SAFETY DATA SHEET
WILLOWCHEM 51

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

PRODUCT NAME	WILLOWCHEM 51
SYNONYMS, TRADE NAMES	Pickle paste
SUPPLIER	WILLOWCHEM TECHNOLOGY LIMITED BALLYROE BALLYHEA CHARLEVILLE CO. CORK 063 - 81975

2 HAZARDS IDENTIFICATION

Toxic by inhalation, in contact with skin and if swallowed. Causes severe burns.

CLASSIFICATION T;R23/24/25. C;R35.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Content	Classification
HYDROFLUORIC ACID ...%	231-634-8	7664-39-3	1-5%	T+;R26/27/28 C;R35
NITRIC ACID ...%	231-714-2	7697-37-2	10-20%	O;R8 C;R35
THICKENING AGENT			10-20%	Xi;R38.

The Full Text for all R-Phrases are Displayed in Section 16

4 FIRST-AID MEASURES

GENERAL INFORMATION

Other considerations

Delayed burns

(i) At lower concentrations, hydrofluoric acid can result in delayed symptoms causing late onset of effects, casualties should be managed as stated. It is recommended that where hydrofluoric acid is used calcium gluconate (HF antidote gel) should be readily available. Hydrofluoric acid workers should be made aware of the potential for delayed effects and the need to seek appropriate medical support.

(ii) All persons working with hydrofluoric acid shall receive a tube of calcium gluconate gel to take home and receive training in recognising delayed burns.

Disposal of contaminated material

(i) All potentially contaminated equipment and clothing should be disposed of. Product is a paste so skin must be washed thoroughly to remove any traces from the surface of the skin.

NOTES TO THE PHYSICIAN

EMERGENCY FIRST AID FOR HF BURNS AND INJURY

Primary Response

It is essential for the safety of the rescuers to prevent inhalation and to avoid contact with HF during the rescue operation.Appropriate personal protective equipment for use with HF must be worn.

The immediate priority after rescue is initial decontamination: this takes precedence over first aid or transfer to medical facilities. First aiders involved in rescue or

INHALATION

(i) REMOVE TO FRESH AIR.

After completion of primary response (decontamination) if inhalation is suspected apply 100% oxygen. If breathing has stopped resuscitate casualty by basic and/or advanced life support techniques - a bag valve mask must be used with 100% oxygen in place of 'mouth-to-mouth'.

(ii) Obtain medical attention; immediately arrange hospital admission.

(iii) Keep casualty at rest in comfortable position and continue with the above measures until medical attention at the site or in a hospital, has been obtained.

INGESTION

(i) After completion of primary response (decontamination) seek urgent hospital admission. Do not induce vomiting. Mouth and lips may be rinsed with water, only if casualty is conscious

SKIN CONTACT

(i) DO NOT DELAY.

Flush any remaining acid from the skin with copious amounts of cold water for at least five minutes and then apply calcium gluconate gel (HF Antidote Gel) and massage into the burnt area wearing gloves appropriate to the level of decontamination. Continue to massage while repeatedly applying gel until 15 minutes after the pain in the burnt area is relieved. If skin contamination is more extensive and clothing affected, be aware of the possibility of inhalation injury.

(ii) If calcium gluconate gel is not available CONTINUE TO FLUSH with water until it is.

(iii) Obtain medical attention, but do not delay the above management until medical attention is available.

EYE CONTACT

(i) DO NOT DELAY.

Flush the eyes with copious amounts of water or eye wash solution (sterile isotonic saline solution) until the ambulance arrives. Do not attempt to remove contact lenses. Irrigation should be continued while en route to hospital.

5 FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

The product is non-combustible. Use fire-extinguishing media appropriate for surrounding materials.

SPECIAL FIRE FIGHTING PROCEDURES

Keep run-off water out of sewers and water sources. Dike for water control. Move container from fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. Use water spray to reduce vapours. If risk of water pollution occurs, notify appropriate authorities.

UNUSUAL FIRE & EXPLOSION HAZARDS

May develop highly toxic or corrosive fumes if heated.

SPECIFIC HAZARDS

Fire creates: Toxic gases/vapours/fumes of Hydrogen fluoride (HF).

PROTECTIVE MEASURES IN FIRE

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

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

Clean-up personnel should use respiratory and/or liquid contact protection. Stop leak if possible without risk. DO NOT touch spilled material! Inform Authorities if large amounts are involved. Neutralise spilled material with crushed limestone, soda ash or lime. Absorb in vermiculite, dry sand or earth and place into containers. Wash thoroughly after dealing with a spillage. Flush with plenty of water to clean spillage area.

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. Wear full protective clothing for prolonged exposure and/or high concentrations.

STORAGE PRECAUTIONS

Isolate from other materials. May attack some plastics, rubber and coatings. Will attack glass and most ceramics. Store in tightly closed original container in a dry, cool and well-ventilated place.

STORAGE CLASS

Corrosive storage.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

REVISION DATE: 14/09/07

Name	Std	LT - ppm	LT - mg/m3	ST - ppm	ST - mg/m3
HYDROFLUORIC ACID ...%	WEL	1.8 ppm	1.5 mg/m3	3 ppm	2.5 mg/m3
NITRIC ACID ...%	WEL	2 ppm	5.2 mg/m3	4 ppm	10 mg/m3

INGREDIENT COMMENTS

WEL = Workplace Exposure Limits

ENGINEERING MEASURES

Provide corrosion-resistant local exhaust ventilation. Well-ventilated area.

RESPIRATORY EQUIPMENT

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

HAND PROTECTION

Seek advice from local supervisor. For exposure of 1 to 4 hours use gloves made of: Rubber (natural, latex). Neoprene. Polyethylene/Ethylene Vinyl Alcohol (PE/EVAL).

EYE PROTECTION

Use approved safety goggles or face shield.

OTHER PROTECTION

Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash station and safety shower. Wear appropriate clothing to prevent any possibility of skin contact.

HYGIENE MEASURES

DO NOT SMOKE IN WORK AREA! When using do not eat, drink or smoke. Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes contaminated. Promptly remove non-impervious clothing that becomes contaminated. Contaminated clothing to be placed in closed container until disposal or decontamination. Warn cleaning personnel of chemical's hazardous properties. Provide shower facilities near the work place.

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Opaque Paste
COLOUR	White to Grey
ODOUR	Noticeable.
SOLUBILITY	Miscible with water.
pH-VALUE, CONC. SOLUTION	1

10 STABILITY AND REACTIVITY

STABILITY

Stable under normal temperature conditions.

CONDITIONS TO AVOID

Avoid contact with: Strong alkalis. In contact with metals generates hydrogen gas, which together with air can form explosive mixtures.

MATERIALS TO AVOID

Bases, alkalies (inorganic). Massive, solid metal. Powdered metal.

HAZARDOUS DECOMPOSITION PRODUCTS

Fire or high temperatures create: Toxic gases/vapours/fumes of: Hydrogen fluoride (HF). Nitrous gases (NOx).

11 TOXICOLOGICAL INFORMATION

GENERAL INFORMATION

Product is a paste, so skin must be thoroughly washed to remove all traces of paste from the surface of the skin.

INHALATION

Toxic by inhalation. May cause damage to mucous membranes in nose, throat, lungs and bronchial system.

INGESTION

Causes burns. Toxic if swallowed. May cause internal injury. May cause burns in mucous membranes, throat, oesophagus and stomach.

SKIN CONTACT

Causes burns. Toxic in contact with skin. Contact with concentrated chemical may cause severe skin damage. May be absorbed through the skin.

EYE CONTACT

Causes burns. Contact with concentrated chemical may very rapidly cause severe eye damage, possibly loss of sight.

HEALTH WARNINGS

Exposure; This chemical has good warning properties. This chemical may cause skin/eye irritation and burns (corrosive). Toxic through skin absorption (percutaneous).

May cause temporary blindness and severe eye damage. Serious damage to the lining of nose, throat and lungs. Acute eczematous dermatitis, contact type erythema, oedema, papules, vesicles, bullae, crusts, desquamation. Contact with concentrated chemical may cause severe skin damage. 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. Bone structure.

MEDICAL SYMPTOMS

Extreme irritation of eyes and mucous membranes, including burning and tearing. Severe pulmonary irritation. Severe skin irritation. Ingestion may cause: Severe abdominal pain, Nausea, vomiting, Diarrhoea

MEDICAL CONSIDERATIONS

Skin disorders and allergies.

12 ECOLOGICAL INFORMATION

ECOTOXICITY

Dangerous for the environment if discharged into watercourses. Dangerous for the environment: May cause long-term adverse effects in the aquatic environment

MOBILITY

The product is soluble in water.

13 DISPOSAL CONSIDERATIONS

DISPOSAL METHODS

Confirm disposal procedures with environmental engineer and local regulations. Dispose of waste and residues in accordance with local authority requirements.

14 TRANSPORT INFORMATION

UK ROAD CLASS	8 (6.1)		
PROPER SHIPPING NAME	CORROSIVE LIQUID TOXIC, N.O.S.		
UN NO. ROAD	2922	UK ROAD PACK GR.	II
ADR CLASS NO.	8	ADR CLASS	Class 8: Corrosive substances.
ADR PACK GROUP	II	HAZARD NO. (ADR)	88 Highly corrosive substance.
	86	ADR LABEL NO.	8 + 6.1

15 REGULATORY INFORMATION

LABELLING

Toxic

Corrosive

CONTAINS

HYDROFLUORIC ACID 4%

NITRIC ACID 12.4%

RISK PHRASES

R23/24/25	Toxic by inhalation, in contact with skin and if swallowed.
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.
S27	Take off immediately all contaminated clothing.
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

WILLOWCHEM 51

REVISION DATE	14/09/07
REV. NO./REPL. SDS GENERATED	1
SDS NO.	2007/10860

RISK PHRASES IN FULL

R26/27/28	Very toxic by inhalation, in contact with skin and if swallowed.
R35	Causes severe burns.
R37	Irritating to respiratory system.
R38	Irritating to skin.
R8	Contact with combustible material may cause fire.