

UD ULTRA RUST PENETRANT

Chemwatch Material Safety Data Sheet
Issue Date: 21-Nov-2006
NC317ECP

CHEMWATCH 4686-32
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Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

UD ULTRA RUST PENETRANT

SYNONYMS

PROPER SHIPPING NAME

AEROSOLS

PRODUCT USE

Application is by spray atomisation from a hand held aerosol pack. Penetrates and frees rusted or frozen parts, lubricates moving parts and inhibits rust and corrosion.

SUPPLIER

Company: UD Trucks (Oceania) Pty Ltd

Address:

1- 11 Kumulla Road

Miranda

NSW 2228

AUS

Telephone: (02) 9525 0288

Fax: (02) 9524 8981

Section 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE

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

POISONS SCHEDULE

None

RISK

Flammable.

Irritating to skin.

Risk of explosion if heated under confinement.

Vapours may cause drowsiness and dizziness.

SAFETY

Keep away from sources of ignition. No smoking.

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.

Take off immediately all contaminated clothing.

In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre.

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

NAME	CAS RN	%
white spirit	8052-41-3.	64
paraffinic distillate, heavy, solvent- dewaxed (severe)	64742-65-0.	14
carbon dioxide	124-38-9	3

Section 4 - FIRST AID MEASURES

SWALLOWED

- 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.

EYE

- If aerosols come in contact with the eyes:
- Immediately hold the eyelids apart and flush the eye continuously for at least 15 minutes with fresh 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.
 - Transport to hospital or doctor without delay.
 - Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

- If solids or aerosol mists are deposited upon the skin:
- Flush skin and hair with running water (and soap if available).
 - Remove any adhering solids with industrial skin cleansing cream.
 - DO NOT use solvents.
 - Seek medical attention in the event of irritation.

INHALED

- If aerosols, fumes or combustion products are inhaled:
- Remove to fresh air.
 - Lay patient down. Keep warm and rested.
 - Prosthesis such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
 - If breathing is shallow or has stopped, ensure clear airway and apply resuscitation, 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

Treat symptomatically.

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 (pO₂ 50 mm Hg) should be intubated.
- Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and

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Section 4 - FIRST AID MEASURES

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].

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

SMALL FIRE:

- Water spray, dry chemical or CO₂

LARGE FIRE:

- Water spray or fog.

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.
- If safe, switch off electrical equipment until vapour fire hazard removed.
- Use water delivered as a fine spray to control fire and cool adjacent area.
- 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.
- Equipment should be thoroughly decontaminated after use.

When any large container (including road and rail tankers) is involved in a fire, consider evacuation by 100 metres in all directions.

FIRE/EXPLOSION HAZARD

- Liquid and vapour are flammable.
- Moderate fire hazard when exposed to heat or flame.
- Vapour forms an explosive mixture with air.
- Moderate explosion hazard when exposed to heat or flame.
- Vapour may travel a considerable distance to source of ignition.
- Heating may cause expansion or decomposition leading to violent rupture of containers.
- Aerosol cans may explode on exposure to naked flame.
- Rupturing containers may rocket and scatter burning materials.
- Hazards may not be restricted to pressure effects.
- May emit acrid, poisonous or corrosive fumes.
- On combustion, may emit toxic fumes of carbon monoxide (CO).

Combustion products include: carbon dioxide (CO₂), other pyrolysis products typical of burning organic material.

FIRE INCOMPATIBILITY

Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

HAZCHEM: 2Y

Personal Protective Equipment

Breathing apparatus.

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Section 5 - FIRE FIGHTING MEASURES

Gas tight chemical resistant suit.
Limit exposure duration to 1 BA set 30 mins.

Section 6 - ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES

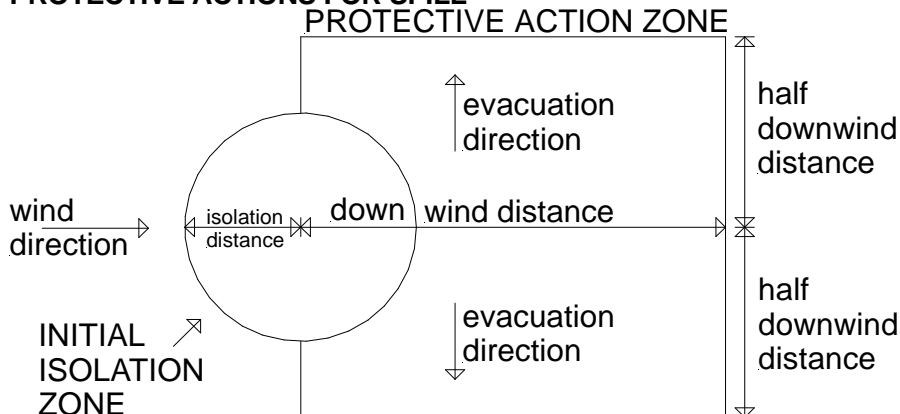
MINOR SPILLS

- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Wear protective clothing, impervious gloves and safety glasses.
- Shut off all possible sources of ignition and increase ventilation.
- Wipe up.
- If safe, damaged cans should be placed in a container outdoors, away from all ignition sources, until pressure has dissipated.
- Undamaged cans should be gathered and stowed safely.

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 courses.
- 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.
- Absorb or cover spill with sand, earth, inert materials or vermiculite.
- If safe, damaged cans should be placed in a container outdoors, away from ignition sources, until pressure has dissipated.
- Undamaged cans should be gathered and stowed safely.
- Collect residues and seal in labelled drums for disposal.

PROTECTIVE ACTIONS FOR SPILL



From IERG (Canada/Australia)

Isolation Distance	-
Downwind Protection Distance	8 metres
IERG Number	49

FOOTNOTES

- 1 PROTECTIVE ACTION ZONE is defined as the area in which people are at risk of harmful exposure. This zone assumes that random changes in wind direction confines the vapour plume to an area within 30 degrees on either side of the predominant wind direction, resulting in a crosswind protective action distance equal

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Section 6 - ACCIDENTAL RELEASE MEASURES

- to the downwind protective action distance.
- 2 PROTECTIVE ACTIONS should be initiated to the extent possible, beginning with those closest to the spill and working away from the site in the downwind direction. Within the protective action zone a level of vapour concentration may exist resulting in nearly all unprotected persons becoming incapacitated and 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 high probability of localised wind reversal may expose nearly all persons without appropriate protection to 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 (jerrican or 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 126 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:

white spirit	500 mg/m ³
paraffinic distillate, heavy, solvent-dewaxed (severe)	500 mg/m ³

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

white spirit	500 mg/m ³
paraffinic distillate, heavy, solvent-dewaxed (severe)	500 mg/m ³

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

white spirit	30 mg/m ³
paraffinic distillate, heavy, solvent-dewaxed (severe)	300 mg/m ³

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

white spirit	10 mg/m ³
paraffinic distillate, heavy, solvent-dewaxed (severe)	100 mg/m ³

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.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- 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 or ignition sources.

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Section 7 - HANDLING AND STORAGE

- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.
- DO NOT incinerate or puncture aerosol cans.
- DO NOT spray directly on humans, exposed food or food utensils.
- 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 are maintained.

SUITABLE CONTAINER

- Aerosol dispenser.
- Check that containers are clearly labelled.

STORAGE INCOMPATIBILITY

Avoid reaction with oxidising agents.

STORAGE REQUIREMENTS

Keep dry to avoid corrosion of cans. Corrosion may result in container perforation and internal pressure may eject contents of can.

- 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. Contents under pressure.
- Store away from incompatible materials.
- Store in a cool, dry, well ventilated area.
- Avoid storage at temperatures higher than 40 deg C.
- Store in an upright position.
- Protect containers against physical damage.
- Check regularly for spills and leaks.
- Observe manufacturer's storing and handling recommendations.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m ³	STEL ppm	STEL mg/m ³	Peak ppm	Peak mg/m ³	TWA F/CC
Australia Exposure Standards	white spirit (White spirits)		790					
Australia Exposure Standards	paraffinic distillate, heavy, solvent- dewaxed (severe) (Oil mist, refined mineral)		5					
Australia Exposure Standards	carbon dioxide (Carbon dioxide in coal mines)	12, 500	22, 500	30, 000	54, 000			
Australia Exposure Standards	carbon dioxide (Carbon dioxide)	5, 000	9, 000	30, 000	54, 000			

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EMERGENCY EXPOSURE LIMITS

Material	Revised IDLH Value (mg/m ³)	Revised IDLH Value (ppm)
white spirit	20, 000	
carbon dioxide		40, 000

MATERIAL DATA

Sensory irritants are chemicals that produce temporary and undesirable side-effects on the eyes, nose or throat. Historically occupational exposure standards for these irritants have been based on observation of workers' responses to various airborne concentrations. Present day expectations require that nearly every individual should be protected against even minor sensory irritation and exposure standards are established using uncertainty factors or safety factors of 5 to 10 or more. On occasion animal no-observable-effect-levels (NOEL) are used to determine these limits where human results are unavailable. An additional approach, typically used by the TLV committee (USA) in determining respiratory standards for this group of chemicals, has been to assign ceiling values (TLV C) to rapidly acting irritants and to assign short-term exposure limits (TLV STELs) when the weight of evidence from irritation, bioaccumulation and other endpoints combine to warrant such a limit. In contrast the MAK Commission (Germany) uses a five-category system based on intensive odour, local irritation, and elimination half-life. However this system is being replaced to be consistent with the European Union (EU) Scientific Committee for Occupational Exposure Limits (SCOEL); this is more closely allied to that of the USA.

OSHA (USA) concluded that exposure to sensory irritants can:

- cause inflammation
- cause increased susceptibility to other irritants and infectious agents
- lead to permanent injury or dysfunction
- permit greater absorption of hazardous substances and
- acclimate the worker to the irritant warning properties of these substances thus increasing the risk of overexposure.

INGREDIENT DATA

WHITE SPIRIT:

Low and high odour thresholds of 5.25 and 157.5 mg/m³, respectively, were considered to provide a rather useful index of odour as a warning property.

The TLV-TWA is calculated from data on the toxicities of the major ingredients and is intended to minimise the potential for irritative and narcotic effects, polyneuropathy and kidney damage produced by vapours.

The NIOSH (USA) REL-TWA of 60 ppm is the same for all refined petroleum solvents. NIOSH published an occupational "action level" of 350 mg/m³ for exposure to Stoddard solvent, assuming a 10-hour work shift and a 40-hour work-week. The NIOSH-REL ceiling of 1800 mg/m³ was established to protect workers from short-term effects that might produce vertigo or other adverse effects which might increase the risk of occupational accidents. Combined (gross) percutaneous absorption and inhalation exposure (at concentrations associated with nausea) are thought, by some, to be responsible for the development of frank hepatic toxicity and jaundice.

PARAFFINIC DISTILLATE, HEAVY, SOLVENT-DEWAXED (SEVERE):

Human exposure to oil mist alone has not been demonstrated to cause health effects except at levels above 5 mg/m³ (this applies to particulates sampled by a method that does not collect vapour). It is not advisable to apply this standard to oils containing unknown concentrations and types of additive.

CARBON DIOXIDE:

NOTE: Detector tubes for carbon dioxide, measuring in excess of 0.01 % vol., are commercially available. Long-term measurements (4 hrs) may be conducted to detect concentrations exceeding 250 ppm.

Studies using physically fit males in confined spaces indicate the TLV-TWA and STEL provides a wide margin of safety against asphyxiation and from undue metabolic stress, provided normal amounts of oxygen are present in

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

inhaled air. Lowered oxygen content, increased physical activity and prolonged exposures each impact on systemic and respiratory effects. Stimulation of the respiratory centre is produced at 50,000 ppm (5%). The gas is weakly narcotic at 30,000 ppm giving rise to reduced acuity of hearing and increasing blood pressure and pulse, Persons exposed at 20,000 ppm for several hours developed headaches and dyspnea on mild exertion, Acidosis and adrenal cortical exhaustion occurred as a result of prolonged continuous exposure at 10,000-20,000 ppm. Intoxication occurs after a 30 minute exposure at 50,000 ppm whilst exposure at 70,000-100,000 ppm produces unconsciousness within a few minutes.

PERSONAL PROTECTION

EYE

No special equipment for minor exposure i.e. when handling small quantities.

OTHERWISE: For potentially moderate or heavy exposures:

- Safety glasses with side shields.

- NOTE: Contact lenses pose a special hazard; soft lenses may absorb irritants and ALL lenses concentrate them.

HANDS/FEET

No special equipment needed when handling small quantities.

OTHERWISE:

For potentially moderate exposures:

Wear general protective gloves, eg. light weight rubber gloves.

For potentially heavy exposures:

Wear chemical protective gloves, eg. PVC. and safety footwear.

OTHER

No special equipment needed when handling small quantities.

OTHERWISE:

- Overalls.

- Skin cleansing cream.

- Eyewash unit.

- Do not spray on hot surfaces.

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.

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS

General exhaust is adequate under normal conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Supplied as an aerosol pack. Contents under PRESSURE. Contains highly flammable hydrocarbon propellant. Liquid with solvent odour; does not mix with water.

PHYSICAL PROPERTIES

Liquid.

Gas.

Does not mix with water.

Floats on water.

Molecular Weight: Not Applicable

Melting Range (°C): Not Available

Solubility in water (g/L): Immiscible

pH (1% solution): Not Applicable

Volatile Component (%vol): Not Available

Relative Vapour Density (air=1): >1

Lower Explosive Limit (%): 7

Autoignition Temp (°C): Not Available

State: Liquid

Boiling Range (°C): 154- 260

Specific Gravity (water= 1): 0.82

pH (as supplied): Not Applicable

Vapour Pressure (kPa): Not Available

Evaporation Rate: <1 Ether = 1

Flash Point (°C): 40

Upper Explosive Limit (%): 10

Decomposition Temp (°C): Not Available

Viscosity: Not Available

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

- Elevated temperatures.
 - Presence of open flame.
 - Product is considered stable.
 - Hazardous polymerisation will not occur.
-

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

Not normally a hazard due to physical form of product.

Accidental ingestion of the material may be damaging to the health of the individual.

Swallowing of the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis; serious consequences may result. (ICSC13733).

Central nervous system (CNS) depression may include general discomfort, symptoms of giddiness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness. Serious poisonings may result in respiratory depression and may be fatal.

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Section 11 - TOXICOLOGICAL INFORMATION

EYE

The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

SKIN

This material can cause inflammation of the skin on contact in some persons.

Spray mist may produce discomfort.

The liquid may be miscible with fats or oils and may degrease the skin, producing a skin reaction described as non-allergic contact dermatitis. The material is unlikely to produce an irritant dermatitis as described in EC Directives .

The material may accentuate any pre-existing dermatitis condition.

INHALED

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.

WARNING: Intentional misuse by concentrating/inhaling contents may be lethal.

CHRONIC HEALTH EFFECTS

Principal routes of exposure are by accidental skin and eye contact and by inhalation of vapours especially at higher temperatures.

Chronic solvent inhalation exposures may result in nervous system impairment and liver and blood changes. [PATTYS].

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.

unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances

WHITE SPIRIT:

TOXICITY

Inhalation (human) TClO: 600 mg/m³/8h

Oral (rat) LD50: >5000 mg/kg

Inhalation (rat) LC50: >5500 mg/m³/4h

white spirit, as CAS RN 8052-41-3

IRRITATION

Nil Reported

Eye (human): 470 ppm/15m

Eye (rabbit): 500 mg/24h Moderate

PARAFFINIC DISTILLATE, HEAVY, SOLVENT-DEWAXED (SEVERE):

No data of toxicological significance identified in literature search.

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.

CARBON DIOXIDE:

TOXICITY

Inhalation (rat) LCLo: 657190 ppm/15 m

Inhalation (human) TClO: 2000 ppm

Inhalation (human) LCLo: 9 pph/5 m (9%)

- pulmonary effects

IDLH: 50,000 ppm

IRRITATION

MATERIAL

CARCINOGEN

REPROTOXIN

SENSITISER

SKIN

carbon dioxide

ILOEI

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Section 11 - TOXICOLOGICAL INFORMATION

REPROTOXIN

ILOEI: ILO Chemicals in the electronics industry that have toxic effects on reproduction: carbon dioxide

Section 12 - ECOLOGICAL INFORMATION

Marine Pollutant: Not Determined

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.

Refer to data for ingredients, which follows:

CARBON DIOXIDE:

log Kow (Sangster 1997): 0.83

Section 13 - DISPOSAL CONSIDERATIONS

- Consult State Land Waste Management Authority for disposal.
- Discharge contents of damaged aerosol cans at an approved site.
- Allow small quantities to evaporate.
- DO NOT incinerate or puncture aerosol cans.
- Bury residues and emptied aerosol cans at an approved site.

Section 14 - TRANSPORTATION INFORMATION



Labels Required: FLAMMABLE GAS

HAZCHEM: 2Y

UNDG:

Dangerous Goods

2.1

Subrisk:

None

Class:

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Section 14 - TRANSPORTATION INFORMATION

UN Number: 1950 Packing Group: None
Shipping Name: AEROSOLS

Air Transport IATA:

ICAO/IATA Class: 2.1 ICAO/IATA Subrisk: None
UN/ID Number: 1950 Packing Group: None
ERG Code: 10L
Shipping Name: Aerosols, flammable

Maritime Transport IMDG:

IMDG Class: 2 IMDG Subrisk: SP63
UN Number: 1950 Packing Group: None
EMS Number: F- D, S- U Marine Pollutant: Not Determined
Shipping Name: AEROSOLS

Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE: None

REGULATIONS

white spirit (CAS: 8052-41-3) is found on the following regulatory lists;

- Australia Exposure Standards
- Australia Inventory of Chemical Substances (AICS)
- Australia Poisons Schedule
- International Council of Chemical Associations (ICCA) - High Production Volume List
- OECD Representative List of High Production Volume (HPV) Chemicals

white spirit (CAS: 8042-47-5) is found on the following regulatory lists;

- Australia - Australia New Zealand Food Standards Code - Processing Aids - Generally permitted
- 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

paraffinic distillate, heavy, solvent-dewaxed (severe) (CAS: 64742-65-0) is found on the following regulatory lists;

- 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

carbon dioxide (CAS: 124-38-9) 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 - Australia New Zealand Food Standards Code - Food Additives - Schedule 2 Miscellaneous additives permitted in accordance with GMP in processed foods specified in Schedule 1
- Australia Exposure Standards
- Australia High Volume Industrial Chemical List (HVICL)
- Australia Inventory of Chemical Substances (AICS)
- CODEX General Standard for Food Additives (GSFA) - Additives Permitted for Use in Food in General, Unless Otherwise Specified, in Accordance with GMP
- OECD Representative List of High Production Volume (HPV) Chemicals

continued...

UD ULTRA RUST PENETRANT

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Section 16 - OTHER INFORMATION

INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name	CAS
white spirit	8052- 41- 3, 8042- 47- 5

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	Endpoint	CR	Adeq TLV
carbon dioxide	1800 mg/m3	10	D/R	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).

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