Kamco Limited
MATERIAL SAFETY DATA SHEET

POWER FLUSH FX2

Revision date: Aug 2015

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

1.1. Product identifier

Product name: POWER FLUSH FX2

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of substance / mixture: Flushing and descaling of heating and cooling systems.

1.3. Details of the supplier of the safety data sheet

Company name: Kamco Ltd
Unit 9, Curo Park
Frogmore
St Albans
Herts
AL2 2DD

Tel: 01727 875020

Fax: 01727 875335

Email: info@kamco.co.uk

1.4. Emergency telephone number

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CHIP: C;R34

Classification under CLP: Skin Corr. 1B – H314

Most important adverse effects: Causes severe skin burns and eye damage.

2.2. Label elements

Label elements under CLP:

Hazard statements: H314: Causes severe skin burns and eye damage.

Signal words: Danger

Hazard pictograms: GHS05: Corrosion

Precautionary statements: P280: Wear protective glove/protective clothing/eye protection/face protection.
P305/351/338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P313: Get medical advice/attention.

Supplementary Precautionary statements: P260: Do not breathe vapour/spray.
P264: Wash contaminated skin thoroughly after handling.
P301/330/331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303/361/353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304/340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P363: Wash contaminated clothing after use.
P405: Store locked up.

Label elements under CHIP:

Hazard symbols:

Risk phrases:

Safety phrases:

2.3. Other hazards

Section 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients:

PHOSPHORIC ACID

EINECS	CAS	CHIP Classification	CLP Classification	Percent
231-633-2	7664-38-2	C; R34	Skin Corr. !B-H314	<36%

CITRIC ACID

EINECS	CAS	CHIP Classification	CLP Classification	Percent
201-069-1	77-92-9			<11%

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention immediately.

Eye contact: Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Continue to rinse for at least 15 minutes and get medical attention.

Ingestion: Do not induce vomiting. Immediately rinse mouth and provide fresh air. Never give liquid to an unconscious person. Get medical attention.

Inhalation: Move exposed person to fresh air at once. Get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Skin contact:	May cause serious chemical burns to the skin.
Eye contact:	Extreme irritation of eyes and mucous membranes, including burning and tearing. May cause blurred vision and serious eye damage.
Ingestion:	May cause chemical burns in mouth, oesophagus and stomach.
Inhalation:	Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. Causes burns to the respiratory tract, inflammation of the lungs, congestion, pulmonary oedema, fever and cyanosis.
Delayed / immediate effects:	Immediate effects can be expected after short-term exposure.

4.3. Indication of any immediate medical attention and special treatment needed

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media:	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products:	Fire or high temperature create oxides of phosphorus

5.3. Advice for fire-fighters

Protective equipment for fire-fighters:	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions:	Wear protective clothing as described in Section 8 of this safety data sheet. Avoid inhalation of spray mist and contact with skin and eyes.

6.2. Environmental precautions

Environmental precautions:	Prevent entry into drains.

6.3. Methods and material for containment and cleaning up

Clean-up procedures:	Absorb with sand or other inert, damp, non-combustible material. Collect spillages in containers, and seal securely.

6.4. Reference to other sections

Reference to other sections:	Refer to section 8 of MSDS

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements:	Avoid contact with skin or eyes. Avoid inhalation of vapours and spray mists.

7.2. Conditions for safe storage, including and incompatibilities

Storage conditions: Keep in tightly closed original container in dry, cool and well ventilated place. Keep NEUTRALISING CRYSTALS available to help deal with small spillages.

Suitable packaging: Polyethylene. Stainless steel.

7.3. Specific end use(s)

Specific end uses(s): Flushing and descaling of heating and cooling systems.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Phosphoric Acid, >=25%
WEL: TWA-8hrs : 1mg/m3, STEL - 15min : 2mg/m3

8.2. Exposure controls

Protective equipment:

Engineering measures: Ensure there is sufficient ventilation of the area.

Respiratory protection: Avoid breathing vapour. If ventilation is insufficient, suitable respiratory protection must be provided.

Hand protection: Use protective gloves.

Eye protection: Wear tight fitting goggles or face shield.

Skin protection: Protective clothing must be worn.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Viscous liquid

Colour: Pinkish-red.

Odour: Very slight sweet odour.

Solubility in water: Miscible with water, soluble in ethanol

pH: (of 10% solution): 1

Specific gravity: 1.30

9.2. Other information

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Provide suitable ventilation when descaling. Some hydrogen may be evolved, and this is a flammable gas. Avoid smoking nearby, or any other means of ignition.

10.2. Chemical stability

Chemical stability: Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions.
Decomposition may occur on exposure to conditions or materials listed below.

10.4. Conditions to avoid

Conditions to avoid: Avoid extreme temperatures for prolonged periods of time (boiling point 171ºC). Avoid freezing.

10.5. Incompatible materials

Materials to avoid: Strong alkalis. Oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products: Oxides of phosphorous.
When heated, toxic and corrosive vapours may be formed.

Section 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity: Acute toxicity (Oral LD50): 1530 mg/kg Rat.
Acute toxicity (Dermal LD50): 2740 mg/kg.

Symptoms / routes of exposure

Skin contact: May cause serious chemical burns to the skin.

Eye contact: Skin corrosive, corrosivity to eyes is assumed.
No testing is needed.

Carcinogenicity: Does not contain any substances known to be carcinogenic.

Ingestion: May cause chemical burns in mouth, oesophagus and stomach.

Inhalation: Irritating to respiratory system. May cause damage to mucous membranes in nose, throat, lungs and bronchial system.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

Section 12: Ecological information

12.1. Toxicity

Toxicity: May affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.

12.2. Persistence and degradability

Persistence and degradability:

12.3. Bioaccumulative potential

Bioaccumulative potential:

12.4. Mobility in soil

Mobility: Miscible in water. May spread in water systems.

12.5. Results of PBT and vPvB assessment

PBT identification:

12.6. Other adverse effects

Other adverse effects:

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Dispose by flushing away with water after neutralising with alkali to neutral pH. For large quantities, seek advice from special waste disposal company or local authority.

Disposal of packaging: Return empty containers to the supplier for recycling. Damaged containers should be destroyed by cutting up or incineration. Do not use for potable water.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information

14.1. UN number

UN No. (ADR/RID/ADN): 1805

UN No. (IMDG): 1805

NU No. (ICAD) 1805

14.2. UN proper shipping name:

Proper shipping name POWER FLUSH FX2

14.3. Transport hazard class(es):

ADR/RID/ADN Class Class 8: Corrosive substances.

ADR Label No. 8

IMDG Class 8

ICAO Class / Division 8

14.4. Packing group

ADR/RID/ADN packing group: III

IMDG packing group: III

ICAD packing group III

14.5. Environmental hazards

Environmental hazardous Substances / marine pollutant: No

14.6. Special precautions for user

EMS: F-A, S-B

Emergency Action Code: 2R

Hazard No. (ADR) 80

Section 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Statutory instruments: The chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I 2009 No. 716).

Approved Code of Practice: Safety Data Sheets for Substances and Preparations. Classification and Labelling of Substances and Preparations Dangerous for Supply.

Guidance Notes: CHIP for everyone HSG (108). Workplace Exposure Limits EH40.

Section 16: Other information

Other information:

Legal disclaimer: The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. Kamco Limited shall not be held liable for any damage resulting from handling or from contact with the above product.