

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/04/2014

Reviewed on 01/14/2014

1 Identification

- **Product identifier**
- **Trade name:** Power Bright
- **Article number:** 971 PK
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Power Kleen Corporation
101 South Bayview Blvd.
OLDSMAR, FL 34677
USA
- **Information department:** Product Safety Department
- **Emergency telephone number:** ChemTel Inc. (800) 255-3924 Intl. +01 (813) 248-0585



2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS06 Skull and crossbones

Acute Tox. 2 H300 Fatal if swallowed.

Acute Tox. 1 H310 Fatal in contact with skin.

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 Health hazard

Carc. 1A H350 May cause cancer.



GHS05 Corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS05



GHS06



GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**
hydrofluoric acid
sulphuric acid 98.%
- **Hazard statements**
Fatal if swallowed or in contact with skin.
Toxic if inhaled.
Causes severe skin burns and eye damage.

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May cause cancer.

· **Precautionary statements**

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

Do not breathe dust/fume/gas/mist/vapours/spray.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Remove/Take off immediately all contaminated clothing.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 4

Fire = 0

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 4

Fire = 0

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

7664-39-3	hydrofluoric acid	10-25%
7664-93-9	sulphuric acid 98.%	2.5-10%

4 First-aid measures

· **Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

Remove breathing apparatus only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· **After inhalation:**

Delayed reactions up to and including fatal pulmonary edema to inhaled concentrations of HF may not be apparent for hours following initial exposure.

Use a respiration bag or breathing device.

Do not use mouth to mouth or mouth to nose resuscitation.

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

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· **After skin contact:**

Remove contaminated clothing while flushing effected area with drenching shower for at least five minutes.
 Rub in Ca-gluconate solution or Ca-gluconate gel immediately.
 Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:**

Irrigate open eyelids with 500-1000cc's of a 1% calcium gluconate in saline solution.
 Remove contact lenses if able to do so.
 Call a doctor immediately.
 Protect unharmed eye.
 Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:**

Seek immediate medical attention with emphasis on hydrofluoric acid exposure.
 Drink large amounts of calcium based antacid followed by milk of magnesia or milk.
 A person vomiting while lying on their back should be turned onto their side.
 Do not induce vomiting; immediately call for medical help.
 Drink copious amounts of water and provide fresh air. Immediately call a doctor.

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

Latent skin burns with delayed onset (up to 8 hours) can occur at lower concentrations (below 2%) exposure to this product. Skin burns start with an itching sensation and proceed to necrosis of effected tissue.
 Corrosive and extremely irritating to all tissues.
 Gastric or intestinal disorders
 Breathing difficulty

· **Danger**

Danger of gastric perforation.
 Danger of hypocalcemia
 Danger of pulmonary edema.

· **Indication of any immediate medical attention and special treatment needed**

If blue colouring appears (lips, ear-lobes, finger-nails), give oxygen treatment as quickly as possible.
 Later observation for pneumonia and pulmonary edema.
 Medical supervision for at least 48 hours.

5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:** Limestone powder
 · **Special hazards arising from the substance or mixture**

Formation of toxic gases is possible during heating or in case of fire.
 Hydrogen fluoride (HF)

· **Advice for firefighters**

Product is not flammable, however due to the possible evolution of toxic gases in fire situations, fight surrounding fires from the upwind side of the fire wearing full SCBA protective gear. Avoid breathing fumes, vapors or gases from this product.

· **Protective equipment:**

Wear self-contained respiratory protective device.
 Wear fully protective suit.
 Mouth respiratory protective device.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

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- **Environmental precautions:**
 - Do not allow product to reach sewage system or any water course.
 - Inform respective authorities in case of seepage into water course or sewage system.
 - Dilute with plenty of water.
 - Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
 - Neutralize spills with lime or limestone powder. Ventilate effected area.
 - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 - Use neutralizing agent.
 - Dispose contaminated material as waste according to item 13.
 - Ensure adequate ventilation.
- **Reference to other sections**
 - See Section 7 for information on safe handling.
 - See Section 8 for information on personal protection equipment.
 - See Section 13 for disposal information.

7 Handling and storage

- **Precautions for safe handling**
 - Refer to 40CFR 355 and 370 for regulations pertaining to items classified as Threshold Planning Quantities as shown in section 2, Hazardous ingredients.
 - This product will attack glass, concrete, and certain metals.
 - When diluting, always stir the product into standing water, not water to product.
 - Keep receptacles tightly sealed.
 - Ensure good ventilation/exhaustion at the workplace.
 - Open and handle receptacle with care.
 - Prevent formation of aerosols.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
 - Unsuitable material for receptacle: glass or ceramic.
 - Unsuitable material for receptacle: steel.
 - Use receptacles with fluoroplastic lining.
- **Information about storage in one common storage facility:**
 - Store away from metals.
 - Store away from foodstuffs.
- **Further information about storage conditions:**
 - Store under lock and key and out of the reach of children.
 - Protect from contamination.
 - Store receptacle in a well ventilated area.
 - Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

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· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

7664-39-3 hydrofluoric acid

PEL	Long-term value: 3 ppm as F
REL	Long-term value: 2.5 mg/m ³ , 3 ppm Ceiling limit value: 5* mg/m ³ , 6* ppm *15-min, as F
TLV	Long-term value: 0.41 mg/m ³ , 0.5 ppm Ceiling limit value: 1.64 mg/m ³ , 2 ppm as F; Skin; BEI

7664-93-9 sulphuric acid 98.%

PEL	Long-term value: 1 mg/m ³
REL	Long-term value: 1 mg/m ³
TLV	Long-term value: 0.2* mg/m ³ *as thoracic fraction

· **Ingredients with biological limit values:**

7664-39-3 hydrofluoric acid

BEI	3 mg/g creatinine Medium: urine Time: prior to shift Parameter: Flourides (background)
	10 mg/g creatinine Medium: urine Time: end of shift Parameter: Flourides (background)

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work.
- Store protective clothing separately.
- Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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- **Material of gloves**

Fluorocarbon rubber (Viton)

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **For the permanent contact gloves made of the following materials are suitable:** Fluorocarbon rubber (Viton)

- **Not suitable are gloves made of the following materials:**

Plastic gloves

Butyl rubber, BR

PVA gloves

PVC gloves

Nitrile rubber, NBR

- **Eye protection:**

Face protection



Tightly sealed goggles

- **Body protection:**

Boots

Acid resistant protective clothing

Full head, face and neck protection

Apron

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Liquid

Color: Pink

- **Odor:** Acrid

- **Odour threshold:** Not determined.

- **pH-value at 20 °C (68 °F):** < 1

- **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: < 100 °C (< 212 °F)

- **Flash point:** Not applicable.

- **Flammability (solid, gaseous):** Not applicable.

- **Ignition temperature:**

Decomposition temperature: Not determined.

- **Auto igniting:** Product is not selfigniting.

- **Danger of explosion:** Product does not present an explosion hazard.

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· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure at 20 °C (68 °F):	40 hPa (30 mm Hg)
· Density at 20 °C (68 °F):	1.13 g/cm ³ (9.43 lbs/gal)
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Fully miscible.
· Partition coefficient (n-octanol/water): Not determined.	
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	0.0 %
Water:	75.8 %
VOC content:	24.2 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability** Stable
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions**
 - Attacks materials containing glass and silicate.
 - Reacts with strong oxidizing agents.
 - Reacts with alkali (lyes).
 - Reacts with metals forming hydrogen.
 - Develops toxic gases / fumes.
 - Reacts with light alloys to form hydrogen.
 - Reacts with various metals.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** Strong alkalis, Strong oxidizers, Most metals, Cyanides, Sulfides, Glass and Ceramics.
- **Hazardous decomposition products:**
 - Fluorine
 - Hydrocarbons
 - Carbon monoxide and carbon dioxide
 - Hydrogen fluoride

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Strong caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.

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- **Sensitization:** No sensitizing effects known.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Toxic

Corrosive

Very toxic

Danger through skin absorption.

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

7664-93-9	sulphuric acid 98.%	I
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- **NTP (National Toxicology Program)**

7664-93-9	sulphuric acid 98.%	K
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- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:** No further relevant information available.

- **Persistence and degradability** No further relevant information available.

- **Bioaccumulative potential** No further relevant information available.

- **Mobility in soil** No further relevant information available.

- **Additional ecological information:**

- **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**

- **Recommendation:**

Dilute concentrate with water and neutralize afterwards with suitable alkali material (sodium hydroxide solution, lime). The formed neutral salts are relatively environment-friendly.

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- **Uncleaned packagings:**

- **Recommendation:**

Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.

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· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

<ul style="list-style-type: none"> · UN-Number · DOT, IMDG, IATA 	UN2922
<ul style="list-style-type: none"> · UN proper shipping name · DOT · IMDG, IATA 	Corrosive liquids, toxic, n.o.s. (Hydrofluoric acid) CORROSIVE LIQUID, TOXIC, N.O.S. (HYDROFLUORIC ACID)
<ul style="list-style-type: none"> · Transport hazard class(es) · DOT 	<div style="display: flex; justify-content: space-around; align-items: center;">   </div>
<ul style="list-style-type: none"> · Class · Label 	8 Corrosive substances 8+6.1
<ul style="list-style-type: none"> · IMDG, IATA 	<div style="display: flex; justify-content: space-around; align-items: center;">   </div>
<ul style="list-style-type: none"> · Class · Label 	8 Corrosive substances 8+6.1
<ul style="list-style-type: none"> · Packing group · DOT, IMDG, IATA 	II
<ul style="list-style-type: none"> · Environmental hazards: · Marine pollutant: 	No
<ul style="list-style-type: none"> · Special precautions for user · Danger code (Kemler): · EMS Number: · Segregation groups 	86 F-A,S-B Acids
<ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	Not applicable.
<ul style="list-style-type: none"> · Transport/Additional information: · DOT · Quantity limitations 	On passenger aircraft/rail: 1 L On cargo aircraft only: 30 L
<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) 	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml

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· UN "Model Regulation":	UN2922, Corrosive liquids, toxic, n.o.s. (Hydrofluoric acid), 8 (6.1), II
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15 Regulatory information

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

· Section 355 (extremely hazardous substances):	
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7664-93-9	sulphuric acid 98.%
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· Section 313 (Specific toxic chemical listings):	
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7664-93-9	sulphuric acid 98.%
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· TSCA (Toxic Substances Control Act):	
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7664-93-9	sulphuric acid 98.%
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144-62-7	oxalic acid
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66455-15-0	C10-12 6 Mole Linear Alcohol Ethoxylate
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7732-18-5	water, distilled, conductivity or of similar purity
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- Proposition 65

- Chemicals known to cause cancer:

Sulfuric acid as mist only.

None of the ingredients is listed.

- Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

- Chemicals known to cause reproductive toxicity for males.

None of the ingredients is listed.

- Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

- Carcinogenic categories

· EPA (Environmental Protection Agency)	
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None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)	
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7664-93-9	sulphuric acid 98.%		
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· NIOSH-Ca (National Institute for Occupational Safety and Health)	
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None of the ingredients is listed.

- GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).

- Hazard pictograms



GHS05

GHS06

GHS08

- Signal word *Danger*

- Hazard-determining components of labeling:

hydrofluoric acid

sulphuric acid 98.%

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- **Hazard statements**

Fatal if swallowed or in contact with skin.

Toxic if inhaled.

Causes severe skin burns and eye damage.

May cause cancer.

- **Precautionary statements**

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

Do not breathe dust/fume/gas/mist/vapours/spray.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Remove/Take off immediately all contaminated clothing.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing MSDS:** Environment protection department.

- **Date of preparation / last revision**

11/04/2014 / -

01/15/2014

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

Acute Tox. 2: Acute toxicity, Hazard Category 2

Acute Tox. 1: Acute toxicity, Hazard Category 1

Acute Tox. 3: Acute toxicity, Hazard Category 3

Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A

Carc. 1A: Carcinogenicity, Hazard Category 1A