Wardle Antiquing

SAFETY DATA SHEET

ANTIQUING FLUID - BRONZE

PRODUCT DESCRIPTION

Antiquing Fluid – Bronze, is a cold patination treatment which will colour new or bright brass, copper, and bronze to give an antique look.

DIRECTIONS: Remove any metal lacquer using paint stripper first. Thoroughly remove and clean any grease or oil, including fingerprints with Cold Patination Pre-Treatment, and wipe dry. Proper preparation of the surface is essential to produce a uniform colour. Dilute with 10 parts water and immerse items together to ensure a uniform colour change. For larger items apply Antiquing Fluid directly on to the item using either cotton wool or a brush and watch the surface quickly change colour. When the desired colour is achieved, immediately rinse with clean water and pat dry with paper towel. After treating with Antiquing Fluid, items can be sealed with a finishing wax, oil or appropriate lacquer.

IMPORTANT: Always test products first on a spare surface or inconspicuous area to check colour, compatibility and end result.

SECTION 1: IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier
Product Name: Antiquing Fluid - Bronze
Composition / Ingredients: Orthophosphoric Acid 25-93%
CAS No. 7664-38-2
EC No: 231-633-2
Tariff No 28092000

1.2 Relevant identified uses of the substance or mixture and uses advised against
Antique solution for Brass, Copper & Bronze Metal / Metal surface treatment
No uses advised against.

1.3 Details of the supplier of the safety data sheet
Company Name: Wardle Antiquing
Unit 6 Albany Court, Blenheim Road, Airfield Industrial Estate,
Ashbourne DE6 1HA
Tel: 01335 347154
Email: sales@johnwardle.co.uk

1.4 Emergency telephone number
Emergency tel: 01335 347154 (office hours only)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classifications of the substance or mixture

Classification under CLP: Regulation (EC) No.1272/2008

GHS05 corrosion
Skin corr. 1B H314 Causes severe skin burns and eye damage.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Symbol(s) C: Corrosive
R-phrase(s) R34 – Causes burns

2.2 Label elements

GHS05

Signal Word**: DANGER**

Hazard Statements

H314 Causes severe skin burns and eye damage.

Precautionary Statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water / shower.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove Contact lenses, if present and easy to do. Continue rinsing.
P303 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

2.3 Other hazards

PBT and vPvB : Not applicable

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Orthophosphoric Acid 25 – 93%
CAS No: 7664-38-2

EC number; 231-633-2
Index No: 015-011-00-6
REACH Registration No: 01-2119485924-24-0005

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General information: Do not leave affected persons unattended. Personal protection for the First Aider.

Skin Contact: Wash off immediately with soap and plenty of water and rinse thoroughly while removing all contaminated clothes and shoes. Immediate medical attention is required.

Eye Contact: Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Ingestion: Call a physician immediately. Rinse out mouth and then drink plenty of water.

Inhalation: Remove from exposure, lie down. Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Immediate medical attention is required.

4.2 Most important symptoms and effects, both acute and delayed

Causes severe skin burns and eye damage. Gastric and intestinal disorders.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing Media

This product is not flammable. Use fire extinguishing methods suitable to surrounding conditions. CO_2, powder or water spray. Fight large fires with water spray or alcohol resistant foam. **For safety reasons unsuitable extinguishing agents**: Water with full jet.

5.2 Special hazards arising from the substance or mixture

In case of fire, the following can be released: Phosphorus oxides (e.g. P205)

5.3 Advice for fire-fighters

Wear self-contained respiratory protection. Wear fully protective suit.
Additional Information: Cool endangered receptacles with water spray. Collect contaminated firefighting water separately. It must not enter the sewage system.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away. Mount respiratory protective device.

6.2 Environmental precautions

Dilute with plenty of water. Do not allow to enter sewers / surface or ground water.

6.3 Methods and material for containment and cleaning up

Absorb with liquid binding material. Use neutralising agent. Dispose contaminated materials as waste according to item 13. Ensure adequate ventilation.

6.4 Reference to other sections

Reference to other sections: Refer to section 8 and 13

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Keep receptacles tightly sealed. Ensure good ventilation / exhaustion at the workplace. When diluting always pour product into water and not vice versa

7.2 Conditions for safe storage, including any inculpabilities

Store only in the original receptacle. Use polyolefine receptacles. Provide acid resistant floor. Suitable material for receptacles and pipes: Stainless Steel. Store away from reducing agents. Do not store together with alkalis (caustic solutions) Keep container tightly closed.

7.3 Specific end use(s)

Metal Finishing

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

7664-38-2 Orthophosphoric Acid
IOELV (EU) Short-term value: 2mg/m3
Long-term value: 1mg/m3

8.2 Exposure controls

General Protective & Hygiene Measures: The usual precautionary measures are to be adhered to when handling chemicals. Do not eat or drink while working. Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.

Respiratory protection:
Use suitable respiratory protective device only when aerosol or mist is formed.
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device. Short term filter device: ABEK+P Filter A/P2 (EN 14387, EN 143)

Protection of hands: Protective gloves
The glove material has to be impermeable and resistant to the product/the substance/the preparation.

Material of gloves
Butyl rubber, BR (0.7 mm)
Nitrile rubber, NBR (0.4 mm)
Chloroprene rubber, CR (0.5 mm)
Fluorocarbon rubber (Viton)
Natural rubber, NR
Neoprene gloves
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. (EN 374)
Not suitable are gloves made of the following materials: Leather gloves

Eye protection: Tightly sealed goggles (EN 166)
Body protection: Acid resistant protective clothing. Boots.

Limitation and supervision of exposure into the environment
Avoid discharging of phosphoric acid solutions into municipal wastewater, surface water or soils, when such discharges are expected to cause significant pH changes.

Risk management measures
Regular control of the pH value previous to or during discharges into open waters is required. Discharges should be carried out as to minimize pH changes in receiving surface waters. In general, most aquatic organisms can tolerate pH values in the range of 6-9.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical State:	Liquid
Appearance:	Blue
Odour:	Slight
Flammability:	This product is not flammable
Solubility in water:	Miscible
Boiling point / range oC	108 - 171oC (50-93%, 1013 hPa)
Vapour Pressure @ 20oC	4 Pa
Relative Density @ 20oC	1.574-1,791 (75-93%, EC A.3)
Vapour Density	3.4 (air=1)
Flash Point	Not Applicable
Viscosity @ 20oC	1.1 – 600 Mpa.s (5% - 105%)

9.2 Other Information

Other Information:	No further relevant information available.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity
Corrosive action on metals.
Reacts with reducing agents.
Reacts with alkali (lyes).
Ammonia (NH_3), fluorine, sulphur trioxide (SO_3), phosphorus pentoxide (P_2O_5).

10.2 Chemical stability
No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions
Reacts with metals forming hydrogen.
Reacts with alkali (lyes).

10.4 Conditions to avoid
To avoid thermal decomposition do not overheat.

10.5 Incompatible materials:
Alkalis
Metals

10.6 Hazardous decomposition products:
Phosphorus oxides

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:
LD/LC50 values relevant for classification:
Oral LD50 2600 mg/kg (rat) (equivalent to OECD 423)
Specific symptoms in biological assay:
Phosphoric acid is classified as corrosive to the skin, therefore, no need to perform an acute dermal and an acute inhalative toxicity test.
Primary irritant effect:
on the skin: Caustic effect on skin and mucous membranes.
on the eye: Strong caustic effect.
Sensitization: Phosphoric acid is classified as skin corrosive, thus a further assessment for skin sensitization is not necessary.

Additional toxicological information:
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of oesophagus and stomach.

Toxicokinetics, metabolism and distribution
This substance is not considered to have bio accumulative potential as it is highly soluble in water and phosphate levels in the body are regulated via homeostasis. For risk assessment purposes oral absorption is considered to be 50-100%, inhalation absorption 100% and dermal absorption 50-100%. Wide distribution throughout the body is to be expected and excretion will be predominantly via urine. Supporting studies show increased phosphorus retention in bone and increased

urinary phosphorus excretion after prolonged dietary administration of phosphoric acid and support the initial toxicokinetic assessment.

Repeated dose toxicity

Oral NOAEL 250 mg/kg bw/day (rat) (OECD 422 (sub chronic) should not be classified for STOT - repeated exposure

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Mutagenicity:

None (acc. to OECD 471, OECD 473, OECD 476 tests)

Carcinogenicity:

No data available (no carcinogenicity study needs to be performed as this substance is not genotoxic)

Toxicity for reproduction:

no classification is necessary

reproductive toxicity:	NOAEL≥500 mg/kg bw/day; rat; oral (OECD 422)
developmental toxicity:	NOAEL≥410 mg/kg bw/day; rat; oral
maternal toxicity:	NOAEL≥410 mg/kg bw/day; rat; oral (equivalent to OECD 414)

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Aquatic toxicity:

Phosphoric acid toxicity is related to its acidic nature and, therefore, is more related to concentration than to dose.
EC50/48 h (static) >100 mg/L (Daphnia magna) (OECD 202, freshwater)
EC50/72 h (static) >100 mg/L (algae) (OECD 201, freshwater)
median lethal pH 96h : 3-3.25 (Bluegill fish) fish mortality is caused by low pH values

12.2 Persistence and degradability

The substance is inorganic; therefore, no biodegradation tests are applicable.
Phosphoric acid dissociates in water into H3O+, H2PO4–, HPO4- - ions, which cannot be further degraded.

Other information:

The product should not get in high quantities into waste water because it may act as a plant nutrient and cause eutrophication.

12.3 Bio accumulative potential

Does not accumulate in organisms. This substance is highly water soluble and dissociating.
Phosphoric acid dissociates in water into H3O+, H2PO4–, HPO4- - ions, which are ubiquitous in the environment. Phosphoric acid is absorbed in form of phosphate anions. This anion is an essential component of the body.

12.4 Mobility in soil

This substance is highly water soluble and dissociating. When spilled onto soil, phosphoric acid will infiltrate downward and will be partially neutralized by dissolving some of the soil material. On reaching the ground table phosphoric acid

will be dispersed and diluted. Therefore, the environmental assessment should be limited to the aquatic compartment.

Behaviour in sewage processing plants:
Phosphoric acid is of low toxicity to microorganisms, since in sewage treatment plants the microorganisms are essentially exposed to mainly H2PO4- and HPO4- - ions, which are an essential nutrient for them, and not to parent phosphoric acid or to low pH values.

12.5 Results of PBT and vPvB assessment

PBT: No assessment is required for inorganic substances.
vPvB: No assessment is required for inorganic substances.

12.6 Other adverse effects

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Rinse off 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.

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. Disposal must be made according to official regulations. Small amounts may be diluted with plenty of water and washed away. Dispose of bigger amounts in accordance with Local Authority requirements.

European waste catalogue 06 01 04 phosphoric and phosphorous acid

Uncleaned packaging:
Recommendation:
Empty contaminated packaging thoroughly. They may be recycled after thorough and proper cleaning. Packaging that may not be cleansed are to be disposed of in the same manner as the product. Disposal must be made in accordance with Local Authority requirements

Recommended cleansing agents: Water, if necessary, together with cleansing agents.

SECTION 14: TRANSPORT INFORMATION

14.1	UN Number:	UN1805
14.2	UN Proper Shipping Name:	Phosphoric Acid Solution
14.3	Transport Hazard Class(es):	8
14.4	Packing Group:	III

SECTION 15: REGULATORY INFORMATION

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

The regulatory information given above only indicates their principal regulations specifically applicable to the product described in the safety data sheet. The users attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

15.2 Chemical Safety Assessment

Chemical Safety Assessment: A chemical safety assessment has been carried out for the substance or the mixture by the supplier.

SECTION 16: OTHER INFORMATION

Full text R-Phrases used in S2 & S3

R34 – Causes burns.

Full text of H-Statements used in S2 & S3

H314 - Causes severe skin burns and eye damage.

Revision Date: 24/05/17