

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier:** Flux
- **Trade name:** Carr's Brown Flux
- **Article number:** C1030 (50ml), C1031 (250ml)
- **1.2 Relevant identified uses of the substance or mixture and uses advised against** Soldering Flux
- **Application of the substance / the mixture**  
Soldering
- **1.3 Details of the supplier of the safety data sheet**
- **Supplier:**  
Phoenix Precision Paints Limited  
13 Orwell Court,  
Wickford,  
Essex SS11 8YJ  
Tel +44 (0)1268 730549  
EMAIL: sales@phoenix-paints.co.uk
- **Further information obtainable from:** sales@phoenix-paints.co.uk
- **1.4 Emergency telephone number:** +44 (0)1268 730549 (Business hours)

### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS05 corrosion  
Eye Dam. 1

H318 Causes serious eye damage.

- **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** GHS05
- **Signal word:** Danger

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

phosphoric acid

- **Hazard statements**

Causes severe skin burns and eye damage

Causes serious eye damage

- **Precautionary statements**

Do not breathe mist, vapors, spray

Wash exposed skin thoroughly after handling

Wear protective gloves, protective clothing, eye protection, face protection

IF SWALLOWED: rinse mouth. Do NOT induce vomiting

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

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing Immediately call a poison center or doctor/physician

Wash contaminated clothing before reuse

Store locked up, Dispose of contents/container to comply with local, state and federal regulations

If inhaled: Remove person to fresh air and keep comfortable for breathing

- **2.3 Other hazards**


None

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**according to 1907/2006/EC, Article 31**

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### SECTION 3: Composition / Information on ingredients

- 3.2 Chemical characterisation: Mixtures
- Description: Mixture of substances listed below with nonhazardous additions.

CAS: 7664-38-2	phosphoric acid	
EINECS: 231-633-2	 Skin Corr. 1B, H314	98 - 99.9%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

### SECTION 4: First Aid Measures

#### 4.1 Description of first aid measures

- **General information:** Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with labored breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.
- **After inhalation:** Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
- **After skin contact:** Wash immediately with lots of water (15 minutes)/shower. Do not apply (chemical) neutralising agents. Remove clothing while washing. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service. If burned surface > 10%: take victim to hospital.
- **After eye contact:** Rinse immediately with plenty of water for 15 minutes. Do not apply neutralising agents. Take victim to an ophthalmologist.
- **After swallowing:** Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Do not give activated charcoal. Call Poison Centre/Doctor. Take the container/vomit to the doctor/hospital. Immediately consult a doctor/medical service. Ingestion of large quantities: immediately to hospital. Do not give chemical antidote. Doctor: gastric lavage is not recommended.

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

- **Symptoms/injuries after inhalation:** Coughing. Dry/sore throat. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. FOLLOWING SYMPTOMS MAY APPEAR LATER: Respiratory difficulties. Risk of lung edema.
- **Symptoms/injuries after skin contact:** Caustic burns/corrosion of the skin.
- **Symptoms/injuries after eye contact:** Corrosion of the eye tissue.
- **Symptoms/injuries after ingestion:** Burns to the gastric/intestinal mucosa. Nausea. Abdominal pain. Blood in vomit. AFTER ABSORPTION OF LARGE QUANTITIES: Shock.
- **Chronic symptoms:** ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Dry skin. Red skin.

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

No additional information available

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### SECTION 5: Fire Fighting Measures

#### 5.1 Extinguishing media

- **Suitable extinguishing agents:** Adapt extinguishing media to the environment.
- **Unsuitable extinguishing media:** No unsuitable extinguishing media known.

#### 5.2 Special hazards arising from the substance or mixture

• **Fire hazard:** DIRECT FIRE HAZARD. Non combustible. INDIRECT FIRE HAZARD. Reactions involving a fire hazard: see "Reactivity Hazard".

• **Explosion hazard:** INDIRECT EXPLOSION HAZARD. Reactions with explosion hazards: see "Reactivity Hazard".

• **Reactivity:** Reacts exothermically with water (moisture). Decomposes on exposure to temperature rise: release of toxic and corrosive gases/vapours (phosphorus oxides). Reacts on exposure to temperature rise with (some) metals: release of highly flammable gases/vapours (hydrogen). Violent exothermic reaction with (some) bases. Violent to explosive reaction with many compounds e.g.: with (strong) oxidizers and with (strong) reducers.

#### 5.3 Advice for firefighters

- **Precautionary measures fire:** Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: seal off low-lying areas. Exposure to fire/heat: have neighbourhood close doors and windows.
- **Firefighting instructions:** Cool tanks/drums with water spray/remove them into safety. Dilute toxic gases with water spray. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.
- **Protection during firefighting:** Heat/fire exposure: compressed air/oxygen apparatus.

### SECTION 6: Accidental Release Measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

- **Protective equipment:** Gloves. Face-shield. Corrosion-proof suit. Dust cloud production: compressed air/oxygen apparatus. See "Material-Handling" to select protective clothing.
- **Emergency procedures:** Mark the danger area. Prevent dust cloud formation. No naked flames. Wash contaminated clothes. Large spills/in confined spaces: consider evacuation. In case of hazardous reactions: keep upwind. In case of reactivity hazard: consider evacuation.
- **Measures in case of dust release:** In case of dust production: keep upwind. In case of dust production: consider evacuation. Dust production: have neighbourhood close doors and windows.

##### 6.1.2. For emergency responders

- **Protective equipment:** Equip cleanup crew with proper protection.
- **Emergency procedures:** Ventilate area.

#### 6.2 Environmental precautions:

Prevent soil and water pollution. Prevent spreading in sewers.

#### 6.3 Methods and material for containment and cleaning up:

- **For containment:** Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Dam up the solid spill. Hazardous reaction: measure explosive gas-air mixture. Reaction: dilute combustible gas/vapour with water curtain. Take account of toxic/corrosive precipitation water. Heat exposure: dilute toxic gas/vapour with water spray.
- **Methods for cleaning up:** Prevent dust cloud formation. Scoop solid spill into closing containers. See "Material-handling" for suitable container materials. Carefully collect the spill/leftovers. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

#### 6.4 Reference to other sections

See Section 8: Exposure controls and personal protection.

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### SECTION 7: Handling and Storage

#### 7.1 Precautions for safe handling:

• **Precautions for safe handling:** Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Keep the substance free from contamination. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Keep away from naked flames/heat. Observe strict hygiene. Keep container tightly closed. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

**Hygiene measures:** Wash exposed skin thoroughly after handling. Wash contaminated clothing before reuse.

#### 7.2 Conditions for safe storage, including any incompatibilities

- **Technical measures:** Comply with applicable regulations.
- **Storage conditions:** Keep only in the original container in a cool, well ventilated place away from incompatible materials. Keep container closed when not in use.
- **Incompatible products:** Strong bases. Strong acids. metals.
- **Incompatible materials:** Sources of ignition. Direct sunlight.
- **Storage temperature:** > 20 °C
- **Heat-ignition:** KEEP SUBSTANCE AWAY FROM: heat sources.
- **Prohibitions on mixed storage:** KEEP SUBSTANCE AWAY FROM: reducing agents. (strong) bases. metals. many substances.
- **Storage area:** Ventilation at floor level. Keep locked up. Unauthorized persons are not admitted. Meet the legal requirements.
- **Special rules on packaging:** SPECIAL REQUIREMENTS: closing. corrosion-proof. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
- **Packaging materials:** SUITABLE MATERIAL: stainless steel. polyethylene. glass. MATERIAL TO AVOID: steel. aluminium. iron.

### SECTION 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:**

#### 7664-38-2 phosphoric acid

WEL	Short-term value: 2 mg/m <sup>3</sup> Long-term value: 1 mg/m <sup>3</sup>
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#### 7664-38-2 phosphoric acid

Inhalative	DNEL	0.73 mg/m <sup>3</sup> (Con) 2.92 mg/m <sup>3</sup> (Ind)
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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:

Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Store protective clothing separately.  
Avoid contact with the skin.  
Avoid contact with the eyes and skin.

##### • Respiratory protection:

Dust production: an ABEK respirator to EN141 and EN405 is normally sufficient. If in doubt, consult a respirator manufacturer and show this safety data sheet.

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• **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 can not 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:**



Tightly sealed goggles

## SECTION 9: Physical and Chemical Properties

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

• **General Information**

• **Appearance:**

**Form:** Liquid

**Colour:** Brown

• **Odour:** Odourless

• **Odour threshold:** Not determined.

• **pH-value:** Not determined.

• **Change in condition**

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:** 100 °C

• **Flash point:** Not applicable.

• **Flammability (solid, gaseous):** Not applicable.

• **Ignition temperature:** Not applicable.

• **Decomposition temperature:** Not determined.

• **Self-igniting:** Product is not selfigniting.

• **Danger of explosion:** Heating may cause an explosion.

• **Explosion limits:**

**Lower:** Not determined.

**Upper:** Not determined.

• **Vapour pressure at 20 °C:** Not determined.

• **Density at 20 °C:** Not determined.

• **Relative density** Not determined.

• **Vapour density** Not determined.

• **Evaporation rate** Not determined.

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• <b>Solubility in / Miscibility with water:</b>	Complete
• <b>Partition coefficient (n-octanol/water):</b>	Not determined.
• <b>Viscosity:</b>	
<b>Dynamic at 20 °C:</b>	Not determined
<b>Kinematic:</b>	Not determined.
• <b>Solvent content:</b>	
<b>Organic solvents:</b>	Not determined
<b>Solids content:</b>	0.00%
• <b>9.2 Other information</b>	No further relevant information available.

### SECTION 10: Stability and Reactivity

- **10.1 Reactivity:** Reacts exothermically with water (moisture). Decomposes on exposure to temperature rise: release of toxic and corrosive gases/vapours (phosphorus oxides). Reacts on exposure to temperature rise with (some) metals: release of highly flammable gases/vapours (hydrogen). Violent exothermic reaction with (some) bases. Violent to explosive reaction with many compounds e.g.: with (strong) oxidizers and with (strong) reducers.
- **10.2 Chemical stability:** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions:** No dangerous reactions known.
- **10.4 Conditions to avoid:** Direct sunlight. Extremely high or low temperatures.
- **10.5 Incompatible materials:** Strong acids. Strong bases.
- **10.6 Hazardous decomposition products:** Phosphorus oxides. Carbon monoxide. Carbon dioxide. Thermal decomposition generates : Corrosive vapors.

### SECTION 11: Toxicological Information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

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

**7664-38-2 phosphoric acid**

Oral	LD50	2600 mg/kg (Rat)
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**Primary irritant effect:**

- **Skin corrosion/irritation:** Causes severe skin burns and eye damage.
- **Serious eye damage/irritation:** Causes serious eye damage.
- **Respiratory or skin sensitisation:** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** Based on available data, the classification criteria are not met.
- **Reproductive toxicity:** Based on available data, the classification criteria are not met.
- **STOT-single exposure:** Not classified
- **STOT-repeated exposure:** Not classified
- **Aspiration hazard:** Not classified
- **Potential Adverse human health effects and symptoms:** Based on available data, the classification criteria are not met.
- **Symptoms/injuries after inhalation:** Coughing. Dry/sore throat. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. FOLLOWING SYMPTOMS MAY APPEAR LATER: Respiratory difficulties. Risk of lung edema.
- **Symptoms/injuries after skin contact:** Caustic burns/corrosion of the skin.



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### SECTION 12: Ecological Information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **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.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**

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.

Must not reach sewage water or drainage ditch undiluted or unneutralised.

Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### SECTION 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.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### SECTION 14: Transport Information

- |                                       |                                |
|---------------------------------------|--------------------------------|
| • <b>14.1 UN-Number</b>               |                                |
| • <b>ADR, IMDG, IATA</b>              | UN1805                         |
| • <b>14.2 UN proper shipping name</b> |                                |
| • <b>ADR</b>                          | 1805 PHOSPHORIC ACID, SOLUTION |
| • <b>IMDG</b>                         | PHOSPHORIC ACID, SOLUTION      |
| • <b>IATA</b>                         | PHOSPHORIC ACID, SOLUTION      |

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- 14.3 Transport hazard class(es)
- ADR, IMDG, IATA



- Class 8 Corrosive substances.
- Label 8

- 14.4 Packing group III
- ADR, IMDG, IATA

- 14.5 Environmental hazards:
- Marine pollutant: No

- 14.6 Special precautions for user Warning: Warning: Corrosive substances.
- Danger code (Kemler): 80
- EMS Number: F-A,S-B

- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code Not applicable.

- UN "Model Regulation": UN1805; PHOSPHORIC ACID, SOLUTION; 8; III

### SECTION 15: Regulatory Information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

### SECTION 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.**

H318 Causes serious eye damage.

- **Department issuing SDS:** Product safety department: LABORATORY

- **Contact:** Health & Safety Officer

- **Abbreviations and acronyms:**

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