

SECTION 1. IDENTIFICATION**1.1 Product Identifier**

Product Name

X-PO 400**1.2 Other means of identification****1.3 Recommended use of product and restrictions on use****1.4 Suppliers Details****Closed System Treatment****VEXO International (UK) LTD**

6 The Granary Building
 Millow Hall Farm, Millow (Dunton)
 Biggleswade Bedfordshire
 SG18 8RH
 United Kingdom
 Non-Emergency Tel: 44-1767 500150

1.5 Emergency Phone Number**800-424-9300 CHEMTREC®****24 Hour Emergency Response****SECTION 2: Hazard identification****General hazard statement**

To the best of our knowledge, this Safety Data Sheet is prepared to comply with US OSHA 29 CFR 1910.1200 and other governmental agencies both domestic and foreign. Hazard and precautionary statements are based on maximum listed concentrations of each hazardous ingredient. Unlisted ingredients are not "hazardous" per the OSHA Hazard Communication Standard (29 CFR 1910.1200) and/or other governmental agencies.

2.1 Classification of the substance or mixture**GHS classification in accordance with: (US) OSHA (29 CFR 1910.1200)**

- Eye damage/irritation, Cat. 2B
- Acute toxicity, oral, Cat. 4
- Acute toxicity, oral, Cat. 5
- Sensitization, skin, Cat. 1
- Specific target organ toxicity (single exposure), Cat. 3

2.2 GHS label elements, including precautionary statements**Pictogram****Irritant
Warning****Signal word****Hazard statement(s)**

H302
 H303
 H316
 H319
 H373

Harmful if swallowed
 May be harmful if swallowed
 Causes mild skin irritation
 Causes serious eye irritation
 May cause damage to organs through prolonged or repeated exposure

Precautionary statement(s)

P261
 P264
 P270
 P272
 P280
 P301+P312
 P301+P330+P331
 P302+P352
 P303+P361+P353

Avoid breathing dust/fume/gas/mist/vapors/spray.
 Wash hands thoroughly after handling.
 Do not eat, drink or smoke when using this product.
 Contaminated work clothing must not be allowed out of the workplace.
 Wear protective gloves/protective clothing/eye protection/face protection.
 IF SWALLOWED: Call a POISON CENTER /doctor, if you feel unwell.
 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 IF ON SKIN: Wash with plenty of water/...
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

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P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P314	Get medical advice/attention if you feel unwell.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P363	Wash contaminated clothing before reuse.
P501	Dispose of contents/container according to state and local regulations
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

1. Citric acid

Concentration 10 - 20 % (weight)

Other names / synonyms 1,2,3-Propanetricarboxylic acid, 2-hydroxy-; 2-Hydroxy-1,2,3-propanetricarboxylic acid; Acidum citricum; ACILETTEN; ANHYDROUS CITRIC ACID; BETA-HYDROXYTRICARBALLYLIC ACID; CITRETTE; CITRICACID; CITRO; HYDROCEROL A

EC no. 201-069-1

CAS no. 77-92-9

- Eye damage/irritation, Cat. 2A

2. Hydroxyphosphonoacetic acid

Concentration 10 - 20 % (weight)

EC no. 405-710-8

CAS no. 23783-26-8

Index no. 015-159-00-1

- Acute toxicity, oral, Cat. 4
- Specific target organ toxicity (repeated exposure), Cat. 2
- Skin corrosion/irritation, Cat. 1B
- Sensitization, skin, Cat. 1

H302 Harmful if swallowed

H314 Causes severe skin burns and eye damage

H317 May cause an allergic skin reaction

H373 May cause damage to organs [organs] through prolonged or repeated exposure [route]

3. Sodium Glucoheptonate

Concentration 5 - 10 % (weight)

CAS no. 31138-65-5

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General advice Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor if you feel unwell. Acute and delayed symptoms and effects: May cause respiratory irritation. Signs/symptoms may include burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema.

In case of skin contact Take off immediately all contaminated clothing. Rinse skin with water/shower for at least 15 minutes. Call a poison center or doctor if irritation develops or persists. Wash contaminated clothing before reuse. Acute and delayed symptoms and effects: Causes severe skin burns. Signs/symptoms may include localized redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.

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In case of eye contact	Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention/advice. Acute and delayed symptoms and effects: Causes serious eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.
If swallowed	Rinse mouth. Do NOT induce vomiting. Immediately call a poison center or doctor. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Never give anything by mouth to an unconscious person. Call a doctor if you feel unwell. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Acute and delayed symptoms and effects: May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

4.2 Most important symptoms/effects, acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

4.3 Indication of immediate medical attention and special treatment needed, if necessary

No data available.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Specific hazards arising from the chemical

None known other than material can splatter above 100°C/212°F.

5.3 Special protective actions for fire-fighters

Avoid any skin contact. Effects of contact or inhalation may be delayed. Fire may produce irritating, corrosive and/or toxic gases. Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution. Wear positive pressure self-contained breathing apparatus (SCBA). Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.

Further information

Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection if necessary. Avoid breathing gas, mist, vapors, or spray. Ensure adequate ventilation. Evacuate personnel to safe areas.
For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Stop leak if you can do it without risk. Sweep up and shovel into suitable containers for disposal.

Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Do not swallow. Do not breathe mist, vapors, or spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. See Section 8 for information on Personal Protective Equipment.

7.2 Conditions for safe storage, including any incompatibilities

Store away from incompatible materials. See Section 10 for information on Incompatible Materials. Keep out of the reach of children.

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Specific end use(s)

Apart from the uses mentioned in section 1 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

1. Citric acid (CAS: 77-92-9 EC: 201-069-1)

PEL-TWA: None Est.; USA (OSHA)

TLV@: None Est.; USA (ACGIH)

2. Hydroxyphosphonoacetic acid (CAS: 23783-26-8 EC: 405-710-8)

PEL-TWA: None Est.; USA (OSHA)

TLV@: None Est.; USA (ACGIH)

3. Sodium Glucoheptonate (CAS: 31138-65-5)

PEL-TWA: None Est.; USA (OSHA)

TLV@: None Est.; USA (ACGIH)

8.2 Appropriate engineering controls

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, gas, etc.) below recommended exposure limits.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Pictograms



Eye/face protection

Tightly fitting safety goggles. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Ensure that eyewash stations and/or safety showers are close to the workstation location if working with concentrated product.

Skin protection

Wear protective gloves. Consult manufacturer specifications for further information.

Body protection

Wear protective clothing. Clothing with full length sleeves and pants should be worn. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Thermal hazards

No data available.

Control banding approach

No data available.

Environmental exposure controls

Do not let product enter drains.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance/form (physical state, color, etc.)	Amber color liquid
Odor	Characteristic odor
Odor threshold	No data available.
pH	<6.00
Melting point/freezing point	Approx. 32°F
Initial boiling point and boiling range	212°F+/-

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Flash point	No data available.
Evaporation rate	1.00
Flammability (solid, gas)	Non-Flammable
Upper/lower flammability limits	No data available.
Upper/lower explosive limits	No data available.
Vapor pressure	No data available.
Vapor density	No data available.
Relative density	No data available.
Solubility(ies)	Completely soluble in water
Partition coefficient: n-octanol/water	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Viscosity	No data available.
Explosive properties	No data available.
Oxidizing properties	No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity

Contact with incompatible materials. Sources of ignition. Exposure to heat.

10.2 Chemical stability

Stable under normal storage conditions.

10.3 Possibility of hazardous reactions

No data available.

10.4 Conditions to avoid

Excessive temperature, contact with any type of reactive chemicals

10.5 Incompatible materials

Avoid contact with Strong Alkalis, Oxidizers or any other type of reactive material.

10.6 Hazardous decomposition products

There are no known hazardous decomposition products for this material unless the material is burned in which case undetermined evolution of toxic gases may occur.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Likely Routes of Exposure: Eye contact. Skin contact. Inhalation. Ingestion.

Components:

Citric acid: LD50 Oral - Rat - 5,400 mg/kg

Hydroxyphosphonoacetic acid: LD50 Oral - Rat - 2754mg/kg

Sodium Glucoheptonate: LD50 Oral - Rat - 2754mg/kg

Symptoms (including delayed and immediate effects):

Inhalation: May cause respiratory irritation. Signs/symptoms may include burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema.

Ingestion: May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Skin corrosion/irritation

Causes skin irritation. Signs/symptoms may include localized redness, swelling, and itching.

Citric acid: LD50 Skin - Rabbit - > 2,000 mg/kg

Sodium Glucoheptonate: LD50 Intraperitoneal - Rabbit - >1000mg/kg

Serious eye damage/irritation

Causes irritation. Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Citric acid: Rabbit - Result: Irritating to eyes.

Respiratory or skin sensitization

No data available on product.

Germ cell mutagenicity

No data available.

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Carcinogenicity

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA

Reproductive toxicity

No data available.

STOT-single exposure

No data available.

STOT-repeated exposure

No data available.

Aspiration hazard

No data available.

Additional information

No data available.

SECTION 12: Ecological information

Toxicity

No data available on product

Components:

Citric acid: EC50 - Daphnia magna (water flea) - 1,535 mg/l - 24 h

Citric acid: LC50 - Leuciscus idus (golden orfe) - 440 mg/l - 48 h

Hydroxyphosphonoacetic acid: LC50 - Daphnia magna (water flea) - 140mg/l - 48hr

Hydroxyphosphonoacetic acid: EC50 - Chlorella vulgaris (freshwater algae) - 30mg/l - 48hr

Sodium Glucoheptonate: LC50 - Daphnia magna (water flea) - >1000mg/l - 48hr

Sodium Glucoheptonate: EC50 - Pseudokirchneriella subcapitata (green algae) - >1000mg/l - 96hr

Persistence and degradability

No data available on product

Bioaccumulative potential

No data available on product

Mobility in soil

No data available.

Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects

No data available.

SECTION 13: Disposal considerations

Disposal of the product

Disposal should be in accordance with applicable Federal, State and local laws and regulations. Local regulations may be more stringent than State or Federal requirements.

Disposal of contaminated packaging

Dispose of as unused product.

Waste treatment

Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable federal, state and local regulations.

Sewage disposal

Do not drain into sewer

Other disposal recommendations

Triple rinse the empty containers with water before disposal to be reconditioned or land fill or garbage.

SECTION 14: Transport information

DOT (US)

UN Number: NA

Class: NA

Packing Group: NA

Proper Shipping Name: NON-REGULATED MATERIALS

Reportable quantity (RQ): NA

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Marine pollutant: No
Poison inhalation hazard: No

IMDG

UN Number:
Class:
Packing Group:
EMS Number:
Proper Shipping Name:

IATA

UN Number:
Class:
Packing Group:
Proper Shipping Name:

SECTION 15: Regulatory information

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

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 311/312 Hazards: Acute Health Hazard

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Massachusetts Right To Know Components

This product does not contain any chemicals known to State of Massachusetts to cause cancer, birth defects, or any other reproductive harm.

New Jersey Right To Know Components

Citric acid: CAS-No. 77-92-9

Pennsylvania Right To Know Components

Citric acid: CAS-No. 77-92-9

HMIS Rating

X-PO 400	
HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	C

NFPA Rating



SECTION 16: Other information

16.1 Further information/disclaimer

DISCLAIMER: The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigation to determine the suitability of information for their particular purposes. In no event shall manufacturer be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, whatsoever arising, even if manufacturer has been advised of the possibility of such damages. SDS CODE: MCFRC6024-2020