

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

1 Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** QuickFix-1
- **Article number:** CP0169
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **1.3 Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
OpGen, Inc.
708 Quince Orchard Rd
Gaithersburg, MD 20878
Phone: (301) 869-9683
- **1.4 Emergency telephone number:**
ChemTel Inc.
(800)255-3924, +1 (813)248-0585

2 Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
The product is not classified as hazardous according to OSHA GHS regulations within the United States.
The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H412.
Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is not classified as hazardous according to OSHA GHS regulations within the United States.
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms** Not Regulated
- **Signal word** Not Regulated
- **Hazard statements**
Not applicable within the USA; only applicable for the EU.

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The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H412.

H412 Harmful to aquatic life with long lasting effects.

• **Precautionary statements**

Not applicable within the USA; only applicable for the EU.

P273 Avoid release to the environment.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

• **Hazard description:**

• **WHMIS-symbols:** Not hazardous under WHMIS.

• **NFPA ratings (scale 0 - 4)**



Health = 0

Fire = 1

Reactivity = 0

• **HMIS-ratings (scale 0 - 4)**



Health = 0

Fire = 1

Reactivity = 0

• **HMIS Long Term Health Hazard Substances**

None of the ingredients is listed.

• **2.3 Other hazards**

• **Results of PBT and vPvB assessment**

• **PBT:** Not applicable.

• **vPvB:** Not applicable.

3 Composition/information on ingredients

• **3.2 Mixtures**

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

• **Dangerous components:**

CAS: 64-17-5 EINECS: 200-578-6 Index number: 603-002-00-5	ethanol F R11 Flam. Liq. 2, H225 Eye Irrit. 2, H319	10-25%
CAS: 7758-98-7 EINECS: 231-847-6 Index number: 029-004-00-0	copper sulphate Xn R22; Xi R36/38; N R50/53 Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319	≤ 2,5%

• **Additional information:** For the wording of the listed risk phrases refer to section 16.

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4 First aid measures

- **4.1 Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Immediately rinse with water.
If skin irritation continues, consult a doctor.
- **After eye contact:**
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.
- **4.2 Most important symptoms and effects, both acute and delayed**
Headache
Nausea in case of ingestion.
Gastric or intestinal disorders when ingested.
Dizziness
Slight irritant effect on skin and mucous membranes.
Slight irritant effect on eyes.
Disorientation
- **Hazards**
Danger of convulsion.
May be harmful if swallowed.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** None.
- **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
- **Additional information** Cool endangered receptacles with water spray.

6 Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Use respiratory protective device against the effects of fumes/dust/aerosol.

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Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources.

· **6.2 Environmental precautions:**

Do not allow to enter sewers/ surface or ground water.

Inform respective authorities in case of seepage into water course or sewage system.

· **6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Pick up mechanically.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Clean the affected area carefully; suitable cleaners are:

Warm water

· **6.4 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

· **7.1 Precautions for safe handling**

Prevent formation of aerosols.

Store in cool, dry place in tightly closed receptacles.

Use only in well ventilated areas.

· **Information about fire - and explosion protection:** No special measures required.

· **7.2 Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:** Store at 35,6 - 46,4 °F / 2 - 8 °C .

· **Information about storage in one common storage facility:**

Store away from foodstuffs.

Store away from oxidizing agents.

· **Further information about storage conditions:** Protect from heat and direct sunlight.

· **7.3 Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

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

· **8.1 Control parameters**

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

64-17-5 ethanol

PEL (USA) Long-term value: 1900 mg/m³, 1000 ppm

REL (USA) Long-term value: 1900 mg/m³, 1000 ppm

TLV (USA) Short-term value: 1880 mg/m³, 1000 ppm

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EL (Canada)	Short-term value: 1000 ppm
EV (Canada)	Long-term value: 1,900 mg/m ³ , 1,000 ppm

- **DNELs** No further relevant information available.
- **PNECs** No further relevant information available.
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid close or long term contact with the skin.
Do not inhale gases / fumes / aerosols.
- **Respiratory protection:**
Not required under normal conditions of use.
For spills, respiratory protection may be advisable.
Use suitable respiratory protective device in case of insufficient ventilation.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

- **Material of gloves**
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 cannot 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.
- **Eye protection:**



Safety glasses

- **Body protection:** Protective work clothing
- **Limitation and supervision of exposure into the environment**
No further relevant information available.
- **Risk management measures**
See Section 7 for additional information.
No further relevant information available.

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9 Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form: Liquid

Colour: Blue

· Odour: Like alcohol

· Odour threshold: Not determined.

· pH-value: 8,3 - 8,9

· Change in condition

Melting point/Melting range: Not Determined.

Boiling point/Boiling range: Undetermined.

· Flash point: Product not expected to support sustained combustion.

· Flammability (solid, gaseous): Not applicable.

· Auto/Self-ignition temperature: Not determined.

· Decomposition temperature: Not determined.

· Self-igniting: Product is not self-igniting.

· Danger of explosion: Product does not present an explosion hazard.

· Explosion limits:

Lower: Not determined.

Upper: Not determined.

· Vapour pressure: Not determined.

· Density: Not determined.

· 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.

· 9.2 Other information: No further relevant information available.

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10 Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**
Reacts with strong alkali.
Reacts with amines.
Reacts with oxidizing agents.
Toxic fumes may be released if heated above the decomposition point.
- **10.4 Conditions to avoid** Keep away from heat and direct sunlight.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Sulphur oxides (SO_x)
Toxic metal oxide smoke

11 Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values relevant for classification:**

7758-98-7 copper sulphate

Oral	LD50	300 mg/kg (rat)
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- **Primary irritant effect:**
- **on the skin:** Slight irritant effect on skin and mucous membranes.
- **on the eye:** Slight irritant effect on eyes.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.
- **Acute effects (acute toxicity, irritation and corrosivity):**
May be harmful if swallowed.
Vapours have narcotic effect.

12 Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** The product contains materials that are harmful to the environment.
- **12.2 Persistence and degradability** The product is partially biodegradable. Significant residuals remain.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish

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· **Additional ecological information:**

· **General notes:**

The product contains heavy metals. Avoid transfer into the environment. Specific preliminary treatments are necessary

This statement was deduced from the properties of the single components.

Water hazard class 1 (German Regulation) (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.

Harmful to aquatic organisms

Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment cannot be excluded.

· **12.5 Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **12.6 Other adverse effects** No further relevant information available.

13 Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation**

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

Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

· **Uncleaned packaging:**

· **Recommendation:** Disposal must be made according to official regulations.

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

14 Transport information

· **14.1 UN-Number**

· **DOT, ADR, ADN, IMDG, IATA** Not Regulated

· **14.2 UN proper shipping name**

· **DOT, ADR, ADN, IMDG, IATA** Not Regulated

· **14.3 Transport hazard class(es)**

· **DOT, ADR, ADN, IMDG, IATA**

· **Class** Not Regulated

· **14.4 Packing group**

· **DOT, ADR, IMDG, IATA** Not Regulated

· **14.5 Environmental hazards:**

· **Marine pollutant:** No

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- **14.6 Special precautions for user** Not applicable.
- **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **UN "Model Regulation":** -

15 Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **United States (USA)**
- **SARA**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65 (California):**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

Ethanol - listing refers specifically to alcoholic beverage consumption and is not applicable for product.

64-17-5	ethanol
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· **Carcinogenic Categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

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

64-17-5	ethanol	1
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· **TLV (Threshold Limit Value established by ACGIH)**

64-17-5	ethanol	A3
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· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **Canada**

· **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

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· **Canadian Ingredient Disclosure list (limit 0.1%)**

64-17-5 ethanol

· **Canadian Ingredient Disclosure list (limit 1%)**

None of the ingredients is listed.

· **Other regulations, limitations and prohibitive regulations**

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

· **Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients is listed.

· **15.2 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.

· **Relevant phrases**

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

R11 Highly flammable. R22

Harmful if swallowed. R36/38

Irritating to eyes and skin.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· **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

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

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)

WHMIS: Workplace Hazardous Materials Information System (Canada)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Flam. Liq. 2: Flammable liquids, Hazard Category 2

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

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Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

• **Sources**

SDS Prepared by:

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