

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: **60X Wash Solution**
- Article number: CP0022
- **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 following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H411.



corrosion

Eye Dam. 1 H318 Causes serious eye damage.



environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



Skin Irrit. 2 H315 Causes skin irritation.

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



Xi; Irritant

R38-41: Irritating to skin. Risk of serious damage to eyes.



N; Dangerous for the environment

R51/53: Toxic 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.

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· **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**



This pictogram only applicable for EU regulations. Not for use in the United States (OSHA GHS).



GHS05 GHS09

· **Signal word** Danger

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

Polyethylene glycol octylphenol ether

· **Hazard statements**

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H411.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H411 Toxic to aquatic life with long lasting effects.

· **Precautionary statements**

P280 Wear protective gloves / eye protection.

P264 Wash thoroughly after handling.

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.

P302+P352 IF ON SKIN: Wash with plenty of water.

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

· **Hazard description:**

· **WHMIS-symbols:**

D2B - Toxic material causing other toxic effects

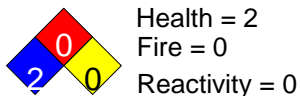


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· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**



· **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: 9002-93-1	Polyethylene glycol octylphenol ether Xi R36/38; N R50/53 Eye Dam. 1, H318 Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Skin Irrit. 2, H315	5-10%
CAS: 7647-01-0 EINECS: 231-595-7 Index number: 017-002-00-2	hydrochloric acid C R34; Xi R37 Skin Corr. 1B, H314 STOT SE 3, H335	< 5%

· **SVHC**

9002-93-1 | Polyethylene glycol octylphenol ether

· **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:** 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.

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- **After eye contact:**
Protect unharmed eye.
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**
Nausea in case of ingestion.
Gastric or intestinal disorders when ingested.
Cramp
Coughing
Irritant to skin and mucous membranes.
Strong irritant with the danger of severe eye injury.
- **Hazards** Danger of severe eye injury.
- **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:** Use fire extinguishing methods suitable to surrounding conditions.
- **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** No further relevant information available.

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
Particular danger of slipping on leaked/spilled product.
- **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.
Clean the affected area carefully; suitable cleaners are:

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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.

Avoid splashes or spray in enclosed areas.

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 .

Avoid storage near extreme heat, ignition sources or open flame.

· **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.

· **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:**

7647-01-0 hydrochloric acid

IOELV (EU) Short-term value: 15 mg/m³, 10 ppm

Long-term value: 8 mg/m³, 5 ppm

PEL (USA) Ceiling limit: 7 mg/m³, 5 ppm

REL (USA) Ceiling limit: 7 mg/m³, 5 ppm

TLV (USA) Ceiling limit: 2,98 mg/m³, 2 ppm

EL (Canada) Short-term value: C 2 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.

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Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.

· **Respiratory protection:**

Not required under normal conditions of use.
For spills, respiratory protection may be advisable.
Use suitable respiratory protective device when aerosol or mist is formed.

· **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.

9 Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· Form:	Liquid
· Colour:	Colourless
· Odour:	Nearly odourless
· Odour threshold:	Not determined.
· pH-value:	9,9 - 10,1

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- **Change in condition**
 - Melting point/Melting range:** Not Determined.
 - Boiling point/Boiling range:** Undetermined.
- **Flash point:** Not applicable.
- **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:** Soluble.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - Dynamic:** Not determined.
 - Kinematic:** Not determined.
- **9.2 Other information** No further relevant information available.

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 with oxidizing agents.
- **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
Nitrogen oxides

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Chlorine compounds

11 Toxicological information

· **11.1 Information on toxicological effects**

· **Acute toxicity:**

· **Primary irritant effect:**

· **on the skin:** Irritant to skin and mucous membranes.

· **on the eye:** Strong irritant with the danger of severe eye injury.

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

· **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Irritant

· **Acute effects (acute toxicity, irritation and corrosivity):**

May be harmful in contact with skin.

May be harmful if inhaled.

12 Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**

The product contains materials that are harmful to the environment.

Toxic for aquatic organisms

· **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:**

Toxic for fish

The product is oxygen-consuming. The declared action may be partly caused by lack of oxygen.

· **Additional ecological information:**

· **General notes:**

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

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Also poisonous for fish and plankton in water bodies.

Toxic for 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.

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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 only.

14 Transport information

· **14.1 UN-Number**

· DOT

Not Regulated

· ADR, IMDG, IATA

UN3082

· **14.2 UN proper shipping name**



Limited Quantity for packages less than 30 kg (66 lb) and inner packagings less than 5 L (1.3 gal).

· DOT

Not Regulated

· ADR

3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Polyethylene glycol octylphenol ether)

· IMDG, IATA

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Polyethylene glycol octylphenol ether)

· **14.3 Transport hazard class(es)**

· DOT

· Class

Not Regulated

· ADR



· Class

9 (M6) Miscellaneous dangerous substances and articles.

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· Label 9

· IMDG



· Class 9 Miscellaneous dangerous substances and articles.
 · Label 9

· IATA



· Class 9 Miscellaneous dangerous substances and articles.
 · Label 9
 · 14.4 Packing group Not Regulated
 · DOT III
 · ADR, IMDG, IATA III
 · 14.5 Environmental hazards:
 · Marine pollutant: Yes
 · Special marking (ADR): Symbol (fish and tree)
 · Special marking (IATA): Symbol (fish and tree)
 · 14.6 Special precautions for user Warning: Miscellaneous dangerous substances and articles.
 · Danger code (Kemler): 90
 · EMS Number: F-A,S-F
 · 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.
 · Transport/Additional information:

· ADR
 · Limited quantities (LQ) 5L
 · Transport category 3
 · Tunnel restriction code E
 · UN "Model Regulation": UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Polyethylene glycol octylphenol ether), 9, III

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):

7647-01-0 | hydrochloric acid

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

7647-01-0	hydrochloric acid
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· **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:**

None of the ingredients is listed.

· **Carcinogenic Categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

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

7647-01-0	hydrochloric acid	3
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· **TLV (Threshold Limit Value established by ACGIH)**

7647-01-0	hydrochloric acid	A4
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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.

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

None of the ingredients is listed.

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

9002-93-1	Polyethylene glycol octylphenol ether
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7647-01-0	hydrochloric acid
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· **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**

9002-93-1	Polyethylene glycol octylphenol ether
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· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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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**

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H335 May cause respiratory irritation.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

R34 Causes burns.

R36/38 Irritating to eyes and skin.

R37 Irritating to respiratory system.

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)

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

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

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

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

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

Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

• **Sources**

SDS Prepared by:

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