DY-MARK FLAWCHEK STEP 3 REMOVER AEROSOL

Hazard Alert Code: MODERATE

Chemwatch Material Safety Data Sheet | Revision No: 2.0 | Chemwatch 11733

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Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
DY-MARK FLAWCHEK STEP 3 REMOVER AEROSOL

SYNONYMS
19013503, "visible inspection flaw detector", "flawcheck (misspelling)"

PROPER SHIPPING NAME
AEROSOLS

PRODUCT USE
The product is used in one step of a four-part flaw detection process.

SUPPLIER
Company: Dy-Mark Pty Ltd
Address:
89 Formation Street
Wacol
QLD, 4076
AUS
Telephone: +61 7 3271 2222
Fax: +61 7 3271 2751

Section 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE
DANGEROUS GOODS. NON-HAZARDOUS SUBSTANCE. According to the Criteria of NOHSC, and the ADG Code.

POISONS SCHEDULE
None

RISK
» Extremely flammable.
» Risk of explosion if heated under confinement.
» Toxic to aquatic organisms may cause long-term adverse effects in the aquatic environment.
» Repeated exposure may cause skin dryness and cracking.
» Inhalation skin contact and/or ingestion may produce health damage*.
» Cumulative effects may result following exposure*.
» May produce discomfort of the eyes respiratory tract and skin*.
» Vapours potentially cause drowsiness and dizziness*.
* (limited evidence).

SAFETY
» Keep away from sources of ignition. No smoking.
» Do not breathe gas/ fumes/ vapour/ spray.
» Avoid contact with skin.
» Wear eye/ face protection.
» Use only in well ventilated areas.
» Keep container in a well ventilated place.
» To clean the floor and all objects contaminated by this material use water.
» Keep container tightly closed.
» This material and its container must be disposed of in a safe way.
» In case of contact with eyes rinse with plenty of water and contact Doctor or Poisons Information Centre.
» Use appropriate container to avoid environment contamination.
» Avoid release to the environment. Refer to special instructions/ safety data sheets.
» This material and its container must be disposed of as hazardous waste.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%

aromatic 150	64742-95-6.	>60
surfactant		<10
hydrocarbon propellant	68476-85-7.	10-30
NOTE: Manufacturer has supplied full ingredient information to allow CHEMWATCH assessment.		

Section 4 - FIRST AID MEASURES

SWALLOWED
» 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.

EYE
» If this product comes in contact with the eyes:
- Wash out immediately 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.

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.

INHALED
»
- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.

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 (pO2 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]

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA
»
- Water spray or fog.
- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

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.

FIRE/EXPLOSION HAZARD
»
- Liquid and vapour are highly flammable.
- Severe fire hazard when exposed to heat or flame.
- Vapour forms an explosive mixture with air.
- Severe explosion hazard, in the form of vapour, when exposed to flame or spark.
- Vapour may travel a considerable distance to source of ignition.
- Heating may cause expansion or decomposition with violent container rupture.
- Aerosol cans may explode on exposure to naked flames.
- 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).

Other combustion products include: carbon dioxide (CO_2).

FIRE INCOMPATIBILITY

» Avoid contamination with strong oxidising agents as ignition may result.

HAZCHEM

(1) NOT APPLICABLE TO THE CARRIAGE OF DANGEROUS GOODS UNDER RID OR ADR

Personal Protective Equipment

Gas tight chemical resistant suit.

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.

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.
- 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 storage with oxidisers.

STORAGE REQUIREMENTS

»

- Store in original containers in approved flame-proof 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 in an upright position.
- Avoid storage at temperatures higher than 40 deg C.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storing and handling recommendations.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m³	STEL ppm	STEL mg/m³	Peak ppm	Peak mg/m³	TWA F/CC
Australia Exposure Standards	hydrocarbon propellant (LPG (liquified petroleum gas))	1000	1800					

The following materials had no OELs on our records

• aromatic 150: CAS:64742-95-6 CAS:64742-94-5

PERSONAL PROTECTION

RESPIRATOR

Type AX Filter of sufficient capacity

EYE

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

- OTHERWISE:
- Safety glasses with side shields.
- 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

»

- No special equipment needed when handling small quantities.
- OTHERWISE: Wear general protective gloves, eg. light weight rubber gloves. Or as required: Wear chemical protective gloves, eg. PVC. Wear safety footwear.

OTHER

» No special equipment needed when handling small quantities.

OTHERWISE:

- Overalls.
- Skin cleansing cream.
- Eyewash unit.
- Do not spray on hot surfaces.

ENGINEERING CONTROLS

» General exhaust is adequate under normal operating 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. 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
Liquid with aromatic hydrocarbon odour; mixes with water. » Supplied as an aerosol pack. Contents under PRESSURE. Contains highly flammable hydrocarbon propellant.

PHYSICAL PROPERTIES

Liquid.
Gas.
Mixes with water.

Molecular Weight: Not applicable.	Boiling Range (°C): 183
Melting Range (°C): Not available.	Specific Gravity (water=1): <1
Solubility in water (g/L): Miscible	pH (as supplied): Not applicable
pH (1% solution): Not applicable	Vapour Pressure (kPa): Not available
Volatile Component (%vol): >60	Evaporation Rate: Not available
Relative Vapour Density (air=1): >1	Flash Point (°C): -81 propellant
Lower Explosive Limit (%): Not available.	Upper Explosive Limit (%): Not available.
Autoignition Temp (°C): Not available.	Decomposition Temp (°C): Not available
State: Liquid	

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	CHRONIC HEALTH EFFECTS
» Can be absorbed through skin.	» Repeated exposure may cause skin dryness and cracking.
» Vapours may cause dizziness or suffocation.	» Cumulative effects may result following exposure*.
» Inhalation, skin contact and/or ingestion may produce health damage*.	» * (limited evidence).
» May produce discomfort of the eyes, respiratory tract and skin*.	
» Vapours potentially cause drowsiness and dizziness*.	
» * (limited evidence).	

TOXICITY AND IRRITATION
» Not available. Refer to individual constituents.
AROMATIC 150:
» unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY	IRRITATION
Oral (rat) LD50: 3000 mg/kg	Nil Reported
Dermal (rabbit) LD50: >3000 mg/kg [Manufacturer]	

HYDROCARBON PROPELLANT:
» Not available. Refer to individual constituents.

Section 12 - ECOLOGICAL INFORMATION

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
This material and its container must be disposed of as hazardous waste.
Avoid release to the environment.
Refer to special instructions/ safety data sheets.

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: None (ADG6)
Land Transport UNDG:

Class or division:	2	Subsidiary risk:	None
UN No.:	1950	UN 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
Special provisions:	A145 A153		

Shipping Name: AEROSOLS, FLAMMABLE

Maritime Transport IMDG:

IMDG Class:	2.1	IMDG Subrisk:	SP63
UN Number:	1950	Packing Group:	None
EMS Number:	F-D,S-U	Special provisions:	63 190 277 327 959
Limited Quantities:	See SP277		

Shipping Name: AEROSOLS

Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE
None

REGULATIONS
Regulations for ingredients
Dy- Mark Flawchek Step 3 Remover Aerosol (CAS: None):
No regulations applicable
aromatic 150 (CAS: 64742- 95- 6) is found on the following regulatory lists;
Australia Hazardous Substances
Australia High Volume Industrial Chemical List (HVICL)
Australia Inventory of Chemical Substances (AICS)
International Council of Chemical Associations (ICCA) - High Production Volume List
OECD Representative List of High Production Volume (HPV) Chemicals
aromatic 150 (CAS: 64742- 94- 5) is found on the following regulatory lists;
Australia - Victoria Occupational Health and Safety Regulations - Schedule 9: Materials at Major Hazard Facilities (And Their Threshold Quantity) Table 2
Australia Hazardous Substances
Australia High Volume Industrial Chemical List (HVICL)
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Schedule 5
International Council of Chemical Associations (ICCA) - High Production Volume List
OECD Representative List of High Production Volume (HPV) Chemicals
OSPAR List of Chemicals for Priority Action
hydrocarbon propellant (CAS: 68476- 85- 7) is found on the following regulatory lists;
Australia Exposure Standards
Australia Hazardous Substances
Australia High Volume Industrial Chemical List (HVICL)
Australia Inventory of Chemical Substances (AICS)
OECD Representative List of High Production Volume (HPV) Chemicals
hydrocarbon propellant (CAS: 68476- 86- 8) is found on the following regulatory lists;
Australia Hazardous Substances
Australia Inventory of Chemical Substances (AICS)
OECD Representative List of High Production Volume (HPV) Chemicals

Section 16 - OTHER INFORMATION

Ingredients with multiple CAS Nos

Ingredient Name	CAS
aromatic 150	64742-95-6, 64742-94-5
hydrocarbon propellant	68476-85-7, 68476-86-8

» Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.
A list of reference resources used to assist the committee may be found at:
www.chemwatch.net/references.

» The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine

whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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