

Material Safety Data Sheet



QUEL ACID CIP

1. Product and company identification

Product name : QUEL ACID CIP

Supplier/Manufacturer : DuBois Chemicals, Inc.
3630 E. Kemper Rd.
Cincinnati, OH 45241 USA
Phone: 1-800-438-2647

DuBois Chemicals Canada, Inc.
1155 North Service Road West
Unit 6
Oakville, Ontario, L6M 3E3 Canada
Phone: 1-866-861-3603

Recommended use : Industrial applications: Acidic detergent descaler

MSDS # : DUB00877

Product code : 12390330, 12390470, 12390100

Validation date : 8/1/2013.

Version : 1

Responsible name : Regulatory Department 1-800-438-2647

In case of emergency : 1-866-923-4919 (US and Canada)
01-651-523-0314 (Int'l and Mexico)

**Hazardous Material
Information System (U.S.A.)**

| | |
|------------------|---|
| Health | 3 |
| Flammability | 0 |
| Physical hazards | 1 |
| | |

2. Hazards identification

Physical state : Liquid.

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency overview : DANGER!

CORROSIVE. CAUSES DIGESTIVE TRACT, EYE AND SKIN BURNS. MAY CAUSE RESPIRATORY TRACT IRRITATION. MAY BE HARMFUL IF SWALLOWED.

Do not breathe vapor or mist. Do not ingest. Do not get in eyes or on skin or clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Routes of entry : Dermal contact. Eye contact. Inhalation.

Potential acute health effects

Inhalation : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.

Ingestion : Harmful if swallowed. Corrosive to the digestive tract. Causes burns.

Skin : Corrosive to the skin. Causes burns.

Eyes : Corrosive to eyes. Causes burns.

Potential chronic health effects

Carcinogenicity : No known significant effects or critical hazards.

Target organs : May cause damage to the following organs: upper respiratory tract.
Contains material which may cause damage to the following organs: skin, eye, lens or cornea, teeth, testes.

2. Hazards identification

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See toxicological information (section 11)

3. Composition/information on ingredients

| Name | CAS number | % by weight |
|-----------------|------------|-------------|
| nitric acid | 7697-37-2 | 20 - 30 |
| Phosphoric acid | 7664-38-2 | 5 - 10 |

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.

4. First aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

5. Fire-fighting measures

Flammability of the product : In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : 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.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
nitrogen oxides
phosphorus oxides

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

- Personal precautions** : 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. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).
- Environmental precautions** : 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).
- Methods for cleaning up**
- Small spill** : 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.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. 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 (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. Handling and storage

- Handling** : Put on appropriate personal protective equipment (see section 8). 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. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Storage** : 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. Separate from alkalis. 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.

8. Exposure controls / personal protection

Occupational exposure limits

| Ingredient | Exposure limits |
|-------------------|--|
| nitric acid | ACGIH TLV (United States, 2/2010). TWA: 2 ppm 8 hour(s). TWA: 5.2 mg/m ³ 8 hour(s). STEL: 4 ppm 15 minute(s). STEL: 10 mg/m ³ 15 minute(s). OSHA PEL (United States, 6/2010). TWA: 2 ppm 8 hour(s). TWA: 5 mg/m ³ 8 hour(s). |
| Phosphoric acid | ACGIH TLV (United States, 2/2010). TWA: 1 mg/m ³ 8 hour(s). STEL: 3 mg/m ³ 15 minute(s). OSHA PEL (United States, 6/2010). TWA: 1 mg/m ³ 8 hour(s). |

Consult local authorities for acceptable exposure limits.

8. Exposure controls / personal protection

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
- Engineering measures** : If user operations generate dust, fumes, gas, vapor 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.
- 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.
- Personal protection**
- Respiratory** : If a risk assessment indicates this is necessary, use a properly fitted, air-purifying or air-fed respirator complying with an approved standard. 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.
- Hands** : 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.
Recommended: nitrile rubber
- Eyes** : 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 or dusts. Recommended: splash goggles
- Skin** : 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.
- 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.
- Personal protective equipment (Pictograms)** :



9. Physical and chemical properties

- Physical state** : Liquid.
- Flash point** : Closed cup: >93.333°C (>200°F) [Pensky-Martens (ASTM D93)]
- Color** : Colorless.
- Odor** : acidic smell
- pH** : <1
- Dilution pH** : 1.2 [Conc. (% w/w): 4%]
- Boiling/condensation point** : Not available.
- Melting/freezing point** : Not available.
- Specific gravity** : 1.175
- Density** : 9.805375 lbs/gal
- Vapor pressure** : Not available.
- Vapor density** : Not available.
- Odor threshold** : Not available.
- Evaporation rate** : Not available.
- Solubility** : Easily soluble in the following materials: cold water and hot water.
- Elemental Phosphorus** : 2.4 %

9. Physical and chemical properties

Octanol/water partition coefficient : Not available.

10. Stability and reactivity

Chemical stability : The product is stable.

Conditions to avoid : No specific data.

Materials to avoid : Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air.
Reactive or incompatible with the following materials:
alkalis

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

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

11. Toxicological information

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|-------------------------|-----------|---------|-----------|----------|
| Phosphoric acid | LD50 Oral | Rat | 1.25 g/kg | - |

Carcinogenicity

None known.

Acute toxicity estimates

| ATE value | Route |
|-------------|-------|
| 12560 mg/kg | Oral |

12. Ecological information

Ecotoxicity : No known significant effects or critical hazards.

Aquatic ecotoxicity

None known.

13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

RCRA classification : D002 [Corrosive]

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

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

14. Transport information

IATA/IMDG/DOT/TDG: Please refer to the Bill of Lading/receiving documents for up to date shipping information.

15. Regulatory information

United States

- U.S. Federal regulations** : TSCA 12(b) one-time export: No products were found.
TSCA 12(b) annual export notification: No products were found.
- United States inventory (TSCA 8b)** : All components are listed or exempted.
- SARA 311/312 MSDS distribution - chemical inventory - hazard identification:**
QUEL ACID CIP: Immediate (acute) health hazard
- SARA 302/304/311/312 extremely hazardous substances:** nitric acid
- CERCLA:** Hazardous substances.: Phosphoric acid: 5000 lbs. (2270 kg); nitric acid: 1000 lbs. (454 kg);
- Clean Air Act (CAA) 112 accidental release prevention:** nitric acid

SARA 313

| | Product name | CAS number | Concentration |
|-----------------------|--------------|------------|---------------|
| Supplier notification | nitric acid | 7697-37-2 | 20 - 30 |

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations

- Massachusetts** : The following components are listed: NITRIC ACID; PHOSPHORIC ACID
- Rhode Island** : None of the components are listed.
- New Jersey** : The following components are listed: NITRIC ACID; PHOSPHORIC ACID
- Pennsylvania** : The following components are listed: NITRIC ACID; PHOSPHORIC ACID
- California Prop. 65**

None of the components are listed.

Canada

- WHMIS (Canada)** : Class D-1A: Material causing immediate and serious toxic effects (Very toxic).
Class E: Corrosive material

- WHMIS (Pictograms)** :



Canadian lists

- Canadian NPRI** : The following components are listed: Nitric acid; Phosphorus (total)
- Canada inventory** : All components are listed or exempted.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

International regulations

- International lists** :
- Australia inventory (AICS):** All components are listed or exempted.
 - China inventory (IECSC):** All components are listed or exempted.
 - Japan inventory:** Not determined.
 - Korea inventory:** All components are listed or exempted.
 - New Zealand Inventory of Chemicals (NZIoC):** All components are listed or exempted.
 - Philippines inventory (PICCS):** Not determined.
- Europe inventory** : All components are listed or exempted.

16. Other information

Hazardous Material :
Information System (U.S.A.)

| | |
|------------------|---|
| Health | 3 |
| Flammability | 0 |
| Physical hazards | 1 |
| | |

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

Date of issue : 8/1/2013.

Date of previous issue : No previous validation.

Version : 1

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.