Safety Data Sheet

SECTION 1: Identification

1.1 Product identifier
Product name
Brilliant CIP Acid Blend
Product number
978
Brand
Crown Chemical, Inc

1.2 Other means of identification
Brilliant CIP Acid Blend

1.3 Recommended use of the chemical and restrictions on use
Lime and scale removal

1.4 Supplier’s details
Name
Crown Chemical, Inc.
Address
4701 W. 136th. St.
Crestwood, Illinois 60418
U.S.A.
Telephone
708-371-6990
Fax
708-371-6992
email
info@crown-chem.com

1.5 Emergency phone number(s)
800-535-5053

SECTION 2: Hazard identification

General hazard statement
Causes serious eye damage; Causes severe skin burns and eye damage

2.1 Classification of the substance or mixture
GHS classification in accordance with: (US) OSHA (29 CFR 1910.1200)
- Eye damage/irritation, Cat. 1
- Skin corrosion/irritation, Cat. 1A

2.2 GHS label elements, including precautionary statements

Pictogram
1. Corrosion

Signal word
Danger

Hazard statement(s)
H318 Causes serious eye damage
H314 Causes severe skin burns and eye damage
Precautionary statement(s)

P280 Wear eye protection/face protection/protective gloves/protective clothing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor for treatment advice.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P264 Wash hands & skin thoroughly after handling.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P363 Wash contaminated clothing before reuse.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P405 Store locked up.
P501 Dispose of contents and container in accordance with all local, state, national and international regulations.

2.3 Other hazards which do not result in classification
None identified

SECTION 3: Composition/information on ingredients

3.2 Mixtures
Corrosive Mixture

Components

1. Phosphoric acid
Concentration 20 - 40 % (By weight)
EC no. 231-633-2
CAS no. 7664-38-2
Index no. 015-011-00-6
- Skin corrosion/irritation, Cat. 1B
  H314 Causes severe skin burns and eye damage

2. Nitric acid (<40%)
Concentration 15 - 25 % (By Weight)
EC no. 231-714-2
CAS no. 7697-37-2
Index no. 007-004-00-1
- Oxidizing liquids, Cat. 2
- Skin corrosion/irritation, Cat. 1A
  H272 May intensify fire; oxidizer
  H314 Causes severe skin burns and eye damage

Trade secret statement (OSHA 1910.1200(i))
The specific chemical identities and/or actual concentrations for one or more components are being withheld as trade secrets under the US regulation 29 CFR 1910.1200(i).

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General advice
Do not breathe fumes or mists. Wash hand thoroughly after handling. Wear protective rubber gloves and chemical splash goggles or face shield when using this product. If inhalable particles of dusts or mists may occur during use, wear NIOSH approved respiratory protection. Mix ONLY with water.
If inhaled
Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor if you feel unwell.

In case of skin contact
Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. Call a Poison Control Center or doctor for treatment advice if irritation persists.

In case of eye contact
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a Poison Control Center or doctor for treatment advice.

If swallowed
Rinse out mouth. Do NOT induce vomiting. Immediately call a Poison Control Center or doctor for treatment advice.

4.2 Most important symptoms/effects, acute and delayed
See Section 11 for additional information.

4.3 Indication of immediate medical attention and special treatment needed, if necessary
Treat exposure symptomatically. In all cases of eye contact, ingestion, or inhalation, contact a doctor or Poison Control Center immediately.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media
Use water spray, fog or foam.

5.2 Specific hazards arising from the chemical
None known

5.3 Special protective actions for fire-fighters
Self-contained breathing apparatus.

Further information
Remove all persons from the vicinity. No responsive action should be taken without proper training.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Initiate spill containment procedures immediately using containment or absorption methods. Keep people away from area. Put on appropriate protective equipment (see Section 8).

6.2 Environmental precautions
See Section 12 for ecological Information.

6.3 Methods and materials for containment and cleaning up
Do not allow spilled material to enter sewers, waterways or soil. Neutralize with water. Mop, sweep or otherwise collect spilled material and hold for disposal. Consult local government authorities for allowable disposal methods. After removal, rinse area completely with water to remove residue. For large spills, immediately call an environmental remediation company for assistance.

Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Avoid contact with eyes, skin or clothing. Avoid inhalation of dust or mists. Use in a well ventilated area. Wash thoroughly after handling.
7.2 Conditions for safe storage, including any incompatibilities
Store in a locked location inaccessible to small children. Keep container closed when not in use. Store in a well ventilated area between 60-100°F (15-38°C).

Specific end use(s)
Apart from the uses mentioned in section 1 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

1. Phosphoric acid (CAS: 7664-38-2 EC: 231-633-2)
PEL (Inhalation): 1 mg/m³; USA (OSHA)
OSHA Annotated Table Z-1, www.osha.gov
PEL (Inhalation): 1 mg/m³, (ST) 3 mg/m³; USA (Cal/OSHA)
OSHA Annotated Table Z-1, www.osha.gov
REL (Inhalation): 1 mg/m³, (ST) 3 mg/m³; USA (NIOSH)
OSHA Annotated Table Z-1, www.osha.gov
TLV® (Inhalation): 1 mg/m³, (ST) 3 mg/m³; USA (ACGIH)
OSHA Annotated Table Z-1, www.osha.gov

8.2 Appropriate engineering controls
Use with adequate ventilation to maintain exposure limits below listed thresholds.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection
Wear chemical splash goggles or face shield when using this product.

Skin protection
Wear protective rubber gloves, a long sleeve shirt and, if necessary, a rubber apron to prevent contact.

Body protection
Wash hand thoroughly after handling. Avoid contact with clothing or shoes. Wash contaminated items before reuse. Avoid wearing contact lenses when using this product.

Respiratory protection
Wear a NIOSH approved respirator for corrosive dusts or mists.

Thermal hazards
No data available.

Environmental exposure controls
Do not let product enter drains.

SECTION 9: Physical and chemical properties

<table>
<thead>
<tr>
<th>Information on basic physical and chemical properties</th>
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<tbody>
<tr>
<td>Appearance/form (physical state, color, etc.)</td>
<td>Colorless Liquid</td>
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<tr>
<td>Odor</td>
<td>Characteristic</td>
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<td>Odor threshold</td>
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<tr>
<td>pH</td>
<td>&lt;2.0 (1% solution)</td>
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<tr>
<td>Melting point/freezing point</td>
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<td>Initial boiling point and boiling range</td>
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<tr>
<td>Flash point</td>
<td>Non-Combustible</td>
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<tr>
<td>Evaporation rate</td>
<td>No data available.</td>
</tr>
</tbody>
</table>
Safety Data Sheet
Brilliant CIP Acid Blend

Flammability (solid, gas) No data available.
Upper/lower flammability limits No data available.
Upper/lower explosive limits No data available.
Vapor pressure No data available.
Vapor density No data available.
Relative density >1.0
Solubility(ies) 100% in 120°F Water
Partition coefficient: n-octanol/water No data available.
Auto-ignition temperature No data available.
Decomposition temperature No data available.
Viscosity >1.0
Explosive properties No data available.
Oxidizing properties No data available.

Other safety information
No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity
Product is highly reactive with alkalis, reactive metals (especially aluminum, zinc and tin), Sodium Hypochlorite and chlorine. Reactions may produce hazardous conditions, including violent splattering of corrosive materials. Contact with Hypochlorite or chlorine may release toxic chlorine gas. NEVER mix this product with other chemicals. Mix this product ONLY with water.

10.2 Chemical stability
Product is stable under normal storage and usage conditions.

10.3 Possibility of hazardous reactions
No data available.

10.4 Conditions to avoid
Heat, flames and sparks. Incompatible products. Keep away from open flames, hot surfaces and sources of ignition.

10.5 Incompatible materials
Alkalis, chlorine and other halogens, metals.

10.6 Hazardous decomposition products
None are expected under normal storage and usage conditions.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
Likely Routes of Exposure: Eyes, Skin, Ingestion, Inhalation

Skin corrosion/irritation
Irritation, pain, redness, blistering.

Serious eye damage/irritation
Irritation, pain, redness, watering.

Respiratory or skin sensitization
Coughing, choking, respiratory tract irritation, breathing difficulty.

Germ cell mutagenicity
No data available.
Carcinogenicity
No data available.

Reproductive toxicity
No data available.

STOT-single exposure
No data available.

STOT-repeated exposure
No data available.

Aspiration hazard
No data available.

Additional information
No known significant effects or critical hazards.

SECTION 12: Ecological information

Toxicity
No specific data available for this mixture. Phosphoric Acid is known to be toxic to aquatic life.

Persistence and degradability
No data available on product.

Bioaccumulative potential
No data available on product.

Mobility in soil
No data available.

Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects
No known significant effects or critical hazards.

SECTION 13: Disposal considerations

Disposal of the product
Avoid disposal of this product. Use complete contents according to directions.

Other disposal recommendations
Do not release contents into a municipal sewer except through normal dilution and usage. Do not release contents onto the ground or into any body of water. Dispose of empty container by offering for recycling if available, or into a landfill. Follow all applicable state and local regulations.

SECTION 14: Transport information

DOT (US)
UN Number: NA 1760
Class: 8
Packing Group: III
Proper Shipping Name: NA 1760, Compounds, Cleaning Liquid, 8, PG III (Contains Phosphoric Acid, Nitric Acid)
Reportable quantity (RQ): Phosphoric Acid

Note: Certain package sizes of this product may qualify for exceptions to DOT’s packaging, labeling and other requirements, and thus may have different DOT shipping names. For bulk shipments, see the shipping documents.
SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components
Phosphoric acid CAS number: 7664-38-2
Nitric acid CAS number: 7697-37-2

Pennsylvania Right To Know Components
Phosphoric acid CAS number: 7664-38-2
Nitric acid CAS number: 7697-37-2

New Jersey Right To Know Components
Phosphoric acid CAS number: 7664-38-2
NITRIC ACID CAS number: 7697-37-2

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16: Other information

The information herein is believed to be correct, but is given without warranty or guaranty of any kind, express or implied. The hazards provided in this Safety Data Sheet apply to the product in its concentrated form, and may differ significantly after dilution.

16.1 Further information/disclaimer
DISCLAIMER: The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigation to determine the suitability of information for their particular purposes. In no event shall Crown Chemical, Inc. be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, whatsoever arising, even if Crown Chemical, Inc. has been advised of the possibility of such damages.