

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-2**
- Article number: CP0170
- **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**



flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.
Acute Tox. 3 H311 Toxic in contact with skin.
Acute Tox. 3 H331 Toxic if inhaled.



health hazard

STOT SE 1 H370 Causes damage to the central nervous system.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



T; Toxic

R23/24/25-39/23/24/25: Toxic by inhalation, in contact with skin and if swallowed. Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.



F; Highly flammable

R11: Highly flammable.

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· **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 classified and labelled according to the CLP regulation.

· **Hazard pictograms**



GHS02 GHS06 GHS08

· **Signal word** Danger

· **Hazard-determining components of labelling:**

methanol

· **Hazard statements**

H225 Highly flammable liquid and vapour.

H301 Toxic if swallowed.

H311 Toxic in contact with skin.

H331 Toxic if inhaled.

H370 Causes damage to the central nervous system.

· **Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P280 Wear protective clothing / eye protection.

P264 Wash thoroughly after handling.

P260 Do not breathe mist/vapours/spray.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P403+P235 Store in a well-ventilated place. Keep cool.

· **Hazard description:**

· **WHMIS-symbols:**

B2 - Flammable liquid

D1A - Very toxic material causing immediate and serious toxic effects

D2A - Very toxic material causing other toxic effects

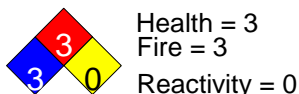


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· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**



* - Indicates a long term health hazard from repeated or prolonged exposures.

· **HMIS Long Term Health Hazard Substances**

67-56-1	methanol
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· **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: 67-56-1 EINECS: 200-659-6 Index number: 603-001-00-X	methanol T R23/24/25-39/23/24/25; F R11 Flam. Liq. 2, H225 Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331 STOT SE 1, H370	50-100%
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· **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

· **4.1 Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

Take affected persons out into the fresh air.

· **After inhalation:**

Supply fresh air; consult doctor in case of complaints.

Supply fresh air or oxygen; call for doctor.

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

· **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

Seek medical treatment in case of complaints.

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- **After eye contact:**
Rinse opened eye for several minutes under running water.
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. Then 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
Cramp
Gastric or intestinal disorders when ingested.
Dizziness
Nausea
Irritant to skin and mucous membranes.
Blindness
Acidosis
Disorientation
Unconsciousness
- **Hazards**
Vapours may cause drowsiness and dizziness.
Causes damage to organs through prolonged or repeated exposure.
Danger of convulsion.
Danger of disturbed cardiac rhythm.
Danger of cerebral oedema.
Danger of circulatory collapse.
Danger of severe eye injury.
- **4.3 Indication of any immediate medical attention and special treatment needed**
Contains methanol (methyl alcohol). Consult literature for specific antidotes.
Medical supervision for at least 48 hours.
If necessary oxygen respiration treatment.
Monitor circulation, possible shock treatment.
May produce a nephrotoxic / hepatotoxic effect.

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**
During heating or in case of fire poisonous gases are produced.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.

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- **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.
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.
- **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
Used rags or other cleaning materials should be soaked with water and placed in a sealed container.
- **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.
Avoid splashes or spray in enclosed areas.
Use only in well ventilated areas.
- **Information about fire - and explosion protection:**
Protect against electrostatic charges.
Keep ignition sources away - Do not smoke.
Protect from heat.
Flammable gas-air mixtures may form in empty receptacles.
Fumes can combine with air to form an explosive mixture.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Avoid storage near extreme heat, ignition sources or open flame.
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:**
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.

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· **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:**

67-56-1 methanol

IOELV (EU)	Long-term value: 260 mg/m ³ , 200 ppm Skin
PEL (USA)	Long-term value: 260 mg/m ³ , 200 ppm
REL (USA)	Short-term value: 325 mg/m ³ , 250 ppm Long-term value: 260 mg/m ³ , 200 ppm Skin
TLV (USA)	Short-term value: 328 mg/m ³ , 250 ppm Long-term value: 262 mg/m ³ , 200 ppm Skin; BEI
EL (Canada)	Short-term value: 250 ppm Long-term value: 200 ppm Skin
EV (Canada)	Short-term value: 325 mg/m ³ , 250 ppm Long-term value: 260 mg/m ³ , 200 ppm Skin

· **DNELs** No further relevant information available.

· **PNECs** No further relevant information available.

· **Ingredients with biological limit values:**

67-56-1 methanol

BEI (USA)	15 mg/L Medium: urine Time: end of shift Parameter: Methanol (background, nonspecific)
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· **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.
- Avoid contact with the eyes.
- Avoid close or long term contact with the skin.
- Do not inhale gases / fumes / aerosols.
- Avoid contact with the eyes and skin.
- Clean skin thoroughly immediately after handling the product.
- Do not carry product impregnated cleaning cloths in trouser pockets.

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- **Respiratory protection:**

Wear appropriate NIOSH respirator when ventilation is inadequate and occupational exposure limits are exceeded.

Avoid inhalation of the chemical/ the product/ the preparation by organizational measures.

For spills, respiratory protection may be advisable.

- **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.

- **For the permanent contact gloves made of the following materials are suitable:**

Butyl rubber, BR

Fluorocarbon rubber (Viton)

Nitrile rubber, NBR

PVC gloves

Neoprene gloves

Laminated film gloves.

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

- **Eye protection:**

Contact lenses should not be worn.



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: Clear

· Odour: Like alcohol

· Odour threshold: Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/Melting range: Not Determined.

Boiling point/Boiling range: 65 °C (149 °F)

· Flash point: 11 °C (52 °F)

· Flammability (solid, gaseous): Not applicable.

· Auto/Self-ignition temperature: 385 °C (725 °F)

· Decomposition temperature: Not determined.

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

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

· Explosion limits:

Lower: 5,5 Vol % (approximate)

Upper: 44 Vol % (approximate)

· Vapour pressure at 20 °C: 129 hPa

· Density at 20 °C: 0,8±0,1 g/cm³

· 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**
Toxic fumes may be released if heated above the decomposition point.
Reacts violently with oxidizing agents.
Reacts with strong acids and alkali.
Develops readily flammable gases/fumes.
Used empty containers may contain product gases which form explosive mixtures with air.
- **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
Chlorine

11 Toxicological information

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

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

67-56-1 methanol

Oral	LD50	5628 mg/kg (rat)
Dermal	LD50	15800 mg/kg (rabbit)
Inhalative	LC50/4h	130,7 mg/l (rat)

- **Primary irritant effect:**
- **on the skin:** Slight irritant effect on skin and mucous membranes.
- **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
Toxic
Danger through skin adsorption.
Toxic and/or corrosive effects may be delayed up to 12 hours.
Inhalation of concentrated vapours as well as oral intake will lead to anaesthesia-like conditions and headache, dizziness, etc.
- **Acute effects (acute toxicity, irritation and corrosivity):** Vapours have narcotic effect.
- **Repeated dose toxicity:**
May cause neurotoxic effects.
Causes damage to organs through prolonged or repeated exposure.

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12 Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** The product contains materials that are harmful to the environment.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
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.
- **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.
After prior treatment product has to be disposed of in an incinerator for hazardous waste adhering to the regulations pertaining to the disposal of particularly hazardous waste.
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, IMDG, IATA** UN1230
- **14.2 UN proper shipping name**
- **DOT** Methanol, mixture
- **ADR** 1230 METHANOL, mixture
- **IMDG, IATA** METHANOL, mixture

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· 14.3 Transport hazard class(es)

· DOT



· Class 3 Flammable liquids.
 · Label 3

· ADR



· Class 3 (FT1) Flammable liquids.
 · Label 3+6.1

· IMDG, IATA



· Class 3 Flammable liquids.
 · Label 3+6.1
 · 14.4 Packing group II
 · DOT, ADR, IMDG, IATA II
 · 14.5 Environmental hazards: No
 · Marine pollutant: Warning: Flammable liquids.
 · 14.6 Special precautions for user 336
 · Danger code (Kemler): F-E,S-D
 · EMS Number: Not applicable.
 · 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

· Transport/Additional information:

· ADR
 · Limited quantities (LQ) 1L
 · Transport category 2
 · Tunnel restriction code D/E
 · UN "Model Regulation": UN1230, METHANOL, mixture, 3 (6.1), II

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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):**

67-56-1 | methanol

· **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:**

67-56-1 | methanol

· **Carcinogenic Categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

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

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **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.

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

None of the ingredients is listed.

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

67-56-1 | methanol

· **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.

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· **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.

H301 Toxic if swallowed.

H311 Toxic in contact with skin.

H331 Toxic if inhaled.

H370 Causes damage to the central nervous system.

R11 Highly flammable.

R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

R39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

· **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. 3: Acute toxicity, Hazard Category 3

STOT SE 1: Specific target organ toxicity - Single exposure, Hazard Category 1

· **Sources**

SDS Prepared by:

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