

Revision Date 2021-06-18

Version 1

## 1. IDENTIFICATION

|                            |  |
|----------------------------|--|
| <b>Product Name</b>        | Decalcifier, Calfor®   |
| <b>Product Code</b>        | CFQ025, CFQ038, CFQ100, CFQ400, CFQ438   |
| <b>Recommended Use</b>     | For laboratory, scientific, R&D or manufacturing use.  |
| <b>Company</b>             | Cancer Diagnostics, Inc.<br>4300 Emperor Blvd. #400<br>Durham, NC 27703<br>Tel. (877) 846-5393 |
| <b>Emergency Telephone</b> | Call CHEMTREC 1-800-424-9300   |

## 2. HAZARDS IDENTIFICATION

### Classification

#### OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

|   |                           |
|---|---------------------------|
| Acute toxicity - Oral                     | Category 4                |
| Acute toxicity - Inhalation (Gases)       | Category 4                |
| Acute toxicity - Inhalation (Dusts/Mists) | Category 4                |
| Skin corrosion/irritation                 | Category 1 Sub-category A |
| Serious eye damage/eye irritation         | Category 1                |
| Skin sensitization                        | Category 1                |

### Label elements

#### Signal word

Danger

#### Hazard statements

Harmful if swallowed. Harmful if inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction.



#### Precautionary Statements - Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapors/spray. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves.

**Precautionary Statements - Response**

Immediately call a POISON CENTER or doctor/physician.

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 doctor/physician.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. Immediately call a POISON CENTER or doctor/physician.

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. Do NOT induce vomiting.

**Precautionary Statements - Storage**

Store locked up.

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS No.   | Weight-% |
|---------------|-----------|----------|
| Water         | 7732-18-5 | <80      |
| Formaldehyde  | 50-00-0   | >10      |
| Formic acid   | 64-18-6   | <10      |

### 4. FIRST AID MEASURES

**Description of first aid measures****Eye contact**

Immediately flush with plenty of water for at least 15 minutes, separating eyelids occasionally. Remove contact lenses if present. Get immediate medical attention.

**Skin contact**

Wash thoroughly with soap and water while removing contaminated garments. Get medical attention if irritation develops.

**Inhalation**

Remove to fresh air. Get medical attention for any breathing difficulty.

**Ingestion**

Do NOT induce vomiting unless instructed to do so by medical personnel. If conscious, rinse mouth and give several glasses of water to drink. Never give anything by mouth to an unconscious person. Get immediate medical attention.

**Most important symptoms and effects, both acute and delayed****Symptoms**

Causes skin and eye irritation/burns. If swallowed, causes GI disturbances.

### 5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

**Specific hazards arising from the chemical**

No information available.

**Protective equipment and precautions for firefighters**

Firefighters should wear self-contained breathing apparatus with full facepiece operated in pressure-demand or other positive pressure mode.

**NFPA****Health hazards 3****Flammability 1****Instability 0****Physical and Chemical Properties -**

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Ensure adequate ventilation, especially in confined areas.

**Environmental precautions** Prevent entry into waterways, sewers, basements or confined areas.

### Methods and material for containment and cleaning up

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Absorb spill with inert material, scoop up and containerize for disposal.

## 7. HANDLING AND STORAGE

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

**Incompatible materials** None known based on information supplied.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Occupational exposure limits

| Chemical Name           | ACGIH TLV                     | OSHA PEL   | NIOSH IDLH  |
|-------------------------|-------------------------------|--|---|
| Formaldehyde<br>50-00-0 | STEL: 0.3 ppm<br>TWA: 0.1 ppm | TWA: 0.75 ppm<br>(vacated) TWA: 3 ppm unless<br>specified in 1910.1048<br>(vacated) STEL: 10 ppm 30 min<br>unless specified in 1910.1048<br>(vacated) Ceiling: 5 ppm unless<br>specified in 1910.1048<br>STEL: 2 ppm see 29 CFR<br>1910.1048 | IDLH: 20 ppm<br>Ceiling: 0.1 ppm 15 min<br>TWA: 0.016 ppm |
| Formic acid<br>64-18-6  | STEL: 10 ppm<br>TWA: 5 ppm    | TWA: 5 ppm<br>TWA: 9 mg/m <sup>3</sup><br>(vacated) TWA: 5 ppm<br>(vacated) TWA: 9 mg/m <sup>3</sup>   | IDLH: 30 ppm<br>TWA: 5 ppm<br>TWA: 9 mg/m <sup>3</sup>    |

### Appropriate engineering controls

**Engineering Controls** Emergency showers, eyewash stations, ventilation systems.

### Individual protection measures, such as personal protective equipment

**Eye/face protection** Tight sealing safety goggles.

**Skin and body protection** Wear protective gloves and protective clothing.

**Respiratory protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

|                                       |                          |
|---------------------------------------|--------------------------|
| <b>Physical state</b>                 | Liquid                   |
| <b>Appearance</b>                     | Clear, colorless         |
| <b>Odor</b>                           | Odorless                 |
| <b>Odor threshold</b>                 | No information available |
| <b>pH</b>                             | No information available |
| <b>Melting point / freezing point</b> | No information available |
| <b>Boiling point / boiling range</b>  | No information available |
| <b>Flash point</b>                    | No information available |
| <b>Evaporation rate</b>               | No information available |
| <b>Flammability (solid, gas)</b>      | No information available |
| <b>Flammability Limit in Air</b>      |                          |
| <b>Upper flammability limit:</b>      | No information available |
| <b>Lower flammability limit:</b>      | No information available |
| <b>Vapor pressure</b>                 | No information available |
| <b>Vapor density</b>                  | No information available |
| <b>Relative density</b>               | No information available |
| <b>Water solubility</b>               | Miscible with water      |
| <b>Solubility in other solvents</b>   | No information available |
| <b>Partition coefficient</b>          | No information available |
| <b>Autoignition temperature</b>       | No information available |
| <b>Decomposition temperature</b>      | No information available |
| <b>Kinematic viscosity</b>            | No information available |

## 10. STABILITY AND REACTIVITY

|   |  |
|---|--|
| <b>Stability</b>                          | Stable under recommended storage conditions. |
| <b>Possibility of Hazardous Reactions</b> | None under normal processing.                |
| <b>Conditions to avoid</b>                | Extremes of temperature and direct sunlight. |
| <b>Incompatible materials</b>             | None known based on information supplied.    |
| <b>Hazardous Decomposition Products</b>   | None known based on information supplied.    |

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

|                     |                    |
|---------------------|--------------------|
| <b>Inhalation</b>   | No data available. |
| <b>Eye contact</b>  | No data available. |
| <b>Skin contact</b> | No data available. |
| <b>Ingestion</b>    | No data available. |

| Chemical Name           | Oral LD50            | Dermal LD50            | Inhalation LC50                      |
|-------------------------|----------------------|------------------------|--------------------------------------|
| Water<br>7732-18-5      | > 90 mL/kg ( Rat )   | -                      | -                                    |
| Formaldehyde<br>50-00-0 | = 100 mg/kg ( Rat )  | = 270 mg/kg ( Rabbit ) | = 0.578 mg/L ( Rat ) 4 h             |
| Formic acid<br>64-18-6  | = 1100 mg/kg ( Rat ) | -                      | = 15 g/m <sup>3</sup> ( Rat ) 15 min |

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

|  |   |
|--|---|
| <b>Skin corrosion/irritation</b>         | Irritating to skin.                                 |
| <b>Serious eye damage/eye irritation</b> | Irritating to eyes. Risk of serious damage to eyes. |

|                               |   |
|-------------------------------|---|
| <b>Sensitization</b>          | No information available.   |
| <b>Germ cell mutagenicity</b> | No information available.   |
| <b>Carcinogenicity</b>        | This chemical does not contain any carcinogens or potential carcinogens as listed by ACGIH, OSHA, IARC or NTP |

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

| Chemical Name           | Algae/aquatic plants   | Fish   | Crustacea   |
|-------------------------|--|--|---|
| Formaldehyde<br>50-00-0 | -  | 0.032 - 0.226: 96 h Oncorhynchus mykiss mL/L LC50 flow-through<br>23.2 - 29.7: 96 h Pimephales promelas mg/L LC50 static<br>22.6 - 25.7: 96 h Pimephales promelas mg/L LC50 flow-through<br>41: 96 h Brachydanio rerio mg/L LC50 static<br>1510: 96 h Lepomis macrochirus µg/L LC50 static<br>100 - 136: 96 h Oncorhynchus mykiss mg/L LC50 static | 2: 48 h Daphnia magna mg/L LC50<br>11.3 - 18: 48 h Daphnia magna mg/L EC50 Static     |
| Formic acid<br>64-18-6  | 25: 96 h Desmodesmus subspicatus mg/L EC50<br>26.9: 72 h Desmodesmus subspicatus mg/L EC50 | 175: 24 h Lepomis macrochirus mg/L LC50 static   | 120: 48 h Daphnia magna mg/L EC50<br>138 - 165.6: 48 h Daphnia magna mg/L EC50 Static |

### Persistence and degradability

No information available.

### Bioaccumulation

No information available.

| Chemical Name           | Partition coefficient |
|-------------------------|-----------------------|
| Formaldehyde<br>50-00-0 | 0.35                  |
| Formic acid<br>64-18-6  | -0.54                 |

### Other adverse effects

No information available

## 13. DISPOSAL CONSIDERATIONS

### Waste treatment methods

#### Disposal of wastes

Disposal should be in accordance with applicable regional, national and local laws and regulations.

#### Contaminated packaging

Do not reuse container. Emptied containers may contain residue. Continue to follow label warnings after container is emptied.

| Chemical Name           | RCRA | RCRA - Basis for Listing  | RCRA - D Series Wastes | RCRA - U Series Wastes |
|-------------------------|------|---|------------------------|------------------------|
| Formaldehyde<br>50-00-0 | U122 | Included in waste streams:<br>K009, K010, K038, K040,<br>K156, K157 | -                      | U122                   |
| Formic acid<br>64-18-6  | U123 | Included in waste streams:<br>K009, K010                            | -                      | U123                   |

| Chemical Name           | California Hazardous Waste Status |
|-------------------------|-----------------------------------|
| Formaldehyde<br>50-00-0 | Toxic<br>Ignitable                |
| Formic acid             | Toxic                             |

|         |           |
|---------|-----------|
| 64-18-6 | Corrosive |
|---------|-----------|

#### 14. TRANSPORT INFORMATION

Transportation information is provided as a general reference only and may not be applicable in all situations. This information applies to non-bulk shipments only. Per 49 CFR §173.22, it is the shipper's responsibility to ensure that all materials are properly packaged, classified and labeled prior to shipment.

##### DOT

|                      |  |
|----------------------|--|
| UN/ID no.            | UN1760   |
| Proper shipping name | Corrosive liquid, n.o.s. (dilute formic acid solution) |
| Hazard Class         | 8  |
| Packing Group        | III  |

##### IATA

|                      |  |
|----------------------|--|
| UN/ID no.            | UN1760   |
| Proper shipping name | Corrosive liquid, n.o.s. (dilute formic acid solution) |
| Hazard Class         | 8  |
| Packing Group        | III  |

#### 15. REGULATORY INFORMATION

##### US Federal Regulations

##### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| Chemical Name          | SARA 313 - Threshold Values % |
|------------------------|-------------------------------|
| Formaldehyde - 50-00-0 | 0.1                           |
| Formic acid - 64-18-6  | 1.0                           |

##### SARA 311/312 Hazard Categories

|                                   |    |
|-----------------------------------|----|
| Acute health hazard               | No |
| Chronic Health Hazard             | No |
| Fire hazard                       | No |
| Sudden release of pressure hazard | No |
| Reactive Hazard                   | No |

##### CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

| Chemical Name           | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|-------------------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Formaldehyde<br>50-00-0 | 100 lb                      | -                      | -                         | X                          |
| Formic acid<br>64-18-6  | 5000 lb                     | -                      | -                         | X                          |

##### CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

| Chemical Name           | Hazardous Substances RQs | CERCLA/SARA RQ | Reportable Quantity (RQ)                   |
|-------------------------|--------------------------|----------------|--|
| Formaldehyde<br>50-00-0 | 100 lb                   | 100 lb         | RQ 100 lb final RQ<br>RQ 45.4 kg final RQ  |
| Formic acid<br>64-18-6  | 5000 lb                  | -              | RQ 5000 lb final RQ<br>RQ 2270 kg final RQ |

##### US State Regulations

##### California Proposition 65

This product contains the following Proposition 65 chemicals

| Chemical Name          | California Proposition 65 |
|------------------------|---------------------------|
| Formaldehyde - 50-00-0 | Carcinogen                |

#### U.S. State Right-to-Know Regulations

| Chemical Name           | New Jersey | Massachusetts | Pennsylvania |
|-------------------------|------------|---------------|--------------|
| Water<br>7732-18-5      | -          | -             | X            |
| Formaldehyde<br>50-00-0 | X          | X             | X            |
| Formic acid<br>64-18-6  | X          | X             | X            |

### 16. OTHER INFORMATION

Prepared By

CDI Regulatory Affairs (Email: [compliance@cancerdiagnostics.com](mailto:compliance@cancerdiagnostics.com))

Issue Date

10-Jul-2020

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**End of Safety Data Sheet**