



Material Safety Data Sheet

Hydrojel PFKC

1. Product and Company Identification

Product Name : Hydrojel PFKC

Product Use : Raw materials for personal care

Manufacturer : KCI Limited.

9th FL IT Castle II, 137

Gasan digital 1-ro, Geumcheon-Ku, SEOUL, KOREA

Phone: 82-2-855-3195

Fax: 82-2-784-9018

Emergency telephone number: 82-2-784-1480

2. Hazard Identification

GHS Classification : Skin Corrosion/Irritation - Category 3
Eye Damage/Irritation - Category 2B

○ **Symbol :** N/A

○ **Signal word :** Warning

○ **Hazard statement :**

H316 Causes mild skin irritation

H320 Causes eye irritation

Prevention

P264 Wash thoroughly after handling.

Response

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention

Storage

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P410 Protect from sunlight.

Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulations (to be specified).

3. Composition/Information on Ingredients



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| Ingredient(s) | CAS # | Percent (% w/w) |
|------------------|-----------|-----------------|
| Glycerin | 56-81-5 | 60-65 |
| Water | 7732-18-5 | 31-39 |
| Other components | - | 1-4 |

4. First Aid Measures

After eye contact

- Flush eyes with running water for at least 20 minutes while holding eyelids apart.
- If symptoms persist, call a physician.

After skin contact

- Wash with soap and running water for at least 20 minutes.
- If symptoms persist, call a physician.

After inhalation

- Move victim to fresh air and keep victim warm and quiet.
- Give artificial respiration if victim is not breathing.
- If needed, call a physician.

After swallowing

- Rinse mouth
- If needed, call a physician.
- Never give anything by mouth to an unconscious person.

Notes to physician

- It may not be advisable to induce vomiting.
- Measures against circulatory shock and convulsions may be necessary.

5. Fire Fighting Measures

Extinguishing media

Suitable extinguishing agents : Use water spray to keep fire-exposed containers cool.

Unsuitable extinguishing agents : No data

Large Fires : Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Hazardous combustion products : Carbon oxides (COx)

Protection of firefighters

Specific hazards arising from the chemical : Combustion generates toxic fumes

Protective equipment for firefighters :



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Firefighters should wear self-contained breathing apparatus (SCBA).

General fire hazards

- Water or foam may cause frothing which can be violent and possibly endanger the life of the fire fighter.
- Water may be used to keep fire-exposed containers cool until fire is out.
- Minimize exposure
- Do not breathe fumes.

6. Accidental Release Measures

Clean up spills immediately. Remove all sources of ignition. Provide ventilation.

Personal precautions

- Use personal protective equipment.
- Wash off in clean water.

Environmental precautions

- Atmosphere : Use with adequate ventilation.
- Land : Collect the spill for later disposal.
- Underwater : Prevent entry into waterway and sewers

Methods for cleaning up

- Collect as much as possible in a clean container for (preferable) reuse or disposal.
- Absorb spill with inert material (e.g. dry sand, sawdust or dust cloth), then place in a chemical waste container.

7. Handling and Storage

Safe Handling

- All handling equipment must be properly grounded.
- Open drums in well ventilated area.
- Avoid breathing vapors.
- Wash off in water after treatment.
- Wash clothing before reuse.

Safe Storage

- Store in normal temperature and normal pressure
- Keep container closed tightly when not in use.
- Empty container contains residual product which may exhibit hazards of product.
Avoid prolonged exposure to heat and air.



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- Keep away with Strong acids, Oxidizing agents..
- Keep away from heat and direct sunlight. Exposure to sunlight can decompose product.

8. Exposure Controls and Personal Protection

Engineering Controls : Use with local exhaust ventilation.

Exposure Limits : Glycerin mist TLV-TWA : 10 mg/m³ (ACGIH)

Glycerin Mist, total dust PEL : 15 mg/m³ (OSHA)

Glycerin Mist, respirable fraction PEL TWA : 5 mg/m³ (OSHA)

Glycerin Mist total PEL TWA : 10 mg/m³ (OSHA)

Personal Protective Equipment

Respiratory Protection: NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Eyes: Wear safety glasses with side shields.

Skin: Wearing chemical resistant gloves is recommended.

Clothing: Uniforms, coveralls, or a lab coat should be worn.

9. Physical and Chemical Information

| | |
|--|---------------------------|
| Appearance | Clear Viscous gel. |
| Color | Colorless |
| Odor | Mild, characteristic |
| Odor threshold | Not determined |
| pH | 5.0-6.0 |
| Melting point/Freezing point | No data |
| Initial boiling point and Boiling range: | No data |
| Flashpoint | >100 °C |
| Evaporation rate | No data |
| Flammability (solid, gas) | No data |
| Upper/lower flammability or explosive limits | No data |
| Vapor pressure | Negligible |
| Solubility | Complete soluble in water |
| Vapor density | No data |
| Relative Density | 1.0-1.2 g/mL |
| Partition coefficient: n-octanol/water | No data |



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|---------------------------|-------------------|
| Auto-ignition temperature | No data |
| Decomposition temperature | No data |
| Viscosity | 200,000 – 400,000 |
| Molecular weight | No data |

10. Stability and Reactivity

Stability : Stable under normal temperature and pressure.

Conditions to Avoid : Incompatible materials, ignition sources, excess heat.

Incompatible materials : Strong acids, Oxidizing agents

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

11. Toxicological Information

| | |
|---|---|
| <input type="radio"/> Acute toxicity (Oral) | <u>Glycerin</u> Rat LD50=12600 mg/kg bw (IUCLID) |
| <input type="radio"/> Acute toxicity (Dermal) | <u>Glycerin</u> Rabbit LD0>18700 mg/kg bw (IUCLID) |
| <input type="radio"/> Acute toxicity (inhalation) | No data |
| <input type="radio"/> Skin corrosion/irritation | <u>Glycerin</u> Rabbit/human, Slightly irritating (IUCLID) |
| <input type="radio"/> Serious eye damage/eye irritation | <u>Glycerin</u> Rabbit, Slightly irritating GLP (IUCLID) |
| <input type="radio"/> Respiratory sensitization | No data |
| <input type="radio"/> Skin sensitization | <u>Glycerin</u> Human, Patch test ; not sensitizing (IUCLID) |
| <input type="radio"/> Carcinogenicity | <u>Glycerin</u> Mouse drinking water 5% solution ; The incidence of pulmonary tumors-bearing mice as well as the mean number of induced tumors per mouse were significantly enhanced in mice given glycerol for 4-25 weeks. (IUCLID) Rat oral 2yr exposure ; no increase in tumor incidence. (IUCLID) |



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| <input type="radio"/> Germ cell mutagenicity | <u>Glycerin</u> In vitro ; Ames test Salmonella Typhimurium negative GLP (IUCLID), CHO Sister chromatid exchange assay ; negative, Unscheduled DNA synthesis ; negative (IUCLID) |
| <input type="radio"/> Reproductive toxicity | <u>Glycerin</u> Rat gavage Two generation study 200 mg/kg/day ; No effects were found on the reproductive efficiency of the parents, nor on the growth, fertility and reproductive performance of the untreated F1 generation, and no histological changes occurred in the tissues of both the F1 and F2 generation. (IUCLID) |
| <input type="radio"/> Specific target organ Toxicity (Single exposure) | No data |
| <input type="radio"/> Specific target organ Toxicity (Repeated exposure) | <u>Glycerin</u> Human oral feed 50days 1300-2200 mg glycerol/kg bw/day ; No overt signs of toxicity or effect on blood consumption and urine production. (IUCLID) |
| <input type="radio"/> Aspiration | No data |

12. Ecological Information

| | |
|---|--|
| <input type="radio"/> Toxicity | <u>Glycerin</u> Fish Oncorhynchus mykiss 96hr LC100=51000-57000 mg/L Fish Carassius auratus 24hr LC50>5000 mg/L Crustacea Daphnia magna 24hr EC50>10000 mg/L (IUCLID) |
| <input type="radio"/> Persistence and degradability | <u>Glycerin</u> Readily biodegradable (63%/14days) OECD 301C LogKow=-2.66~-2.47 calculated |
| <input type="radio"/> Bioaccumulative potential | No data |
| <input type="radio"/> Mobility in soil | No data |



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|---|---------|
| <input type="radio"/> Other adverse effects | No data |
|---|---------|

13. Disposal Considerations

- Incinerate or landfill waste in a properly permitted facility in accordance with federal, state and local regulations. Liquids cannot be disposed of in a landfill.

14. Transport Information

UN Number : Not applicable
Proper Shipping Name : Not applicable
Transport hazard class : Not applicable
Packing group, if applicable : Not applicable
Environmental hazards : Not applicable
Special precautions for user : Not applicable

15. Regulatory Information

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

EU Regulation

- Directive 67/548/EEC : N/A
- Regulation (EC) No 1272/2008 and 1907/2006 : Complied
- ESIS : HPVCs (High Production Volume Chemicals): Glycerin

US Regulation

- Toxic Substances Control Act (TSCA) Inventory : All components of this product are registered
- OSHA Regulation (Standard-29 CFR) 1910.119 : not regulated
- CERCLA SARA Title III Section 313: Not regulated
- CERCLA SARA Title III Section 311: Not regulated
- CERCLA SARA Title III Section 304: Not regulated
- CERCLA SARA Title III Section 302: Not regulated

International Regulation

- INCI(International Nomenclature of Cosmetic Ingredients): Glycerin is classified as Denaturant, Humectant, Solvent, Perfuming
- International Council of Chemical Associations (ICCA) HPV Chemicals Programme : Glycerin



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- OECD/High Production Volume (HPV) Chemicals Programme : Glycerin
- Rotterdam Convention: Not regulated
- Stockholm Convention on Persistent Organic Pollutants(POPs): Not regulated
- Montreal Protocol : Not regulated

16. Other Information

References

- National library of Medicine (NLM)
- ECB-ESIS (European chemical Substances Information System)
- e-Chemportal: The Global Portal to Information on Chemical Substances
- U.S. Environmental Protection Agency
- Emergency Response Guidebook (2008)
- International Council of Chemical Associations (ICCA)
- INCI(International Nomenclature of Cosmetic Ingredients)
- United Nations Environment Programme Ozone Secretariat

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