

WILLOWCHEM 91**PERSONAL PRECAUTIONS**

In case of a major spillage, full protective equipment including a respirator or self-contained breathing apparatus must be worn.

ENVIRONMENTAL PRECAUTIONS

Do not allow to enter sewers or water courses. If spillage does enter sewers or water courses, immediately inform appropriate authorities.

SPILL CLEAN UP METHODS

DO NOT TOUCH SPILLED MATERIAL! Wear necessary protective equipment. Neutralise small amounts with sodium bicarbonate or lime and flush to sewer with large amounts of water. Large spills, dilute, then neutralise with caustic solution. Absorb in vermiculite, dry sand or earth and place into containers. Flush area with plenty of water.

7 HANDLING AND STORAGE**USAGE PRECAUTIONS**

Avoid spilling, skin and eye contact. Ventilate well, avoid breathing vapours. Use approved respirator if air contamination is above accepted level. Eye wash facilities and emergency shower must be available when handling this product.

STORAGE PRECAUTIONS

Store in tightly closed original container in a dry, cool and well-ventilated place. Keep in original container.

STORAGE CLASS

Corrosive storage.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	Std	LT - ppm	LT - mg/m3	ST - ppm	ST - mg/m3
PHOSPHORIC ACID ...%	WEL		1 mg/m3		2 mg/m3

INGREDIENT COMMENTS

WEL = Workplace Exposure Limits OES - The HSE has issued a Chemical Hazard Alert Notice (CHAN 25) for sulphuric acid mist and has recommended that the present Occupational Exposure Standard of 1mg/m3 is too high and should be reduced to 0.3 mg/m3.

PROTECTIVE EQUIPMENT**ENGINEERING MEASURES**

Provide adequate general and local exhaust ventilation.

RESPIRATORY EQUIPMENT

No specific recommendation made, but respiratory protection must be used if the general level exceeds the Recommended Workplace Exposure Limit.

HAND PROTECTION

Use protective gloves made of: Rubber (natural, latex). Butyl rubber. Neoprene. Polyethylene. P.T.F.E (Teflon). or Polyethylene/Ethylene Vinyl Alcohol (PF/FVAI)

EYE PROTECTION

Use approved safety goggles or face shield.

OTHER PROTECTION

Wear appropriate clothing to prevent any possibility of skin contact.

HYGIENE MEASURES

DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes wet or contaminated. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Light viscous liquid		
COLOUR	Colourless		
ODOUR	Slight odour		
SOLUBILITY	Completely soluble in water		
RELATIVE DENSITY	1.76 @ 16°C	pH-VALUE, DILUTED SOLUTION	~ 1.1%

10 STABILITY AND REACTIVITY**STABILITY**

Avoid: Heat, sparks, flames. Moisture. Mixing with any other material. Contact with combustibles.

WILLOWCHEM 91**CONDITIONS TO AVOID**

Reacts strongly with water. Avoid contact with: Strong alkalis.

MATERIALS TO AVOID

Bases, alkalis (inorganic). Strong oxidising substances. Strong reducing agents. Massive, solid metal. Powdered metal. Water, steam, water mixtures.

Flammable/combustible material. Amines. Inorganic nitrates.

HAZARDOUS DECOMPOSITION PRODUCTS

Very toxic gases/vapours/fumes of: Oxides of: Sulphur. Phosphoric acid mist.

11 TOXICOLOGICAL INFORMATION

TOXIC DOSE 1 - LD 50 2140 mg/kg (oral rat)

HEALTH WARNINGS

Gas or vapour is harmful on prolonged exposure or in high concentration. This chemical may cause skin/eye irritation and burns (corrosive). Severe pulmonary irritant. Toxic through skin absorption (percutaneous).

Repeated exposure may cause chronic eye irritation. Contact with concentrated chemical may very rapidly cause severe eye damage, possibly loss of sight.

Perforated septum (damage to partition between cavities). Repeated exposure may cause chronic upper respiratory irritation. Tracheobronchitis, pulmonary oedema. Leucopenia (decreased number of leucocytes in the blood). Burning pain and severe corrosive skin damage. Swallowing concentrated chemical may cause severe internal injury. Erosion of exposed front teeth. Prolonged or repeated contact: Serious damage to the lining of nose, throat and lungs.

ROUTE OF ENTRY

Inhalation. Ingestion. Skin and/or eye contact.

TARGET ORGANS

Eyes. Gastro-intestinal tract. Respiratory system, lungs. Skin. Teeth.

MEDICAL SYMPTOMS

Extreme irritation of eyes and mucous membranes, including burning and tearing. Rhinitis (inflammation of the nasal mucous membranes). Epistaxis (nose bleeding). Pharyngitis (inflammation of back of mouth). Severe pulmonary irritation. General respiratory distress, unproductive cough. Severe skin irritation. Nausea, vomiting. Severe abdominal pain.

MEDICAL CONSIDERATIONS

Skin disorders and allergies.

12 ECOLOGICAL INFORMATION**ECOTOXICITY**

Dangerous for the environment if discharged into watercourses.

LC 50, 96 Hrs, FISH mg/l 42

EC 50, 48 Hrs, DAPHNIA, mg/l 29

MOBILITY

Soluble in water

13 DISPOSAL CONSIDERATIONS**DISPOSAL METHODS**

Mix slowly with NaHCO₃, neutralise and flush to sewer with lots of water. Absorb in vermiculite or dry sand, dispose in licensed hazardous waste. Neutralise with soda ash/slaked lime and discharge to sewer with lots of water. Confirm disposal procedures with environmental engineer and local regulations. Wash to drains with lots of water.

14 TRANSPORT INFORMATION

UK ROAD CLASS	8		
PROPER SHIPPING NAME	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (contains phosphoric acid and sulphuric acid)		
UN NO. ROAD	3264	UK ROAD PACK GR.	II
ADR CLASS NO.	8	ADR CLASS	Class 8: Corrosive substances.
ADR PACK GROUP	II	HAZARD NO. (ADR)	80 Corrosive or slightly corrosive substance.
ADR LABEL NO.	8	HAZCHEM CODE	2R

15 REGULATORY INFORMATION

LABELLING



Corrosive

CONTAINS

PHOSPHORIC ACID
SULPHURIC ACID

RISK PHRASES

R35 Causes severe burns.

SAFETY PHRASES

S24/25 Avoid contact with skin and eyes.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).
S60 This material and its container must be disposed of as hazardous waste.

16 OTHER INFORMATION

REVISION DATE 20/09/07

REV. NO./REPL. SDS GENERATED 1

SDS NO. 2007/10848

RISK PHRASES IN FULL

R34 Causes burns.

R35 Causes severe burns.

DISCLAIMER

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such