

# Material Safety Data Sheet

ID: BRIGHT-004

## \*\*\* Section 1 - Chemical Product and Company Identification \*\*\*

**Chemical Name:** Potassium Perfluorobutane Sulfonate

**Product Use:** It is a kind of perfluoro anion surfactant and has the general characters of fluoro surfactant. It is widely used as inflaming retardant for synthetic materials, especially for polycarbonate.

### Manufacturer Information:

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## \*\*\* Section 2 – Composition / Information on Ingredients \*\*\*

CAS #	Boiling Point:	Percent
29420-49-3	C/0.13 kPa; 200 C/101 kPa (estimated) (acid)	98% min

## \*\*\* Section 3 – Physical & Chemical Properties \*\*\*

**Appearance:** White powder

**Physical State:** Powder

**Molecular Formula:** C<sub>4</sub>F<sub>9</sub>KO<sub>3</sub>S

**PH:** 5-7

## \*\*\* Section 4 –Hazard identification \*\*\*

### Emergency overview

Caution: may cause eye, skin and respiratory tract irritation.

Ingestion may cause gastric disturbances.

Avoid contact with the skin, eyes and clothing.

Avoid inhalation of mists/vapours.

Use with local exhaust ventilation.

Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator.

Wear NIOSH-certified chemical goggles.

Wear protective clothing.

Wear chemical resistant protective gloves.

Eye wash fountains and safety showers must be easily accessible.

### Potential health effects

#### Primary routes of exposure

Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquified gases.

#### Medical conditions aggravated by overexposure:

Data available do not indicate that there are medical conditions that are generally recognized as being aggravated by exposure to this substance/product.

See MSDS section 11 - Toxicological information.

**\*\*\* Section 5 –First-aid measures \*\*\***

**General advice:**

Remove contaminated clothing.

**If inhaled:**

Keep patient calm, remove to fresh air, and seek medical attention. Assist in breathing if necessary.

**If on skin:**

Wash thoroughly with soap and water.

If irritation develops, seek medical attention.

**If in eyes:**

Wash affected eyes for at least 15 minutes under running water with eyelids held open.

Seek medical attention.

**If swallowed:**

Rinse mouth and then drink plenty of water. Do not induce vomiting. Immediate medical attention required.

**Note to physician**

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

**\*\*\* Section 6 –Fire-fighting measures \*\*\***

Flash point: Not applicable

**Suitable extinguishing media:**

Water spray, dry extinguishing media, foam

**NFPA Hazard codes:**

Health: 1 Fire: 0 Reactivity: 0 Special:

**\*\*\* Section 7 –Accidental release measures \*\*\***

**Personal precautions:**

Use personal protective clothing.

**Environmental precautions:**

Do not discharge into drains/surface waters/groundwater.

**Cleanup:**

Spills should be contained, solidified, and placed in suitable containers for disposal.

For small amounts: Pick up with absorbent material (e.g. sand, sawdust, general-purpose binder). Dispose of absorbed material in accordance with regulations.

For large amounts: Pump off product.

**\*\*\* Section 8 –Handling and storage \*\*\***

**Handling**

**General advice:**

No special measures necessary provided product is used correctly.

**Storage**

**General advice:**

Store protected against freezing.

**Storage incompatibility:**

General: Segregate from strong bases. Segregate from heavy-metal salts.

**\*\*\* Section 9 –Exposure controls and personal protection \*\*\***

**Advice on system design:**

Provide local exhaust ventilation to control vapours/mists.

**Personal protective equipment****Respiratory protection:**

Respiratory protection not required.

**Hand protection:**

Chemical resistant protective gloves

**Eye protection:**

Tightly fitting safety goggles (chemical goggles).

**Body protection:**

Body protection must be chosen based on level of activity and exposure.

**General safety and hygiene measures:**

Wear protective clothing as necessary to minimize contact. Handle in accordance with good industrial hygiene and safety practice.

Keep away from food, drink and animal feeding stuffs. Avoid contact with skin and eyes. Remove contaminated clothing.

**\*\*\* Section 10 –Physical and chemical properties \*\*\***

Form: powder

Odour: product specific

Colour: White

pH value: 5-7

**\*\*\* Section 11 –Stability and reactivity \*\*\*****Conditions to avoid:**

No conditions known that should be avoided.

**Substances to avoid:**

oxidizing agent, strong alkalies

**Hazardous reactions:**

Reacts with alkalies. Reacts with heavy metal salts.

**Decomposition products:**

Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

**Corrosion to metals:**

Corrosive effect on: aluminum

**\*\*\* Section 12 –Toxicological information \*\*\*****Acute toxicity****Oral:**

LD50/rat: > 2,000 mg/kg (BASF-Test)

**Skin irritation:** rabbit: non-irritant (BASF-Test)

**Eye irritation :** rabbit: non-irritant (BASF-Test)

**Conclusion:** The test material is of low acute toxicity via the oral route with an oral LD50 > 2000 mg/kg bw.

**\*\*\* Section 13–Ecological information \*\*\*****Environmental fate and transport****Biodegradation:**

Test method: OECD 301 A (new version), activated sludge

Method of analysis: DOC reduction

Degree of elimination: < 10 % (28 d)

Test method: OECD Guideline 302 B (aerobic), activated sludge, industrial

Method of analysis: DOC reduction

Degree of elimination: 0 - 10 % (28 d)

Evaluation: Poorly biodegradable. Poorly eliminated from water.

**Bioaccumulation:**

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

**Chemical oxygen demand (COD):**

335 mg/g

**Environmental toxicity**

**Acute and prolonged toxicity to fish:**

golden orfe/LC50 (96 h): > 100 mg/l

zebra fish/LC50 (96 h): > 10,000 mg/l

**Acute toxicity to aquatic invertebrates:**

Directive 79/831/EEC Daphnia magna/EC50 (48 h): > 500 mg/l

**Toxicity to aquatic plants:**

EC50 (72 h): > 500 mg/l

**Toxicity to microorganisms:**

DIN 38412 Part 8 bacterium/EC10: > 900 mg/l

Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.

**\*\*\* Section 14–Disposal considerations \*\*\***

**Waste disposal of substance:**

Dispose of in accordance with national, state and local regulations.

It is the waste generator's responsibility to determine if a particular waste is hazardous under RCRA.

**Container disposal:**

Dispose of in a licensed facility. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

**\*\*\* Section 15–Transport information \*\*\***

**Land transport**

*USDOT*

Proper shipping name: Potassium Perfluorobutane Sulfonate

Hazard class: None

**Sea transport**

*IMDG*

Proper shipping name: Potassium Perfluorobutane Sulfonate

Hazard class: None

Packing group: None

Marine pollutant: NO

**Air transport**

*IATA/ICAO*

Proper shipping name: Potassium Perfluorobutane Sulfonate

Hazard class: None

**\*\*\* Section 16–Regulatory information\*\*\***

**Federal Regulations**

**Registration status:**

TSCA, US released / listed

**SARA hazard categories (EPCRA 311/312):** Not hazardous

**\* \* \* Section 17–Other information\* \* \***

**HMIS III rating**

Health: 1 Flammability: 0 Physical hazard: 0

HMIS uses a numbering scale ranging from 0 to 4 to indicate the degree of hazard. A value of zero means that the substance possesses essentially no hazard; a rating of four indicates high hazard.

This is the end of MSDS # Bright-004