------------|-------------------|
| Inhalation | : | ☒-(Hydroxy) Acetophenone | No specific data. |
| | | Test Samples | |
| | | 20 mM Borate Buffer - pH9.3 | No specific data. |
| Skin contact | : | ☒-(Hydroxy) Acetophenone | No specific data. |
| | | Test Samples | |
| | | 20 mM Borate Buffer - pH9.3 | No specific data. |
| Ingestion | : | ☒-(Hydroxy) Acetophenone | No specific data. |
| | | Test Samples | |
| | | 20 mM Borate Buffer - pH9.3 | No specific data. |

1. Adverse symptoms may include the following:

respiratory tract irritation
coughing

1. Adverse symptoms may include the following:

pain or irritation
redness
blistering may occur

1. Adverse symptoms may include the following:

stomach pains


Indication of immediate medical attention and special treatment needed, if necessary


| | | | |
|-----------------------------------|---|---|---|
| Notes to physician | : | ☒-(Hydroxy) Acetophenone | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| | | Test Samples | |
| | | 20 mM Borate Buffer - pH9.3 | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| Specific treatments | : | ☒-(Hydroxy) Acetophenone | No specific treatment. |
| | | Test Samples | |
| | | 20 mM Borate Buffer - pH9.3 | No specific treatment. |
| Protection of first-aiders | : | ☒-(Hydroxy) Acetophenone | No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. |
| | | Test Samples | |
| | | 20 mM Borate Buffer - pH9.3 | No action shall be taken involving any personal risk or without suitable training. |
| | | Sodium Hydroxide Solution 1.0N for HPCE | 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. |


See toxicological information (Section 11)


Section 5. Firefighting measures


Extinguishing media


Suitable extinguishing media : -(Hydroxy) Acetophenone Test Samples Use an extinguishing agent suitable for the surrounding fire.
20 mM Borate Buffer - pH9.3 Use an extinguishing agent suitable for the surrounding fire.
Sodium Hydroxide Solution 1. Use an extinguishing agent suitable for the surrounding fire.
0N for HPCE


Unsuitable extinguishing media : -(Hydroxy) Acetophenone Test Samples None known.
20 mM Borate Buffer - pH9.3 None known.
Sodium Hydroxide Solution 1. None known.
0N for HPCE

Specific hazards arising from the chemical : -(Hydroxy) Acetophenone Test Samples In a fire or if heated, a pressure increase will occur and the container may burst.
20 mM Borate Buffer - pH9.3 In a fire or if heated, a pressure increase will occur and the container may burst.
Sodium Hydroxide Solution 1. In a fire or if heated, a pressure increase will occur and the container may burst.
0N for HPCE

Hazardous thermal decomposition products : -(Hydroxy) Acetophenone Test Samples Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
20 mM Borate Buffer - pH9.3 No specific data.
Sodium Hydroxide Solution 1. Decomposition products may include the following materials:
0N for HPCE metal oxide/oxides

Special protective actions for fire-fighters : -(Hydroxy) Acetophenone Test Samples 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.
20 mM Borate Buffer - pH9.3 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.
Sodium Hydroxide Solution 1. 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.
0N for HPCE

Special protective equipment for fire-fighters : -(Hydroxy) Acetophenone Test Samples Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
20 mM Borate Buffer - pH9.3 Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Sodium Hydroxide Solution 1. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
0N for HPCE

Hazchem code : -(Hydroxy) Acetophenone Test Samples Not available.
20 mM Borate Buffer - pH9.3 Not available.
Sodium Hydroxide Solution 1. 2R
0N for HPCE

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

| | | |
|------------------------------------|---|---|
| For non-emergency personnel | : 4-(Hydroxy) Acetophenone Test Samples | 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. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. |
| | 20 mM Borate Buffer - pH9.3 | 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. Put on appropriate personal protective equipment. |
| | Sodium Hydroxide Solution 1.0N for HPCE | 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. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. |
| For emergency responders | : 4-(Hydroxy) Acetophenone Test Samples | 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". |
| | 20 mM Borate Buffer - pH9.3 | 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". |
| | Sodium Hydroxide Solution 1.0N for HPCE | 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". |
| Environmental precautions | : 4-(Hydroxy) Acetophenone Test Samples | 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). |
| | 20 mM Borate Buffer - pH9.3 | 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). |
| | Sodium Hydroxide Solution 1.0N for HPCE | 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). |

Methods and material for containment and cleaning up

| | | |
|--------------------------------|---|---|
| Methods for cleaning up | : 4-(Hydroxy) Acetophenone Test Samples | Stop leak if without risk. Move containers from spill area. 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. |
| | 20 mM Borate Buffer - pH9.3 | Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. |


Section 6. Accidental release measures

- 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.
- Sodium Hydroxide Solution 1. Stop leak if without risk. Move containers from spill area. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Absorb spillage to prevent material damage. Dispose of via a licensed waste disposal contractor.
- 0N for HPCE


Section 7. Handling and storage

Precautions for safe handling

Protective measures

- -(Hydroxy) Acetophenone Test Samples Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- 20 mM Borate Buffer - pH9.3 Put on appropriate personal protective equipment (see Section 8).
- Sodium Hydroxide Solution 1. Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from acids. Empty containers retain product residue and can be hazardous. Do not reuse container. Absorb spillage to prevent material damage.
- 0N for HPCE

Advice on general occupational hygiene

- -(Hydroxy) Acetophenone Test Samples 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.
- 20 mM Borate Buffer - pH9.3 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.
- Sodium Hydroxide Solution 1. 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.
- 0N for HPCE

Section 7. Handling and storage

| | | |
|--|--|--|
| <p>Conditions for safe storage, including any incompatibilities :</p> | <p>4-(Hydroxy) Acetophenone Test Samples</p> | <p>Store in accordance with local regulations. 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. 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. See Section 10 for incompatible materials before handling or use.</p> |
| <p>20 mM Borate Buffer - pH9.3</p> | <p>Sodium Hydroxide Solution 1.0N for HPCE</p> | <p>Store in accordance with local regulations. 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. 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. See Section 10 for incompatible materials before handling or use.</p> <p>Store between the following temperatures: 15 to 25°C (59 to 77°F). Store in accordance with local regulations. 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 in corrosive resistant container with a resistant inner liner. Store locked up. Separate from acids. Keep away from metals. 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. See Section 10 for incompatible materials before handling or use.</p> |

Section 8. Exposure controls and personal protection

Control parameters

Occupational exposure limits

| Ingredient name | Exposure limits |
|--|---|
| 4-(Hydroxy) Acetophenone Test Samples acetophenone | ACGIH TLV (United States, 3/2016). TWA: 10 ppm 8 hours. TWA: 49 mg/m ³ 8 hours. |
| Sodium Hydroxide Solution 1.0N for HPCE Sodium hydroxide | Safe Work Australia (Australia, 1/2014). TWA: 2 mg/m ³ 8 hours. |

| | |
|--|---|
| <p>Appropriate engineering controls</p> | <p>: If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.</p> |
| <p>Environmental exposure controls</p> | <p>: 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.</p> |






Section 8. Exposure controls and personal protection

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 and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- 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.
- 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** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

- Physical state** : -(Hydroxy) Acetophenone Liquid.
Test Samples
20 mM Borate Buffer - pH9.3 Liquid.
Sodium Hydroxide Solution 1. Liquid. [Clear.]
0N for HPCE
- Colour** : -(Hydroxy) Acetophenone Clear. Colourless.
Test Samples
20 mM Borate Buffer - pH9.3 Yellow. [Light]
Sodium Hydroxide Solution 1. Colourless.
0N for HPCE
- Odour** : -(Hydroxy) Acetophenone Jasmine-like.
Test Samples
20 mM Borate Buffer - pH9.3 Not available.
Sodium Hydroxide Solution 1. Not available.
0N for HPCE
- Odour threshold** : -(Hydroxy) Acetophenone 0.2 ppm
Test Samples
20 mM Borate Buffer - pH9.3 Not available.
Sodium Hydroxide Solution 1. Not available.
0N for HPCE
- pH** : -(Hydroxy) Acetophenone Not available.
Test Samples
20 mM Borate Buffer - pH9.3 9.3
Sodium Hydroxide Solution 1. >11.5
0N for HPCE

Section 9. Physical and chemical properties

| | |
|---|--|
| Melting point | : ☒ -(Hydroxy) Acetophenone 20°C (68°F) Test Samples 20 mM Borate Buffer - pH9.3 0°C (32°F) Sodium Hydroxide Solution 1. 0°C (32°F) 0N for HPCE |
| Boiling point | : ☒ -(Hydroxy) Acetophenone 202°C (395.6°F) Test Samples 20 mM Borate Buffer - pH9.3 100°C (212°F) Sodium Hydroxide Solution 1. 100°C (212°F) 0N for HPCE |
| Flash point | : ☒ -(Hydroxy) Acetophenone Closed cup: 81.85°C (179.3°F) [Setaflash.] Test Samples Open cup: 82°C (179.6°F) [Cleveland.] 20 mM Borate Buffer - pH9.3 Not available. Sodium Hydroxide Solution 1. Not available. 0N for HPCE |
| Evaporation rate | : ☒ -(Hydroxy) Acetophenone 0.032 (butyl acetate = 1) Test Samples 20 mM Borate Buffer - pH9.3 <1 (butyl acetate = 1) Sodium Hydroxide Solution 1. Not available. 0N for HPCE |
| Flammability (solid, gas) | : ☒ -(Hydroxy) Acetophenone Not applicable. Test Samples 20 mM Borate Buffer - pH9.3 Not applicable. Sodium Hydroxide Solution 1. Not applicable. 0N for HPCE |
| Lower and upper explosive (flammable) limits | : ☒ -(Hydroxy) Acetophenone Lower: 1.1% Test Samples Upper: 6.7% 20 mM Borate Buffer - pH9.3 Not available. Sodium Hydroxide Solution 1. Not available. 0N for HPCE |
| Vapour pressure | : ☒ -(Hydroxy) Acetophenone <2.4 kPa (<18 mm Hg) [room temperature] Test Samples 20 mM Borate Buffer - pH9.3 Not available. Sodium Hydroxide Solution 1. <2.4 kPa (<18 mm Hg) [room temperature] 0N for HPCE |
| Vapour density | : ☒ -(Hydroxy) Acetophenone <1 [Air = 1] Test Samples 20 mM Borate Buffer - pH9.3 Not available. Sodium Hydroxide Solution 1. <1 [Air = 1] 0N for HPCE |
| Relative density | : ☒ -(Hydroxy) Acetophenone 1.03 Test Samples 20 mM Borate Buffer - pH9.3 1 Sodium Hydroxide Solution 1. Not available. 0N for HPCE |
| Solubility | : ☒ -(Hydroxy) Acetophenone Soluble in the following materials: cold water, hot Test Samples water and acetone. Very slightly soluble in the following materials: diethyl ether. 20 mM Borate Buffer - pH9.3 Easily soluble in the following materials: cold water and hot water. Sodium Hydroxide Solution 1. Easily soluble in the following materials: cold water and hot water. 0N for HPCE |
| Partition coefficient: n-octanol/water | : ☒ -(Hydroxy) Acetophenone 1.59 Test Samples 20 mM Borate Buffer - pH9.3 Not available. Sodium Hydroxide Solution 1. Not available. 0N for HPCE |

Section 9. Physical and chemical properties

| | | |
|----------------------------------|--|--|
| Auto-ignition temperature | : 4-(Hydroxy) Acetophenone Test Samples 20 mM Borate Buffer - pH9.3 Sodium Hydroxide Solution 1.0N for HPCE | 571°C (1059.8°F) Not available. Not available. |
| Decomposition temperature | : 4-(Hydroxy) Acetophenone Test Samples 20 mM Borate Buffer - pH9.3 Sodium Hydroxide Solution 1.0N for HPCE | Not available. Not available. Not available. |
| Viscosity | : 4-(Hydroxy) Acetophenone Test Samples 20 mM Borate Buffer - pH9.3 Sodium Hydroxide Solution 1.0N for HPCE | Dynamic (room temperature): 1.68 mPa·s (1.68 cP) Not available. Not available. |

Section 10. Stability and reactivity

| | | |
|---|--|--|
| Reactivity | : 4-(Hydroxy) Acetophenone Test Samples 20 mM Borate Buffer - pH9.3 Sodium Hydroxide Solution 1.0N for HPCE | No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. |
| Chemical stability | : 4-(Hydroxy) Acetophenone Test Samples 20 mM Borate Buffer - pH9.3 Sodium Hydroxide Solution 1.0N for HPCE | The product is stable. The product is stable. The product is stable. |
| Possibility of hazardous reactions | : 4-(Hydroxy) Acetophenone Test Samples 20 mM Borate Buffer - pH9.3 Sodium Hydroxide Solution 1.0N for HPCE | Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. |
| Conditions to avoid | : 4-(Hydroxy) Acetophenone Test Samples 20 mM Borate Buffer - pH9.3 Sodium Hydroxide Solution 1.0N for HPCE | No specific data. No specific data. No specific data. |
| Incompatible materials | : 4-(Hydroxy) Acetophenone Test Samples 20 mM Borate Buffer - pH9.3 Sodium Hydroxide Solution 1.0N for HPCE | May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. Reactive or incompatible with the following materials: acids metals |
| Hazardous decomposition products | : 4-(Hydroxy) Acetophenone Test Samples 20 mM Borate Buffer - pH9.3 Sodium Hydroxide Solution 1.0N for HPCE | Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. |

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|--|-------------|---------|------------|----------|
| 4-(Hydroxy) Acetophenone Test Samples acetophenone | LD50 Oral | Rat | 815 mg/kg | - |
| Sodium Hydroxide Solution 1.0N for HPCE Sodium hydroxide | LD50 Dermal | Rabbit | 1350 mg/kg | - |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|--|------------------------|---------|-------|-------------------------|-------------|
| 4-(Hydroxy) Acetophenone Test Samples acetophenone | Skin - Mild irritant | Rabbit | - | 515 milligrams | - |
| Sodium Hydroxide Solution 1.0N for HPCE Sodium hydroxide | Eyes - Severe irritant | Rabbit | - | 24 hours 50 Micrograms | - |
| | Eyes - Severe irritant | Rabbit | - | 1 Percent | - |
| | Eyes - Severe irritant | Rabbit | - | 0.5 minutes | - |
| | Skin - Severe irritant | Rabbit | - | 1 milligrams | - |
| | | | | 24 hours 500 milligrams | - |

Sensitisation

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

| Name | Category | Route of exposure | Target organs |
|---|------------|-------------------|------------------------------|
| 4-(Hydroxy) Acetophenone Test Samples Sodium Hydroxide Solution 1.0N for HPCE | Category 3 | Not applicable. | Respiratory tract irritation |

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Section 11. Toxicological information

Information on likely routes of exposure : -(Hydroxy) Acetophenone Routes of entry anticipated: Oral, Dermal, Inhalation.
 Test Samples
 20 mM Borate Buffer - pH9.3 Not available.
 Sodium Hydroxide Solution 1. Routes of entry anticipated: Oral, Dermal, Inhalation.
 0N for HPCE

Potential acute health effects

Eye contact : -(Hydroxy) Acetophenone Causes serious eye irritation.
 Test Samples
 20 mM Borate Buffer - pH9.3 No known significant effects or critical hazards.
 Sodium Hydroxide Solution 1. Causes serious eye damage.
 0N for HPCE

Inhalation : -(Hydroxy) Acetophenone No known significant effects or critical hazards.
 Test Samples
 20 mM Borate Buffer - pH9.3 No known significant effects or critical hazards.
 Sodium Hydroxide Solution 1. May cause respiratory irritation.
 0N for HPCE

Skin contact : -(Hydroxy) Acetophenone No known significant effects or critical hazards.
 Test Samples
 20 mM Borate Buffer - pH9.3 No known significant effects or critical hazards.
 Sodium Hydroxide Solution 1. Causes skin irritation.
 0N for HPCE

Ingestion : -(Hydroxy) Acetophenone Harmful if swallowed.
 Test Samples
 20 mM Borate Buffer - pH9.3 No known significant effects or critical hazards.
 Sodium Hydroxide Solution 1. Corrosive to the digestive tract. Causes burns.
 0N for HPCE

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : -(Hydroxy) Acetophenone Adverse symptoms may include the following:
 Test Samples
 pain or irritation
 watering
 redness
 20 mM Borate Buffer - pH9.3 No specific data.
 Sodium Hydroxide Solution 1. Adverse symptoms may include the following:
 0N for HPCE
 pain
 watering
 redness

Inhalation : -(Hydroxy) Acetophenone No specific data.
 Test Samples
 20 mM Borate Buffer - pH9.3 No specific data.
 Sodium Hydroxide Solution 1. Adverse symptoms may include the following:
 0N for HPCE
 respiratory tract irritation
 coughing

Skin contact : -(Hydroxy) Acetophenone No specific data.
 Test Samples
 20 mM Borate Buffer - pH9.3 No specific data.
 Sodium Hydroxide Solution 1. Adverse symptoms may include the following:
 0N for HPCE
 pain or irritation
 redness
 blistering may occur

Ingestion : -(Hydroxy) Acetophenone No specific data.
 Test Samples
 20 mM Borate Buffer - pH9.3 No specific data.
 Sodium Hydroxide Solution 1. Adverse symptoms may include the following:
 0N for HPCE
 stomach pains

Section 11. Toxicological information

Delayed and immediate effects as well as 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

Not available.

| | | |
|------------------------------|--|---|
| General | : <input checked="" type="checkbox"/> -(Hydroxy) Acetophenone Test Samples | No known significant effects or critical hazards. |
| | 20 mM Borate Buffer - pH9.3 | No known significant effects or critical hazards. |
| | Sodium Hydroxide Solution 1.0N for HPCE | No known significant effects or critical hazards. |
| Carcinogenicity | : <input checked="" type="checkbox"/> -(Hydroxy) Acetophenone Test Samples | No known significant effects or critical hazards. |
| | 20 mM Borate Buffer - pH9.3 | No known significant effects or critical hazards. |
| | Sodium Hydroxide Solution 1.0N for HPCE | No known significant effects or critical hazards. |
| Mutagenicity | : <input checked="" type="checkbox"/> -(Hydroxy) Acetophenone Test Samples | No known significant effects or critical hazards. |
| | 20 mM Borate Buffer - pH9.3 | No known significant effects or critical hazards. |
| | Sodium Hydroxide Solution 1.0N for HPCE | No known significant effects or critical hazards. |
| Teratogenicity | : <input checked="" type="checkbox"/> -(Hydroxy) Acetophenone Test Samples | No known significant effects or critical hazards. |
| | 20 mM Borate Buffer - pH9.3 | No known significant effects or critical hazards. |
| | Sodium Hydroxide Solution 1.0N for HPCE | No known significant effects or critical hazards. |
| Developmental effects | : <input checked="" type="checkbox"/> -(Hydroxy) Acetophenone Test Samples | No known significant effects or critical hazards. |
| | 20 mM Borate Buffer - pH9.3 | No known significant effects or critical hazards. |
| | Sodium Hydroxide Solution 1.0N for HPCE | No known significant effects or critical hazards. |
| Fertility effects | : <input checked="" type="checkbox"/> -(Hydroxy) Acetophenone Test Samples | No known significant effects or critical hazards. |
| | 20 mM Borate Buffer - pH9.3 | No known significant effects or critical hazards. |
| | Sodium Hydroxide Solution 1.0N for HPCE | No known significant effects or critical hazards. |

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

| Product/ingredient name | Result | Species | Exposure |
|--|------------------------------------|--|----------|
| <p>4-(Hydroxy) Acetophenone Test Samples acetophenone</p> | Acute LC50 155000 µg/l Fresh water | Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling) | 96 hours |
| <p>Sodium Hydroxide Solution 1.0N for HPCE Sodium hydroxide</p> | Acute LC50 125 ppm Fresh water | Fish - Gambusia affinis - Adult | 96 hours |

Persistence and degradability

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|--|-------------------|------------|------------------|
| <p>Sodium Hydroxide Solution 1.0N for HPCE Sodium hydroxide</p> | - | - | Readily |

Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|--|--------------------|--------|-----------|
| <p>4-(Hydroxy) Acetophenone Test Samples acetophenone</p> | 1.59 | 0.4749 | low |

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.




Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : 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. 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. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

Section 14. Transport information

| | ADG | IMDG | IATA |
|----------------------------|--|--|--|
| UN number | UN3316 | UN3316 | UN3316 |
| UN proper shipping name | CHEMICAL KIT | CHEMICAL KIT | <input checked="" type="checkbox"/> Chemical kit |
| Transport hazard class(es) | 9  | 9  | 9  |
| Packing group | II | II | II |
| Environmental hazards | No. | No. | No. |

Additional information

| | |
|------|---|
| ADG | : Hazchem code 2Z Special provisions 251, 340 |
| IMDG | : Emergency schedules F-A, _S-P_ Special provisions 251, 340 |
| IATA | : Quantity limitation Passenger and Cargo Aircraft: 10 kg. Packaging instructions: 960. Cargo Aircraft Only: 10 kg. Packaging instructions: 960. Limited Quantities - Passenger Aircraft: 1 kg. Packaging instructions: Y960. Special provisions A44, A163 |

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of Marpol and the IBC Code : Not available.

Section 15. Regulatory information

Standard Uniform Schedule of Medicine and Poisons

5

Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Section 15. Regulatory information

| | |
|--------------------------|--|
| Australia | : Not determined. |
| Canada | : Not determined. |
| China | : Not determined. |
| Europe | : Not determined. |
| Japan | : Japan inventory (ENCS): Not determined. Japan inventory (ISHL): Not determined. |
| Malaysia | : Not determined. |
| New Zealand | : Not determined. |
| Philippines | : Not determined. |
| Republic of Korea | : Not determined. |
| Taiwan | : Not determined. |
| Thailand | : <input checked="" type="checkbox"/> Not determined. |
| Turkey | : Not determined. |
| United States | : Not determined. |
| Viet Nam | : <input checked="" type="checkbox"/> Not determined. |

Section 16. Any other relevant information

History

| | |
|---------------------------------------|---------------|
| Date of issue/Date of revision | : 22/09/2017 |
| Date of previous issue | : 31/10/2016. |
| Version | : 6 |

Key to abbreviations

| |
|---|
| : ADG = Australian Dangerous Goods |
| : ATE = Acute Toxicity Estimate |
| : BCF = Bioconcentration Factor |
| : GHS = Globally Harmonized System of Classification and Labelling of Chemicals |
| : IATA = International Air Transport Association |
| : IBC = Intermediate Bulk Container |
| : IMDG = International Maritime Dangerous Goods |
| : LogPow = logarithm of the octanol/water partition coefficient |
| : MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) |
| : NOHSC = National Occupational Health and Safety Commission |
| : SUSMP = Standard Uniform Schedule of Medicine and Poisons |
| : UN = United Nations |

Procedure used to derive the classification

| Classification | Justification |
|--|--|
| <input checked="" type="checkbox"/> -(Hydroxy) Acetophenone Test Samples Acute Tox. 4, H302 Eye Irrit. 2A, H319 | Expert judgment Expert judgment |
| Sodium Hydroxide Solution 1.0N for HPCE Met. Corr. 1, H290 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 | Expert judgment Expert judgment Expert judgment Expert judgment |

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

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