

WILLOWCHEM 60**UNUSUAL FIRE & EXPLOSION HAZARDS**

May develop highly toxic or corrosive fumes if heated. May form toxic or explosive vapours in presence of certain metals. May ignite other combustible materials.

SPECIFIC HAZARDS

Fire or high temperatures create: Corrosive gases/vapours/fumes of Phosphorus oxides POx

PROTECTIVE MEASURES IN FIRE

Wear self-contained breathing apparatus and protective clothing (including fire-fighting helmet, coat, trousers, boots and gloves).

6 ACCIDENTAL RELEASE MEASURES**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

Stop leak if possible without risk. DO NOT touch spilled material! Collect with non-combustible absorbent material. Flush with water. Dike for large spills. Neutralise with alkaline material (Lime, crushed limestone, sodium bicarbonate or soda ash). Flush area with water. Provide ventilation and confine spill. Do not allow runoff to sewer. Clean-up personnel should use respiratory and/or liquid contact protection.

7 HANDLING AND STORAGE**USAGE PRECAUTIONS**

Keep away from heat, sparks and open flame. Avoid spilling, skin and eye contact. Ventilate well, avoid breathing vapours. Use approved respirator if air contamination is above accepted level. Wear full protective clothing for prolonged exposure and/or high concentrations. Do not use contact lenses.

STORAGE PRECAUTIONS

May attack some plastics, rubber and coatings. Store in tightly closed original container in a dry, cool and well-ventilated place.

STORAGE CLASS

Corrosive storage.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	Std	LT - ppm	LT - mg/m3	ST - ppm	ST - mg/m3
BUTYL GLYCOL	WEL	25		ppm(Sk)	
CHROMIC ACID	WEL	0.05 No std.		mg/m3	
PHOSPHORIC ACID ...%	WEL		1 mg/m3		2 mg/m3

ENGINEERING MEASURES

Provide adequate general and local exhaust ventilation.

HAND PROTECTION

Use protective gloves made of: Rubber (natural, latex). Neoprene. Nitrile. Polyethylene. Polyvinyl chloride (PVC).

EYE PROTECTION

Wear splash-proof eye goggles to prevent any possibility of eye contact. Contact lenses should not be worn when working with this chemical!

OTHER PROTECTION

Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash, quick drench. Wear appropriate clothing to prevent any possibility of skin contact.

HYGIENE MEASURES

Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes contaminated. Change work clothing daily if contamination is reasonably probable. Promptly remove any clothing that becomes wet or contaminated. Contaminated clothing to be placed in closed container until disposal or decontamination. Warn cleaning personnel of chemical's hazardous properties.

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Liquid
COLOUR	Green
ODOUR	Odourless
SOLUBILITY	Soluble in water Soluble in Alcohol
RELATIVE DENSITY	1.3 20
	pH-VALUE, DILUTED SOLUTION 1-2

10 STABILITY AND REACTIVITY

WILLOWCHEM 60**STABILITY**

Stable under normal temperature conditions and recommended use.

CONDITIONS TO AVOID

Gives off hydrogen by reaction with metals.

MATERIALS TO AVOID

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

HAZARDOUS DECOMPOSITION PRODUCTS

Toxic gases/vapours/fumes of: Oxides of: Phosphorus. Phosphoric acid mist.

11 TOXICOLOGICAL INFORMATION

TOXIC DOSE 1 - LD 50 1530 mg/kg (oral rat)

TOXIC DOSE 2 - LD 50 2740 mg/kg (oral-rbt)

HEALTH WARNINGS

Gas or vapour is harmful on prolonged exposure or in high concentration. This chemical may cause skin/eye irritation and burns (corrosive). Irritant of eyes and mucous membranes.

Repeated exposure may cause chronic eye irritation. May cause chemical eye burns. Acute eczematous dermatitis, contact type erythema, oedema, papules vesicles, bullae, crusts, desquamation. Swallowing concentrated chemical may cause severe internal injury.

ROUTE OF ENTRY

Inhalation. Ingestion. Skin and/or eye contact.

TARGET ORGANS

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

MEDICAL SYMPTOMS

Extreme irritation of eyes and mucous membranes, including burning and tearing. Rhinitis (inflammation of the nasal mucous membranes). Upper respiratory irritation. General respiratory distress, unproductive cough. Severe skin irritation. Nausea, vomiting.

MEDICAL CONSIDERATIONS

Skin disorders and allergies.

12 ECOLOGICAL INFORMATION**ECOTOXICITY**

Dangerous to aquatic life in high concentrations. Low concentrations may act as a nutrient or precipitate heavy metals.

LC 50, 96 Hrs, FISH mg/l 100-1000

MOBILITY

The product is soluble in water.

DEGRADABILITY

Degradable; will enter natural phosphorus cycle. Chromium VI in water will eventually be reduced to chromium III by organic matter in the water. Most chromium released will ultimately be deposited in the sediment.

13 DISPOSAL CONSIDERATIONS**DISPOSAL METHODS**

Absorb in vermiculite or dry sand, dispose in licensed hazardous waste. Confirm disposal procedures with environmental engineer and local regulations. Wash to drains with lots of water. Contact supplier for disposal information.

14 TRANSPORT INFORMATION

UK ROAD CLASS	8		
PROPER SHIPPING NAME	CORROSIVE LIQUID, N.O.S.		
UN NO. ROAD	1760	UK ROAD PACK GR.	III
ADR CLASS NO.	8	ADR CLASS	Class 8: Corrosive substances.
ADR PACK GROUP	III	HAZARD NO. (ADR)	80 Corrosive or slightly corrosive substance.

WILLOWCHEM 60

HAZARD No. (ADR)

80

ADR LABEL NO.

8

15 REGULATORY INFORMATION

LABELLING



Corrosive

RISK PHRASES

R34 Causes 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 11/04/08

REV. NO./REPL. SDS GENERATED 2

SDS NO. 2008/10850

RISK PHRASES IN FULL

R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

R22 Harmful if swallowed.

R25 Toxic if swallowed.

R34 Causes burns.

R35 Causes severe burns.

R37 Irritating to respiratory system.

R38 Irritating to skin.

R41 Risk of serious damage to eyes.

R43 May cause sensitisation by skin contact.

R49 May cause cancer by inhalation.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R8 Contact with combustible material may cause fire.

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

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