

# WATTYL HAMMERFINISH LEAD-FREE COLOURS

Chemwatch Material Safety Data Sheet (REVIEW)  
Issue Date: 30-Mar-2006  
NC317TCP

CHEMWATCH 11508  
Version No:2.0

## Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT NAME

WATTYL HAMMERFINISH LEAD-FREE COLOURS

### SYNONYMS

"Wattyl Air Dry Hammerfinish Hammer pattern finish air dry hammertone"

### PROPER SHIPPING NAME

PAINT

### PRODUCT USE

A spray applied decorative coating, particularly for metal surfaces. Usually applied without thinning using pressure pot feed. Application is usually by spray atomisation in a ventilated spray booth, after viscosity reduction with thinner. The use of a quantity of material in an unventilated or confined space may result in increased exposure and an irritating atmosphere developing. Before starting consider control of exposure by mechanical ventilation.

### SUPPLIER

Company: wattyl Granosite	Company: wattyl Pty Ltd
Address:	Address:
Level 1, 68 Waterloo Rd	4 Steel St
North Ryde	Blacktown
NSW, 2113	NSW, 2148
AUS	AUS
Telephone: +61 2 9813 3333	Telephone: +61 2 9621 6255
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## Section 2 - HAZARDS IDENTIFICATION

### STATEMENT OF HAZARDOUS NATURE

**HAZARDOUS SUBSTANCE. DANGEROUS GOODS.** According to the Criteria of NOHSC, and the ADG Code.

### POISONS SCHEDULE

S5

#### RISK

Contact with combustible material may cause fire.  
Highly flammable.  
Harmful by inhalation, in contact with skin and if swallowed.  
Irritating to eyes and skin.  
Limited evidence of a carcinogenic effect.  
Harmful: danger of serious damage to health by prolonged exposure through inhalation.  
Harmful to aquatic organisms.  
Possible risk of harm to the unborn child.  
HARMFUL-May cause lung damage if swallowed.  
Vapours may cause drowsiness and dizziness.

#### SAFETY

Keep away from sources of ignition. No smoking.  
Keep away from combustible material.  
Keep container in a well ventilated place.  
Avoid exposure - obtain special instructions before use.  
Do not empty into drains.  
To clean the floor and all objects contaminated by this material, use water and detergent.  
Keep container tightly closed.  
Keep away from food, drink and animal feeding stuffs.  
Take off immediately all contaminated clothing.  
In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre.

Cumulative effects may result following exposure\*.

May produce discomfort of the respiratory system\*.

\* (limited evidence).

If swallowed, IMMEDIATELY contact Doctor or Poisons Information Centre. (show this container or label).

This material and its container must be disposed of as hazardous waste.

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### Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

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NAME	CAS RN	%
synthetic resins as vinyl modified / styrenated alkyd resin	None	30-60
aluminium powder coated pigments, lead- free	7429-90-5	<10
xylene	1330-20-7	10-30
toluene	108-88-3	30-60
additives		<10

Solvent grades have less than 0.1% benzene content.

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### Section 4 - FIRST AID MEASURES

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#### SWALLOWED

Rinse mouth out with plenty of water.

For advice, contact a Poisons Information Centre or a doctor.

- If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious
- Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
- Seek medical advice.

If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.

#### EYE

If this product comes in contact with the eyes:

- Immediately hold eyelids apart and flush the eye continuously with running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
- Transport to hospital or doctor without delay.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

#### SKIN

If skin contact occurs:

- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

#### INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- Transport to hospital, or doctor.

#### NOTES TO PHYSICIAN

For acute or short term repeated exposures to petroleum distillates or related hydrocarbons:

- Primary threat to life, from pure petroleum distillate ingestion and/or inhalation, is respiratory failure.
- Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO<sub>2</sub> 50 mm Hg) should be intubated.
- Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.
- A chest x-ray should be taken immediately after stabilisation of breathing and circulation to document aspiration and detect the presence of pneumothorax.
- Epinephrine (adrenalin) is not recommended for treatment of bronchospasm because of potential myocardial sensitisation to catecholamines. Inhaled cardioselective bronchodilators (e.g. Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.
- Lavage is indicated in patients who require decontamination; ensure use of cuffed endotracheal tube in adult patients. [Ellenhorn and Barceloux: Medical Toxicology].

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## Section 5 - FIRE FIGHTING MEASURES

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### EXTINGUISHING MEDIA

- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.
- Water spray or fog - Large fires only.

### FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.
- Consider evacuation (or protect in place).
- Fight fire from a safe distance, with adequate cover.
- If safe, switch off electrical equipment until vapour fire hazard removed.
- Use water delivered as a fine spray to control the fire and cool adjacent area.
- Avoid spraying water onto liquid pools.
- Do not approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.

### FIRE/EXPLOSION HAZARD

- Liquid and vapour are highly flammable.
  - Severe fire hazard when exposed to heat, flame and/or oxidisers.
  - Vapour may travel a considerable distance to source of ignition.
  - Heating may cause expansion or decomposition leading to violent rupture of containers.
  - On combustion, may emit toxic fumes of carbon monoxide (CO).
- Other combustion products include: carbon dioxide (CO<sub>2</sub>) and metal oxides.  
May emit clouds of acrid smoke.

### FIRE INCOMPATIBILITY

Avoid reaction with oxidising agents and water.

Reacts slowly with water.

CAUTION contamination with moisture will liberate explosive hydrogen gas, causing pressure build up in sealed containers.

HAZARD: Rags wet / soaked with unsaturated hydrocarbons / drying oils auto oxidise; may generate heat and in-time smoulder and ignite. Oily cleaning rags should be collected regularly and immersed in water.

### HAZCHEM: 3[Y]E

#### Personal Protective Equipment

- Breathing apparatus.
- Chemical splash suit.

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## Section 6 - ACCIDENTAL RELEASE MEASURES

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### EMERGENCY PROCEDURES

#### MINOR SPILLS

- Remove all ignition sources.

- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact by using protective equipment.
- Contain and absorb small quantities with vermiculite or other absorbent material.
- Wipe up.
- Collect residues in a flammable waste container.

### MAJOR SPILLS

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.
- Consider evacuation (or protect in place).
- No smoking, naked lights or ignition sources.
- Increase ventilation.
- Stop leak if safe to do so.
- Water spray or fog may be used to disperse /absorb vapour.
- Contain spill with sand, earth or vermiculite.
- Use only spark-free shovels and explosion proof equipment.
- Collect recoverable product into labelled containers for recycling.
- Absorb remaining product with sand, earth or vermiculite.
- Collect solid residues and seal in labelled drums for disposal.
- Wash area and prevent runoff into drains.
- If contamination of drains or waterways occurs, advise emergency services.

### PROTECTIVE ACTIONS FOR SPILL

From IERG (Canada/Australia)

Isolation Distance           25 metres  
Downwind Protection Distance   300 metres  
IERG Number                 14

#### FOOTNOTES

- 1 PROTECTIVE ACTION ZONE is defined as the area in which people are at risk of harmful exposure. This assumes that random changes in wind direction confines the vapour plume to an area within 30 degrees either side of the predominant wind direction, resulting in a crosswind protective action distance to the downwind protective action distance.
- 2 PROTECTIVE ACTIONS should be initiated to the extent possible, beginning with those closest to the site and working away from the site in the downwind direction. Within the protective action zone a level vapour concentration may exist resulting in nearly all unprotected persons becoming incapacitated unable to take protective action and/or incurring serious or irreversible health effects.
- 3 INITIAL ISOLATION ZONE is determined as an area, including upwind of the incident, within which a probability of localised wind reversal may expose nearly all persons without appropriate protective life-threatening concentrations of the material.
- 4 SMALL SPILLS involve a leaking package of 200 litres (55 US gallons) or less, such as a drum (jerrycan box with inner containers). Larger packages leaking less than 200 litres and compressed gas leaking from a small cylinder are also considered "small spills".  
LARGE SPILLS involve many small leaking packages or a leaking package of greater than 200 litres, such as a cargo tank, portable tank or a "one-tonne" compressed gas cylinder.
- 5 Guide 128 is taken from the US DOT emergency response guide book.
- 6 IERG information is derived from CANUTEC - Transport Canada.

### EMERGENCY RESPONSE PLANNING GUIDELINES (ERPG)

The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour WITHOUT experiencing or developing

life-threatening health effects is:

xylene    900 ppm  
toluene   1000 ppm

irreversible or other serious effects or symptoms which could impair an individual's ability to take protective action is:

xylene    200 ppm  
toluene   300 ppm

other than mild, transient adverse effects without perceiving a clearly defined odour is:

xylene    150 ppm  
toluene   50 ppm

The threshold concentration below which most people will experience no appreciable risk of health effects is:

xylene    100 ppm  
toluene   50 ppm

American Industrial Hygiene Association (AIHA)

Ingredients considered according to the following cutoffs

Very Toxic (T+)	>= 0.1%	Toxic (T)	>= 3.0%
R50	>= 0.25%	Corrosive (C)	>= 5.0%
R51	>= 2.5%		
else	>= 10%		

where percentage is percentage of ingredient found in the mixture

**Personal Protective Equipment advice is contained in Section 8 of the MSDS.**

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## Section 7 - HANDLING AND STORAGE

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**PROCEDURE FOR HANDLING**

- Handle and open container with care . Avoid generating and breathing mist.
- Avoid all personal contact, including inhalation.
  - Wear protective clothing when risk of exposure occurs.
  - Use in a well-ventilated area.
  - Prevent concentration in hollows and sumps.
  - DO NOT enter confined spaces until atmosphere has been checked.
  - Avoid smoking, naked lights, heat or ignition sources.
  - When handling, DO NOT eat, drink or smoke.
  - Vapour may ignite on pumping or pouring due to static electricity.
  - DO NOT use plastic buckets.
  - Earth and secure metal containers when dispensing or pouring product.
  - Use spark-free tools when handling.
  - Avoid contact with incompatible materials.
  - Keep containers securely sealed.
  - Avoid physical damage to containers.
  - Always wash hands with soap and water after handling.
  - Work clothes should be laundered separately.
  - Use good occupational work practice.
  - Observe manufacturer's storing and handling recommendations.
  - Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions.
- DO NOT spray directly on humans, exposed food or food utensils.

**SUITABLE CONTAINER**

- Metal can or drum
- Packaging as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

**STORAGE INCOMPATIBILITY**

- Avoid storage with oxidisers.
- Avoid contamination with water, alkalis and detergent solutions.
  - Material reacts with water and generates gas, pressurises containers with even drum rupture resulting.
  - DO NOT reseal container if contamination is suspected.
  - Open all containers with care.

**STORAGE REQUIREMENTS**

- Store in original containers in approved flammable liquid storage area.
  - DO NOT store in pits, depressions, basements or areas where vapours may be trapped.
  - No smoking, naked lights, heat or ignition sources.
  - Keep containers securely sealed.
  - Store away from incompatible materials in a cool, dry, well-ventilated area.
  - Protect containers against physical damage and check regularly for leaks.
  - Observe manufacturer's storing and handling recommendations.
- Keep dry.

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**Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION**


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**EXPOSURE CONTROLS**

Source	Material	TWA ppm	TWA mg/m <sup>3</sup>	STEL ppm	STEL mg/m <sup>3</sup>	Peak ppm	Peak mg/m <sup>3</sup>	TWA F/CC
Source	Material	TWA ppm	TWA mg/m <sup>3</sup>	STEL ppm	STEL mg/m <sup>3</sup>	Peak ppm	Peak mg/m <sup>3</sup>	TWA F/CC
Australia Exposure Standards	aluminium powder coated (Aluminium, pyro powders (as Al))		5					
Australia Exposure Standards	aluminium powder coated (Aluminium (welding fumes) (as Al))		5					
Australia Exposure Standards	aluminium powder coated (Aluminium (metal dust))		10					
Australia Exposure Standards	xylene (o-, m-, p-	80	350	150	655			

isomers))  
 Australia Exposure toluene (Toluene) 50 191 150 574  
 Standards

### EMERGENCY EXPOSURE LIMITS

Material	Revised IDLH Value (mg/m3)	Revised IDLH value (ppm)
xylene		900
toluene		500

### ODOUR SAFETY FACTOR (OSF)

OSF=4 (vinyl modified / styrenated alkyd resin)  
 Exposed individuals are NOT reasonably expected to be warned, by smell, that the Exposure Standard is being exceeded.  
 Odour Safety Factor (OSF) is determined to fall into either class C, D or E.  
 The Odour Safety Factor (OSF) is defined as:  
 OSF= Exposure Standard (TWA) ppm/ Odour Threshold value (OTV) ppm  
 Classification into classes follows:

Class	OSF	Description
A	550	Over 90% of exposed individuals are aware by smell that the Exposure Standard (TLV-TWA for example) is being reached, even when distracted by working activities
B	26-550	As "A" for 50-90% of persons being distracted
C	1-26	As "A" for less than 50% of persons being distracted
D	0.18-1	10-50% of persons aware of being tested perceive by smell that the Exposure Standard is being reached
E	<0.18	As "D" for less than 10% of persons aware of being tested

### MATERIAL DATA

None assigned. Refer to individual constituents.

### INGREDIENT DATA

TOLUENE:

XYLENE:

Exposure limits with "skin" notation indicate that vapour and liquid may be absorbed through intact skin. Absorption by skin may readily exceed vapour inhalation exposure. Symptoms for skin absorption are the same as for inhalation. Contact with eyes and mucous membranes may also contribute to overall exposure and may also invalidate the exposure standard.

VINYL MODIFIED / STYRENATED ALKYD RESIN:

No exposure limits set by NOHSC or ACGIH.

ALUMINIUM POWDER COATED:

aluminium, metal dust

ES TWA: 10 mg/m<sup>3</sup>

TLV TWA: 10 mg/m<sup>3</sup>

XYLENE:

IDLH Level: 900 ppm

Odour Threshold Value: 20 ppm (detection), 40 ppm (recognition)

NOTE: Detector tubes for o-xylene, measuring in excess of 10 ppm, are available commercially. (m-xylene and p-xylene give almost the same response)

Xylene vapour is an irritant to the eyes, mucous membranes and skin and causes narcosis at high concentrations. Exposure to doses sufficiently high to produce intoxication and unconsciousness also produces transient liver and kidney toxicity. Neurologic impairment is NOT evident amongst volunteers inhaling up to 400 ppm though complaints of ocular and upper respiratory tract irritation occur at 200 ppm for 3 to 5 minutes.

Exposure to xylene at or below the recommended TLV-TWA and STEL is thought to minimise the risk of irritant effects and to produce neither significant narcosis or chronic injury. An earlier skin notation was deleted because percutaneous absorption is gradual and protracted and does not substantially contribute to the dose received by inhalation.

#### TOLUENE:

Odour Threshold Value: 0.16-6.7 (detection), 1.9-69 (recognition)

NOTE: Detector tubes measuring in excess of 5 ppm, are available. High concentrations of toluene in the air produce depression of the central nervous system (CNS) in humans. Intentional toluene exposure (glue-sniffing) at maternally-intoxicating concentration has also produced birth defects. Foetotoxicity appears at levels associated with CNS narcosis and probably occurs only in those with chronic toluene-induced kidney failure. Exposure at or below the recommended TLV-TWA is thought to prevent transient headache and irritation, to provide a measure of safety for possible disturbances to human reproduction, the prevention of reductions in cognitive responses reported amongst humans inhaling greater than 40 ppm, and the significant risks of hepatotoxic, behavioural and nervous system effects (including impaired reaction time and incoordination). Although toluene/ethanol interactions are well recognised, the degree of protection afforded by the TLV-TWA among drinkers is not known.

## PERSONAL PROTECTION

### EYE

- Safety glasses with side shields; or as required,
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

### HANDS/FEET

- Barrier cream and Polyethylene gloves.
- wear chemical protective gloves, eg. PVC.
- wear safety footwear.
- DO NOT use solvent to clean the skin.

### OTHER

- Overalls.
- Eyewash unit.

### RESPIRATOR

Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

Breathing Zone Level ppm (volume)	Maximum Protection Factor	Half-face Respirator	Full-face Respirator
1000	10	A-AUS P	-
1000	50	-	A-AUS P
5000	50	Airline*	-
5000	100	-	A-2 P
10000	100	-	A-3 P
	100+		Airline**

\* - Continuous Flow    \*\* - Continuous-flow or positive pressure demand.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required.

For further information consult site specific CHEMWATCH data (if available), or your Occupational Health and Safety Advisor.

## ENGINEERING CONTROLS

Use in a well-ventilated area.

Spraying to be carried out in conditions conforming to local state regulations.

Unprotected personnel must vacate the spraying area.

General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in special circumstances. If risk of overexposure exists, wear approved respirator. Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection. Provide adequate ventilation in warehouses and enclosed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant:	Air Speed:
solvent, vapours, degreasing etc., evaporating from tank (in still air).	0.25-0.5 m/s (50-100 f/min)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5-1 m/s (100-200 f/min.)
direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min.)
grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion)	2.5-10 m/s (500-2000 f/min.)

Within each range the appropriate value depends on:

Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood-local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

### APPEARANCE

Coloured highly flammable viscous liquid with a strong solvent odour; does not mix with water. Mixes with strong paint thinners.

### PHYSICAL PROPERTIES

Liquid.

Does not mix with water.

Floats on water.

Molecular weight: Not applicable.

Boiling Range (?C): 100-145

Melting Range (?C): Not available.  
 Solubility in water (g/L): Immiscible  
 pH (1% solution): Not applicable.  
 Volatile Component (%vol): 30-60  
 Relative Vapour Density (air=1): > 1.0  
 Lower Explosive Limit (%): 1.0  
 Autoignition Temp (?C): 250  
 State: Liquid

Specific Gravity (water=1): 0.93 - 1.0  
 pH (as supplied): Not applicable  
 Vapour Pressure (kPa): >1  
 Evaporation Rate: Not available  
 Flash Point (?C): 4 (CC)  
 Upper Explosive Limit (%): 7.0  
 Decomposition Temp (?C): Not available

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## Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

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### CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

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## Section 11 - TOXICOLOGICAL INFORMATION

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### POTENTIAL HEALTH EFFECTS

#### ACUTE HEALTH EFFECTS

##### SWALLOWED

Not a likely route of entry into the body in commercial or industrial environments. The liquid may produce considerable gastrointestinal discomfort and be harmful or toxic if swallowed. Ingestion may cause nausea, pain and vomiting. Vomit entering the lungs by aspiration can cause inflammation of the lungs, which can lead to death.

##### EYE

The liquid is discomforting to the eyes and is capable of causing pain and severe conjunctivitis. Corneal injury may develop, with possible permanent impairment of vision, if not promptly and adequately treated. The vapour is discomforting to the eyes. The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

##### SKIN

The liquid is discomforting to the skin and is capable of causing skin reactions which may lead to dermatitis from repeated exposures over long periods. Toxic effects may result from skin absorption. The material may accentuate any pre-existing skin condition. The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

##### INHALED

The vapour is discomforting to the upper respiratory tract. Inhalation hazard is increased at higher temperatures. Inhalation of high concentrations of gas/vapour causes lung irritation with coughing and nausea, central nervous depression with headache and dizziness, slowing of reflexes, fatigue and inco-ordination. If exposure to highly concentrated solvent atmosphere is prolonged this may lead to narcosis, unconsciousness, even coma and possible death.

##### CHRONIC HEALTH EFFECTS

Principal routes of exposure are usually by inhalation of vapour/spray mist and skin contact with the material. Xylene is a central nervous system depressant. Chronic solvent inhalation exposures may result in nervous system impairment and liver and blood changes. [PATTYS]. Prolonged or continuous skin contact with the liquid may cause defatting with drying, cracking, irritation and dermatitis following. As with any chemical product, contact with unprotected bare skin; inhalation of vapour, mist or dust in work place atmosphere; or ingestion in any form, should be avoided by observing good occupational work practice.

### TOXICITY AND IRRITATION

Not available. Refer to individual constituents.

#### VINYL MODIFIED / STYRENATED ALKYD RESIN:

Not available. Refer to individual constituents. "alkyd resin" describes a generic insoluble polymer which has no residual hazardous reactants and is not absorbed in the gastro-intestinal tract. No acute or chronic human exposure / toxicity data available. Almost always in solvent solution - the hazard is from the solvent.

#### ALUMINIUM POWDER COATED:

Not available.

#### XYLENE:

## TOXICITY

Oral (human) LDLo: 50 mg/kg  
 Oral (rat) LD50: 4300 mg/kg  
 Inhalation (human) TCLO: 200 ppm  
 Inhalation (man) LCLO: 10000 ppm/6h  
 Inhalation (rat) LC50: 5000 ppm/4h  
 Oral (Human) LD: 50 mg/kg  
 Inhalation (Human) TCLO: 200 ppm/4h  
 Intraperitoneal (Rat) LD50: 2459 mg/kg  
 Subcutaneous (Rat) LD50: 1700 mg/kg  
 Oral (Mouse) LD50: 2119 mg/kg  
 Intraperitoneal (Mouse) LD50: 1548 mg/kg  
 Intravenous (Rabbit) LD: 129 mg/kg  
 Inhalation (Guinea pig) LC: 450 ppm/4h

The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

The substance is classified by IARC as Group 3:

NOT classifiable as to its carcinogenicity to humans.

Evidence of carcinogenicity may be inadequate or limited in animal testing.  
 Reproductive effector in rats

## IRRITATION

Skin (rabbit): 500 mg/24h Moderate  
 Eye (human): 200 ppm Irritant  
 Eye (rabbit): 87 mg Mild  
 Eye (rabbit): 5 mg/24h SEVERE

## TOLUENE:

## TOXICITY

Oral (human) LDLo: 50 mg/kg  
 Oral (rat) LD50: 636 mg/kg  
 Inhalation (human) TCLO: 100 ppm  
 Inhalation (man) TCLO: 200 ppm  
 Inhalation (rat) LC50: >26700 ppm/1h  
 Dermal (rabbit) LD50: 12124 mg/kg

The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

## IRRITATION

Skin (rabbit): 20 mg/24h- Moderate  
 Skin (rabbit): 500 mg - Moderate  
 Eye (rabbit): 0.87 mg - Mild  
 Eye (rabbit): 2 mg/24h - SEVERE  
 Eye (rabbit): 100 mg/30sec - Mild

MATERIAL	CARCINOGEN	REPROTOXIN	SENSITISER	SKIN
xylene	IARC:3	ILOE1		
toluene	IARC:3	ILOE1		

## CARCINOGEN

IARC: International Agency for Research on Cancer (IARC) Carcinogens: xylene Category: 3

## REPROTOXIN

ILOE1: ILO Chemicals in the electronics industry that have toxic effects on reproduction: xylene

## CARCINOGEN

IARC: International Agency for Research on Cancer (IARC) Carcinogens: toluene Category: 3

## REPROTOXIN

ILOE1: ILO Chemicals in the electronics industry that have toxic effects on reproduction: toluene

## Section 12 - ECOLOGICAL INFORMATION

Marine Pollutant: Not Determined

No data for watty1 Hammerfinish Lead-Free Colours.  
 Refer to data for ingredients, which follows:

## XYLENE:

Fish LC50 (96hr.) (mg/l):	13.5
BCF<100:	2.14- 2.20
log Kow (Prager 1995):	3.12- 3.20
Half- life Soil - High (hours):	672
Half- life Soil - Low (hours):	168
Half- life Air - High (hours):	44
Half- life Air - Low (hours):	2.6
Half- life Surface water - High (hours):	672
Half- life Surface water - Low (hours):	168
Half- life Ground water - High (hours):	8640
Half- life Ground water - Low (hours):	336
Aqueous biodegradation - Aerobic - High (hours):	672
Aqueous biodegradation - Aerobic - Low (hours):	168
Aqueous biodegradation - Anaerobic - High (hours):	8640
Aqueous biodegradation - Anaerobic - Low (hours):	4320
Photolysis maximum light absorption - High (nano- m):	269.5
Photolysis maximum light absorption - Low (nano- m):	265
Photooxidation half- life water - High (hours):	2.70E+08
Photooxidation half- life water - Low (hours):	3.90E+05
Photooxidation half- life air - High (hours):	44
Photooxidation half- life air - Low (hours):	2.6

The lower molecular weight hydrocarbons are expected to form a "slick" on the surface of waters after release in calm sea conditions. This is expected to evaporate and enter the atmosphere where it will be degraded through reaction with hydroxy radicals.

Some of the material will become associated with benthic sediments, and it is likely to be spread over a fairly wide area of sea floor. Marine sediments may be either aerobic or anaerobic. The material, in probability, is biodegradable, under aerobic conditions

(isomerised olefins and alkenes show variable results). Evidence also suggests that the hydrocarbons may be degradable under anaerobic conditions although such degradation in benthic sediments may be a relatively slow process.

Under aerobic conditions the material will degrade to water and carbon dioxide, while under anaerobic processes it will produce water, methane and carbon dioxide.

Based on test results, as well as theoretical considerations, the potential for bioaccumulation may be high. Toxic effects are often observed in species such as blue mussel, daphnia, freshwater green algae, marine copepods and amphipods.

Drinking Water Standards:

hydrocarbon total: 10 ug/l (UK max.).

DO NOT discharge into sewer or waterways.

The material is classified as an ecotoxin\* because the Fish LC50 (96 hours) is less than or equal to 0.1 mg/l

\* Classification of Substances as Ecotoxic (Dangerous to the Environment)

Appendix 8, Table 1

Compiler's Guide for the Preparation of International Chemical Safety Cards: 1993  
Commission of the European Communities.

TOLUENE:

Hazardous Air Pollutant:	Yes
Fish LC50 (96hr.) (mg/l):	7.3- 22.8
BCF<100:	13.2 (EELS)
log Kow (Sangster 1997):	2.73
log Pow (Verschueren 1983):	2.69
BOD5:	5%
COD:	21%
ThOD:	3.13
Half- life Soil - High (hours):	528
Half- life Soil - Low (hours):	96
Half- life Air - High (hours):	104
Half- life Air - Low (hours):	10
Half- life Surface water - High (hours):	528
Half- life Surface water - Low (hours):	96
Half- life Ground water - High (hours):	672
Half- life Ground water - Low (hours):	168
Aqueous biodegradation - Aerobic - High (hours):	528
Aqueous biodegradation - Aerobic - Low (hours):	96
Aqueous biodegradation - Anaerobic - High (hours):	5040
Aqueous biodegradation - Anaerobic - Low (hours):	1344
Aqueous biodegradation - Removal secondary treatment - High (hours):	75%
Photolysis maximum light absorption - High (nano- m):	268
Photolysis maximum light absorption - Low (nano- m):	253.5
Photooxidation half- life water - High (hours):	1284
Photooxidation half- life water - Low (hours):	321
Photooxidation half- life air - High (hours):	104
Photooxidation half- life air - Low (hours):	10

The lower molecular weight hydrocarbons are expected to form a "slick" on the surface of waters after release in calm sea conditions. This is expected to evaporate and enter the atmosphere where it will be degraded through reaction with hydroxy radicals.

Some of the material will become associated with benthic sediments, and it is likely to be spread over a fairly wide area of sea floor. Marine sediments may be either aerobic or anaerobic. The material, in probability, is biodegradable, under aerobic conditions (isomerised olefins and alkenes show variable results). Evidence also suggests that the hydrocarbons may be degradable under anaerobic conditions although such degradation in benthic sediments may be a relatively slow process.

Under aerobic conditions the material will degrade to water and carbon dioxide, while under anaerobic processes it will produce water, methane and carbon dioxide.

Based on test results, as well as theoretical considerations, the potential for bioaccumulation may be high. Toxic effects are often observed in species such as blue mussel, daphnia, freshwater green algae, marine copepods and amphipods.

DO NOT discharge into sewer or waterways.

log Kow: 2.1-3

log Koc: 1.12-2.85

Koc: 37-250

log Kom: 1.39-2.89

Half-life (hr) air: 2.4-104

Half-life (hr) H2O surface water: 5.55-528

Half-life (hr) H2O ground: 168-2628

Half-life (hr) soil: <48-240

Henry's Pa m<sup>3</sup> /mol: 518-694

Henry's atm m<sup>3</sup> /mol: 5.94E-03

BOD 5 if unstated: 0.86-2.12,5%

COD: 0.7-2.52,21-27%

ThOD: 3.13

BCF: 1.67-380

Log BCF: 0.22-3.28

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## Section 13 - DISPOSAL CONSIDERATIONS

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- Consult manufacturer for recycling options and recycle where possible .
- Consult State Land Waste Management Authority for disposal.
- Incinerate residue at an approved site.
- Recycle containers if possible, or dispose of in an authorised landfill.

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**Section 14 - TRANSPORTATION INFORMATION**


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Labels Required: FLAMMABLE LIQUID  
HAZCHEM: 3[Y]E

UNDG:

Dangerous Goods Class:	3	Subrisk:	N
UN Number:	1263	Packing Group:	I

Shipping Name: PAINT

PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base)

**Air Transport IATA:**

ICAO/IATA Class:	3	ICAO/IATA Subrisk:	N
UN/ID Number:	1263	Packing Group:	I
ERG Code:	3L		

Shipping name: PAINT

**Maritime Transport IMDG:**

IMDG Class:	3	IMDG Subrisk:	None
UN Number:	1263	Packing Group:	II
EMS Number:	F-E, S-E	Marine Pollutant:	Not Determine

Shipping Name: PAINT RELATED MATERIAL (including paint thinning or reducing compound)

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**Section 15 - REGULATORY INFORMATION**


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**POISONS SCHEDULE: S5**
**REGULATIONS**

vinyl modified / styrenated alkyd resin (CAS No: None):  
No regulations applicable

aluminium powder coated (CAS: 7429-90-5) is found on the following regulatory lists;  
Australia - Australia New Zealand Food Standards Code - Food Additives - Schedule 1 Permitted uses of food additives by food type

Australia - Australian Capital Territory - Environment Protection Regulation: Ambient environmental standards (IRRIG - inorganic chemicals)

Australia - Australian Capital Territory - Environment Protection Regulation: Ambient environmental standards (STOCK - inorganic chemicals)

Australia - Australian Capital Territory - Environment Protection Regulation: Pollutants entering waterways taken to cause environmental harm (Aquatic habitat)

Australia - Australian Capital Territory - Environment Protection Regulation: Pollutants entering waterways taken to cause environmental harm (IRRIG)

Australia - Australian Capital Territory Environment Protection Regulation Pollutants entering waterways - Agricultural uses (Stock)

Australia - Australian Capital Territory Environment Protection Regulation Pollutants entering waterways - Domestic water quality

Australia Exposure Standards

Australia High Volume Industrial Chemical List (HVICL)

Australia Inventory of Chemical Substances (AICS)

OECD Representative List of High Production Volume (HPV) Chemicals

WHO Guidelines for Drinking-water Quality - Chemicals for which guideline values have not been established

xylene (CAS: 1330-20-7) is found on the following regulatory lists;

Australia - Australian Capital Territory - Environment Protection Regulation: Ambient environmental standards (Domestic water supply - organic compounds)

Australia - Australian Capital Territory Environment Protection Regulation Pollutants entering waterways - Domestic water quality

Australia Exposure Standards

Australia High Volume Industrial Chemical List (HVICL)

Australia Inventory of Chemical Substances (AICS)

Australia National Pollutant Inventory

Australia Poisons Schedule

Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Schedule 6

IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk

International Agency for Research on Cancer (IARC) Carcinogens

International Council of Chemical Associations (ICCA) - High Production Volume List

OECD Representative List of High Production Volume (HPV) Chemicals

WHO Guidelines for Drinking-water Quality - Guideline values for chemicals that are of health significance in drinking-water

toluene (CAS: 108-88-3) is found on the following regulatory lists;

Australia - Australia New Zealand Food Standards Code - Processing Aids - Permitted extraction solvents

Australia - Australian Capital Territory - Environment Protection Regulation: Ambient environmental standards (Domestic water supply - organic compounds)

Australia - Australian Capital Territory - Environment Protection Regulation: Pollutants entering waterways taken to cause environmental harm (Aquatic habitat)

Australia - Australian Capital Territory Environment Protection Regulation Ecosystem maintenance - Organic chemicals - Non-pesticide anthropogenic organics

Australia - Australian Capital Territory Environment Protection Regulation Pollutants entering waterways - Domestic water quality  
 Australia Exposure Standards  
 Australia High Volume Industrial Chemical List (HVICL)  
 Australia Illicit Drug Reagents/Essential Chemicals - Category III  
 Australia Inventory of Chemical Substances (AICS)  
 Australia National Pollutant Inventory  
 Australia Poisons Schedule  
 Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Schedule 6  
 IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk  
 International Agency for Research on Cancer (IARC) Carcinogens  
 OECD Representative List of High Production Volume (HPV) Chemicals  
 United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances - Table II  
 United Nations List of Precursors and Chemicals Frequently used in the Illicit Manufacture of Narcotic Drugs and Psychotropic Substances Under International Control - Table II (English)  
 WHO guidelines for Drinking-water Quality - Guideline values for chemicals that are of health significance in drinking-water

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## Section 16 - OTHER INFORMATION

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### REPRODUCTIVE HEALTH GUIDELINES

Established occupational exposure limits frequently do not take into consideration reproductive end points that are clearly below the thresholds for other toxic effects. Occupational reproductive guidelines (ORGs) have been suggested as an additional standard. These have been established after a literature search for reproductive no-observed-adverse effect-level (NOAEL) and the lowest-observed-adverse-effect-level (LOAEL). In addition the US EPA's procedures for risk assessment for hazard identification and dose-response assessment as applied by NIOSH were used in the creation of such limits. Uncertainty factors (UFs) have also been incorporated.

Ingredient	ORG	UF	Endpoi nt	CR	Adeq TLV
xylene	1.5 mg/m <sup>3</sup>	10	D	NA	-
toluene	9.6 mg/m <sup>3</sup>	10	D	NA	-

These exposure guidelines have been derived from a screening level of risk assessment and should not be construed as unequivocally safe limits. ORGs represent an 8-hour time-weighted average unless specified otherwise.

CR = Cancer Risk/10000; UF = Uncertainty factor:

TLV believed to be adequate to protect reproductive health:

LOD: Limit of detection

Toxic endpoints have also been identified as:

D = Developmental; R = Reproductive; TC = Transplacental carcinogen

Jankovic J., Drake F.: A Screening Method for Occupational Reproductive  
 American Industrial Hygiene Association Journal 57: 641-649 (1996).

### EXPOSURE STANDARD FOR MIXTURES

"Worst Case" computer-aided prediction of spray/ mist or fume/ dust components and concentration:

Composite Exposure Standard for Mixture (TWA) :10 mg/m<sup>3</sup>.

Operations which produce a spray/mist or fume/dust, introduce particulates to the breathing zone.

If the breathing zone concentration of ANY of the components listed below is exceeded, "worst case" considerations deem the individual to be overexposed.

Component Breathing Zone ppm Breathing Zone mg/m<sup>3</sup> Mixture Conc (%).

Component	Breathing Zone (mg/m <sup>3</sup> )	Mixture Conc (%)
aluminium powder coated	10.0000	10.0

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