

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

- **1.1 Product identifier:** Flux
- **Trade name:** Carr's Green Flux
- **Article number:** C1024 (50ml), C1025 (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

Acute toxicity (oral) Category 4
Skin corrosion/irritation Category 1B
Serious Eye Damage/Eye Irritation Category 2

H302
H314
H319



GHS07



GHS09

Hazardous to the aquatic environment -
Chronic Hazard Category 1

H410

- **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, GHS07, GHS09
- **Signal word:** Danger

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

zinc chloride, ammonium chloride.

- **Hazard statements**

Causes serious eye irritation

Harmful if swallowed.

Causes severe skin burns and eye damage.

Very toxic to aquatic life with long lasting effects.

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• Precautionary statements

Do not eat, drink or smoke when using this product,
Avoid release to the environment.

Wear protective gloves/protective clothing/eye protection/face protection.

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.

Dispose of contents/container to a licensed disposal company.

• 2.3 Other hazards

No Information Available

SECTION 3: Composition / Information on ingredients

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

CAS: 7646-85-7 EINECS: 231-592-0	Zinc Chloride ☞ Acute Tox. 4 (oral) H318, Skin Corr. 1B H314, ☞ Aquatic Chronic 1 Dangerous for the environment H410	18 - 22%
CAS: 12125-02-9 EINECS: 235-186-4	Ammonium chloride ☞ Acute Tox. 4 H302, Eye Irrit. 2 H319	1.5 - 2%

- **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:** If symptoms persist, call a physician / seek medical advice (show the label where possible).
- **After inhalation:** Move the exposed person to fresh air. If breathing is difficult, give oxygen. Obtain medical attention, If breathing stops, provide artificial respiration.
- **After skin contact:** Wash immediately with lots of water (15 minutes)/shower. Remove clothing while washing. Do not remove clothing if it sticks to the skin.
- **After eye contact:** Rinse immediately with plenty of water for 15 minutes holding the eyelids open. Seek medical attention.
- **After swallowing:** DO NOT INDUCE VOMITING. Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur. Never give anything by mouth to an unconscious person. Seek medical attention.
- **Protection of First-aiders:** Use personal protective equipment.

4.2 Most important symptoms and effects, both acute and delayed

None reasonably foreseeable.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Fire Fighting Measures

5.1 Extinguishing media

- **Suitable extinguishing agents:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- **Unsuitable extinguishing media:** No unsuitable extinguishing media known.

5.2 Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

• 5.3 Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

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SECTION 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear suitable protective clothing. Avoid breathing vapours, mist or gas. Avoid formation of dust. Ensure adequate ventilation of the working area. Evacuate personnel to a safe area.

6.2 Environmental precautions:

Should not be released into the environment. See Section 12 for additional ecological information.

6.3 Methods and material for containment and cleaning up:

Sweep up or vacuum up spillage and collect in suitable container for disposal. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: Handling and Storage

7.1 Precautions for safe handling:

Wear personal protective equipment. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Avoid dust formation.

7.2 Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place.

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:

7646-85-7 Zinc Chloride

WEL	Short-term value: 2 mg/m ³ Long-term value: 1 mg/m ³
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12125-02-9 Ammonium chloride

WEL	Short-term value: 20 mg/m ³ Long-term value: 10 mg/m ³
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Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Monitoring methods

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust

Derived No Effect Level (DNEL) No information available

Predicted No Effect Concentration (PNEC) No information available.

- Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls

Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

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SECTION 8: Exposure Controls / Personal Protection

- **Personal protective equipment:**

- **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.

Skin and body protection: Long sleeved clothing

- **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:**



Goggles (European standard - EN 166)

SECTION 9: Physical and Chemical Properties

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

- **General Information**

- **Appearance:**

Form: Liquid

Colour: Green

- **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.

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

SECTION 10: Stability and Reactivity

- **10.1 Reactivity:** None known, based on information available
- **10.2 Chemical stability:** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:** No data available
- **10.3 Possibility of hazardous reactions:** No data available
- **10.4 Conditions to avoid:** No data available
- **10.5 Incompatible materials:** No data available
- **10.6 Hazardous decomposition products:** No data available

SECTION 11: Toxicological Information

• 11.1 Information on toxicological effects

• Acute toxicity

Oral Category 4

Dermal Based on available data, the classification criteria are not met

Inhalation Based on available data, the classification criteria are not met

• LD/LC50 values relevant for classification:

7646-85-7 Zinc Chloride

Oral	LD50	350 mg/kg (Rat)
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12125-02-9 Ammonium chloride

Oral	LD50	Dermal	LD50	Inhalation	LC50
1650 mg/kg (Rat)		> 2000 mg/kg			

Primary irritant effect:

- **Skin corrosion/irritation:** Based on available data, the classification criteria are not met
- **Serious eye damage/irritation:** Category 2
- **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:** There are no known carcinogenic chemicals in this product
- **Reproductive toxicity:** Based on available data, the classification criteria are not met.
- **STOT-single exposure:** Based on available data, the classification criteria are not met

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- **STOT-repeated exposure:** Based on available data, the classification criteria are not met
Target Organs - Eyes, Heart, Blood, spleen, Kidney, Respiratory system, Skin.
- **Aspiration hazard:** Not applicable, Solid
- **Symptoms / effects, both acute and delayed:** No information available

SECTION 12: Ecological Information

- **12.1 Toxicity**
- **Ecotoxicity effects:**

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Ammonium chloride	LC50 = 209 mg/L	EC50 = 202 mg/L/24h		
Zinc Chloride		EC50 0.2 mg/L - 48hr		

No further relevant information available.

- **12.2 Persistence and degradability** Soluble in water, Persistence is unlikely, based on information available.
- **12.3 Bioaccumulative potential** Bioaccumulation is unlikely
Ammonium chloride - log Pow -4.38, Bioconcentration factor (BCF) No data available
- **12.4 Mobility in soil** The product is water soluble, and may spread in water systems . Will likely be mobile in the environment due to its water solubility. Highly mobile in soils
- **Ecotoxic effects:**
- **Remark:** Harmful to fish
- **12.5 Results of PBT and vPvB assessment** No data available for assessment.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal Considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.
- **Uncleaned packaging:**
- **Recommendation:** Dispose of this container to hazardous or special waste collection point.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport Information

- **14.1 UN-Number**
- **ADR, IMDG, IATA** Not regulated

- **14.2 UN proper shipping name**
- **ADR** Not regulated
- **IMDG** Not regulated
- **IATA** Not regulated

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



- **Class** 8 Corrosive substances.
- **Label** 8

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• 14.4 Packing group	
• ADR, IMDG, IATA	1
• 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
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• 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.

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.**

- H302 Harmful if swallowed.
 H314 Causes severe skin burns and eye damage.
 H319 Causes serious eye irritation
 H410 Very toxic to aquatic life with long lasting effects.

- **Department issuing SDS:** Product safety department: LABORATORY
- **Contact:** Health & Safety Officer
- **Abbreviations and acronyms:**

Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.