CRAFTERS CHOICE SPRAY ADHESIVE

Safety Data Sheet

1. Identification

GHS Product Identifier	**CRAFTERS CHOICE SPRAY ADHESIVE**
Company Name	CSA Trading Pty Ltd
Address	21-23 Joseph Street Blackburn North Victoria, 3130 Australia
Telephone/Fax Number	Phone: +61 3 9895 4333 Fax: +61 3 9899 4519
Emergency Phone Number	24 hours
Recommended use of the chemical and restrictions on use	Spray adhesive for assorted craft applications
Other Information	This SDS summarises to the best of our knowledge the health and safety hazard information of the product and how to safely handle and use the product in the workplace.

2. Hazard(s) Identification

GHS Classification of the substance/mixture	Aerosols Category 1 Acute Toxicity (Oral) Category 4 Skin Corrosion/Irritation Category 2 Carcinogenicity Category 2 Specific Target Organ Toxicity – Single Exposure Category 3 (narcotic effects) Acute Aquatic Hazard Category 2 Chronic Aquatic Hazard Category 2
Signal Word(s)	**DANGER**
Hazard Statement(s)	H222 Extremely flammable aerosol. H302 Harmful if swallowed. H315 Causes skin irritation. H351 Suspected of causing cancer. H336 May cause drowsiness or dizziness. H411 Toxic to aquatic life with long lasting effects. AUH044 Risk of explosion if heated if heated under confinement.
Pictogram(s)	
Precautionary Statement - Prevention	P201 Obtain special instructions before use. P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P211 Do not spray on an open flame or other ignition source. P251 Pressurized container: Do not pierce or burn, even after use. P271 Use only outdoors or in a well-ventilated area. P281 Use personal protective equipment as required. P261 Avoid breathing mist/vapours/spray. P270 Do not eat, drink or smoke when using this product. P273 Avoid release to the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statement - Response	P308+P313 IF exposed or concerned: Get medical advice/attention. P362 Take off contaminated clothing and wash before reuse. P391 Collect spillage. P301+P312 IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell. P302+P352 IF ON SKIN: Wash with plenty of soap and water. P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P330 Rinse mouth. P332+P313 If skin irritation occurs: Get medical advice/attention.
Precautionary Statement - Storage	P405 Store locked up. P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. P403+P233 Store in a well-ventilated place. Keep container tightly closed.
Precautionary Statement - Disposal	P501 Dispose of contents/container in accordance with local regulations.

3. Composition/Information on Ingredients

Chemical Characterization Aerosol

Ingredients

Name	**CAS**	**Proportion**
methylene chloride	75-09-2	25-45%
naphtha petroleum, light, hydrotreated	64742-49-0	25-45%
hydrocarbon propellant	68476-85-7	25-40%

4. First-Aid Measures

Inhalation

If aerosols, fumes or combustion products are inhaled:
-Remove to fresh air.
-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.
-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.

Ingestion

-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 comfortable drink.
-Seek medical advice.

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.

Eye Contact	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.
Indication of any immediate medical attention and special treatment needed	For intoxication due to Freons/ Halons; A: Emergency and Supportive Measures: -Maintain an open airway and assist ventilation if necessary. -Treat coma and arrhythmias if they occur. Avoid (adrenaline) epinephrine or other sympathomimetic amines that may precipitate ventricular arrhythmias. Tachyarrhythmias caused by increased myocardial sensitisation may be treated with propranolol, 1-2 mg IV or esmolol 25-100 microgm/kg/min IV. -Monitor the ECG for 4-6 hours. B: Specific drugs and antidotes: -There is no specific antidote. C: Decontamination: -Inhalation; remove victim from exposure, and give supplemental oxygen if available. -Ingestion; (a) Prehospital: Administer activated charcoal, if available. **DO NOT** induce vomiting because of rapid absorption and the risk of abrupt onset CNS depression. (b) Hospital: Administer activated charcoal, although the efficacy of charcoal is unknown. Perform gastric lavage only if the ingestion was very large and recent (less than 30 minutes). D: Enhanced elimination: -There is no documented efficacy for diuresis, haemodialysis, haemoperfusion, or repeat-dose charcoal. POISONING and DRUG OVERDOSE, Californian Poison Control System Ed. Kent R Olson; 3rd Edition -Do not administer sympathomimetic drugs unless absolutely necessary as material may increase myocardial irritability. -No specific antidote. -Because rapid absorption may occur through lungs if aspirated and cause systematic effects, the decision of whether to induce vomiting or not should be made by an attending physician. -If lavage is performed, suggest endotracheal and/or esophageal control. -Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. -Treatment based on judgment of the physician in response to reactions of the patient. Treat symptomatically.

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.

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).
Combustion products include: carbon dioxide (CO2), carbon monoxide (CO), hydrogen chloride phosgene, other pyrolysis products typical of burning organic material. Contains low boiling substance: Closed containers may rupture due to pressure buildup under fire conditions. May emit clouds of acrid smoke.

Fire Incompatibility

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

6. Accidental Release Measures

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.

7. Handling and Storage

Safe 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 storage and handling recommendations contained within this SDS.
-Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

Other Information

-Store below 38 deg. C.
-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 storage and handling recommendations contained within this SDS.

Suitable Container

-**DO NOT** use aluminium or galvanised containers.
-Aerosol dispenser.
-Check that containers are clearly labelled.

Storage Incompatibility

-Segregate from alcohol, water.

8. Exposure Controls/Personal Protection

Control Parameters:

Occupational Exposure Limits (OEL)

Ingredient Data

Source	Ingredient	Material Name	TWA	STEL	Peak	Notes
Australia Exposure Standards	methylene chloride	methylene chloride	174 mg / m3 / 50 ppm	N/A	N/A	Sk
Australia Exposure Standards	hydrocarbon propellant	LPG (liquefied petroleum gas)	1800 mg / m3 / 1000 ppm	N/A	N/A	N/A

Emergency Limits

Ingredient	Material Name	TEEL-1	TEEL-2	TEEL-3
methylene chloride	methylene chloride; (Dichloromethane)	N/A	N/A	N/A
hydrocarbon propellant	liquefied petroleum gas (L.P.G.)	3,000 ppm	3,200 ppm	19,000 ppm

Ingredient	Original IDLH	Revised IDLH
methylene chloride	10,000 ppm	2,000 ppm
Naphtha petroleum, light, hydrotreated	N/A	N/A

hydrocarbon propellant	19,000 (LEL) ppm	2,000 (LEL) ppm

Material Data

NOTE M: The classification as a carcinogen need not apply if it can be shown that the substance contains less than 0.005% w/w benzo[a]pyrene (EINECS No 200-028-5). This note applies only to certain complex oil-derived substances in Annex IV.
European Union (EU) List of harmonised classification and labelling hazardous substances, Table 3.1, Annex VI, Regulation (EC) No 1272/2008 (CLP) - up to the latest ATP
NOTE P: The classification as a carcinogen need not apply if it can be shown that the substance contains less than 0.01% w/w benzene (EINECS No 200-753-7). Note E shall also apply when the substance is classified as a carcinogen. This note applies only to certain complex oil-derived substances in Annex VI.
European Union (EU) List of harmonised classification and labelling hazardous substances, Table 3.1, Annex VI, Regulation (EC) No 1272/2008 (CLP) - up to the latest ATP
NOTE K: The classification as a carcinogen need not apply if it can be shown that the substance contains less than 0.1%w/w 1,3-butadiene (EINECS No 203-450-8). - European Union (EU) List of harmonised classification and labelling hazardous substances, Table 3.1, Annex VI, Regulation (EC) No 1272/2008 (CLP) - up to the latest ATP

Exposure Controls: Appropriate Engineering Controls

CARE: Use of a quantity of this material in confined space or poorly ventilated area, where rapid build-up of concentrated atmosphere may occur, could require increased ventilation and/or protective gear.
Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.
The basic types of engineering controls are:
Process controls which involve changing the way a job activity or process is done to reduce the risk.
Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.
Employers may need to use multiple types of controls to prevent employee overexposure.

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.
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:	Speed:
Aerosols, (released at low velocity into zone of active generation)	0.5-1 m/s
Direct spray, spray painting in shallow booths, gas discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 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 metres 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.

Personal Protection

Eye & Face Protection

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.

Skin protection

See Hand protection below.

Hands/Feet Protection

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.

Body Protection

See Other protection below.

Other Protection

No special equipment needed when handling small quantities.
OTHERWISE:
-Overalls.
-Skin cleansing cream.
-Eyewash unit.
-Do not spray on hot surfaces.
-The clothing worn by process operators insulated from earth may develop static charges far higher (up to 100 times) than the minimum ignition energies for various flammable gas-air mixtures. This holds true for a wide range of clothing materials including cotton.
-Avoid dangerous levels of charge by ensuring a low resistivity of the surface material worn outermost.
BRETHERICK: Handbook of Reactive Chemical Hazards.

Thermal Hazards

N/A

9. Physical and Chemical Properties and Safety Characteristics

Appearance

Supplied as an aerosol pack. Contents under PRESSURE. Contains highly flammable hydrocarbon propellant. Colourless liquid with slight chloroform odour; does not mix with water.

Physical State	Liquid	**Relative density (Water = 1)**	0.71 @15C
Odour	N/A	**Partition coefficient n-octanol / water**	N/A
Odour Threshold	N/A	**Auto-ignition temperature (°C)**	N/A
pH (as supplied)	N/A	**Decomposition temperature**	N/A
Melting Point / Freezing Point (°C)	N/A	**Viscosity (cSt)**	N/A
Initial Boiling Point / Boiling Range (°C)	40-140	**Molecular weight (g/mol)**	N/A
Flash Point (°C)	<-18	**Taste**	N/A
Evaporation Rate	N/A	**Explosive Properties**	N/A
Flammability	HIGHLY FLAMMABLE	**Oxidising Properties**	N/A
Upper Explosive Limit (%)	7.6	**Surface Tension (dyn/cm or mN/m)**	N/A
Lower Explosive Limit (%)	1.4	**Volitile Component (%vol)**	60
Vapour Pressure (kPa)	N/A	**Gas Group**	N/A
Solubility in Water (g/L)	Immiscible	**pH as a Solution (1%)**	N/A
Vapour Density (Air=1)	N/A	**VOC g/L**	N/A

10. Stability and Reactivity

Reactivity	See Section 7
Chemical Stability	-Elevated temperatures. -Presence of open flame. -Product is considered stable. -Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See Section 7
Conditions to avoid	See Section 7
Incompatibler materials	See Section 7
Hazardous decomposition products	See Section 5

11. Toxicological Information

Information on toxicological effects:

Inhaled

Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo.

Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual.
Limited evidence or practical experience suggests that the material may produce irritation of the respiratory system, in a significant number of individuals, following inhalation. In contrast to most organs, the lung is able to respond to a chemical insult by first removing or neutralising the irritant and then repairing the damage. The repair process, which initially evolved to protect mammalian lungs from foreign matter and antigens, may however, produce further lung damage resulting in the impairment of gas exchange, the primary function of the lungs. Respiratory tract irritation often results in an inflammatory response involving the recruitment and activation of many cell types, mainly derived from the vascular system. Inhalation hazard is increased at higher temperatures.

High inhaled concentrations of mixed hydrocarbons may produce narcosis characterised by nausea, vomiting and lightheadedness. Inhalation of aerosols may produce severe pulmonary oedema, pneumonitis and pulmonary haemorrhage.
Inhalation of petroleum hydrocarbons consisting substantially of low molecular weight species (typically C2-C12) may produce irritation of mucous membranes, incoordination, giddiness, nausea, vertigo, confusion, headache, appetite loss, drowsiness, tremors and anaesthetic stupor. Massive exposures may produce central nervous system depression with sudden collapse and deep coma; fatalities have been recorded. Irritation of the brain and/or apnoeic anoxia may produce convulsions. Although recovery following overexposure is generally complete, cerebral micro-haemorrhage of focal post-inflammatory scarring may produce epileptiform seizures some months after the exposure. Pulmonary episodes may include chemical pneumonitis with oedema and haemorrhage. The lighter hydrocarbons may produce kidney and neurotoxic effects. Pulmonary irritancy increases with carbon chain length for paraffins and olefins. Alkenes produce pulmonary oedema at high concentrations. Liquid paraffins may produce anaesthesia and depressant actions leading to weakness, dizziness, slow and shallow respiration, unconsciousness, convulsions and death. C5-7 paraffins may also produce polyneuropathy. Aromatic hydrocarbons accumulate in lipid rich tissues (typically the brain, spinal cord and peripheral nerves) and may produce functional impairment

manifested by nonspecific symptoms such as nausea, weakness, fatigue and vertigo; severe exposures may produce inebriation or unconsciousness. Many of the petroleum hydrocarbons are cardiac sensitisers and may cause ventricular fibrillations.
Central nervous system (CNS) depression may include nonspecific 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.
Some aliphatic hydrocarbons produce axonal neuropathies. Isoparaffinic hydrocarbons produce injury to the kidneys of male rats. When albino rats were exposed to isoparaffins at 21.4 mg/l for 4 hours, all animals experienced weakness, tremors, salivation, mild to moderate convulsions, chromodacryorrhoea and ataxia within the first 24 hours. Symptoms disappeared after 24 hours.
Several studies have evaluated sensory irritation in laboratory animals or odor or sensory response in humans. When evaluated by a standard procedure to assess upper airway irritation, isoparaffins did not produce sensory irritation in mice exposed to up to 400 ppm isoparaffin in air. Human volunteers were exposed for six hours to 100 ppm isoparaffin. The subjects were given a self-administered questionnaire to evaluate symptoms, which included dryness of the mucous membranes, loss of appetite, nausea, vomiting, diarrhea, fatigue, headache, dizziness, feeling of inebriation, visual disturbances, tremor, muscular weakness, impairment of coordination or paresthesia. No symptoms associated with solvent exposure were observed. With a human expert panel, odour from liquid imaging copier emissions became weakly discernible at approximately 50 ppm.
Numerous long-term exposures have been conducted in animals with only one major finding observed. Renal tubular damage has been found in kidneys of male rats upon repeated exposures to isoparaffins. It does not occur in mice or in female rats.
This male rat nephropathy has been observed with a number of hydrocarbons, including wholly vaporized unleaded gasoline.
The phenomenon has been attributed to reversible binding of hydrocarbon to alpha2-globulin. Since humans do not synthesize alpha2-globulin or a similar protein, the finding is not considered to be of biological significance to man. No clinically significant renal abnormalities have been found in refinery workers exposed to hydrocarbons.
When evaluated for developmental toxicity in rats, isoparaffins were neither embryotoxic nor teratogenic. Isoparaffins were consistently negative on standard bacterial genotoxicity assays. They were also non-genotoxic in in vivo mammalian testing for somatic or germ cell mutations (mouse micronucleus test and rat dominant lethal assay, respectively).
Mullin et al: Jnl Applied Toxicology 10, pp 136-142, 2006

Material is highly volatile and may quickly form a concentrated atmosphere in confined or unventilated areas. The vapour may displace and replace air in breathing zone, acting as a simple asphyxiant. This may happen with little warning of overexposure.
Acute effects from inhalation of high concentrations of vapour are pulmonary irritation, including coughing, with nausea; central nervous system depression - characterised by headache and dizziness, increased reaction time, fatigue and loss of co-ordination.
WARNING:Intentional misuse by concentrating/inhaling contents may be lethal.
Inhalation exposure may cause susceptible individuals to show change in heart beat rhythm i.e. cardiac arrhythmia.
Exposures must be terminated.

Ingestion

Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.
Not normally a hazard due to physical form of product.
Considered an unlikely route of entry in commercial/industrial environments.
Many aliphatic hydrocarbons create a burning sensation because they are irritating to the GI mucosa. Vomiting has been reported in up to one third of all hydrocarbon exposures.

While most aliphatic hydrocarbons have little GI absorption, aspiration frequently occurs, either initially or in a semi-delayed fashion as the patient coughs or vomits, thereby resulting in pulmonary effects. Once aspirated, the hydrocarbons can create a severe pneumonitis.
Rats given isoparaffinic hydrocarbons (after 18-24 hours fasting) showed lethargy and/or general weakness, ataxia and diarrhoea. Symptoms disappeared within 24-28 hours.
Ingestion of petroleum hydrocarbons may produce irritation of the pharynx, oesophagus, stomach and small intestine with oedema and mucosal ulceration resulting; symptoms include a burning sensation in the mouth and throat. Large amounts may produce narcosis with nausea and vomiting, weakness or dizziness, slow and shallow respiration, swelling of the abdomen, unconsciousness and convulsions. Myocardial injury may produce arrhythmias, ventricular fibrillation and electrocardiographic changes. Central nervous system depression may also occur. Light aromatic hydrocarbons produce a warm, sharp, tingling sensation on contact with taste buds and may anaesthetise the tongue. Aspiration into the lungs may produce coughing, gagging and a chemical pneumonitis with pulmonary oedema and haemorrhage.

Skin contact

The material produces severe skin irritation; evidence exists, or practical experience predicts, that the material either:
-produces severe inflammation of the skin in a substantial number of individuals following direct contact, and/or
-produces significant and severe inflammation when applied to the healthy intact skin of animals (for up to four hours), such inflammation being present twenty-four hours or more after the end of the exposure period.
-Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis.

NOTE: Prolonged contact is unlikely, given the severity of response, but repeated exposures may produce severe ulceration.
Skin contact with the material may damage the health of the individual; systemic effects may result following absorption. Dermally, isoparaffins have produced slight to moderate irritation in animals and humans under occluded patch conditions where evaporation cannot freely occur. However, they are not irritating in non-occluded tests, which are a more realistic simulation of human exposure. They have not been found to be sensitisers in guinea pig or human patch testing. However, occasional rare idiosyncratic sensitisation reactions in humans have been reported.
Spray mist may produce discomfort.
Open cuts, abraded or irritated skin should not be exposed to this material.
The material may accentuate any pre-existing dermatitis condition.
Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

Eye contact

Limited evidence or practical experience suggests, that the material may cause moderate eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals. Repeated or prolonged exposure may cause moderate inflammation (similar to windburn) characterised by a temporary redness of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.
Instillation of isoparaffins into rabbit eyes produces only slight irritation.
Direct contact with the eye may not cause irritation because of the extreme volatility of the gas; however concentrated atmospheres may produce irritation after brief exposures.

Petroleum hydrocarbons may produce pain after direct contact with the eyes. Slight, but transient disturbances of the corneal epithelium may also result. The aromatic fraction may produce irritation and lachrymation.
The liquid may produce eye discomfort and is capable of causing temporary impairment of vision and/or transient eye inflammation, ulceration.

Chronic

Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.

There is some evidence to provide a presumption that human exposure to the material may result in impaired fertility on the basis of: some evidence in animal studies of impaired fertility in the absence of toxic effects, or evidence of impaired fertility occurring at around the same dose levels as other toxic effects but which is not a secondary non-specific consequence of other toxic effects.
Principal route of occupational exposure to the gas is by inhalation.
Repeated or prolonged exposure to mixed hydrocarbons may produce narcosis with dizziness, weakness, irritability, concentration and/or memory loss, tremor in the fingers and tongue, vertigo, olfactory disorders, constriction of visual field, paraesthesias of the extremities, weight loss and anaemia and degenerative changes in the liver and kidney.
Chronic exposure by petroleum workers, to the lighter hydrocarbons, has been associated with visual disturbances, damage to the central nervous system, peripheral neuropathies (including numbness and paraesthesias), psychological and neurophysiological deficits, bone marrow toxicities (including hypoplasia possibly due to benzene) and hepatic and renal involvement. Chronic dermal exposure to petroleum hydrocarbons may result in defatting which produces localised dermatoses. Surface cracking and erosion may also increase susceptibility to infection by microorganisms. One epidemiological study of petroleum refinery workers has reported elevations in standard mortality ratios for skin cancer along with a dose-response relationship indicating an association between routine workplace exposure to petroleum or one of its constituents and skin cancer, particularly melanoma. Other studies have been unable to confirm this finding.
On the basis, primarily, of animal experiments, concern has been expressed that the material may produce carcinogenic or mutagenic effects; in respect of the available information, however, there presently exists inadequate data for making a satisfactory assessment.
Methylene chloride exposures cause liver and kidney damage in animals and this justifies consideration before exposing persons with a history of impaired liver function and/or renal disorders.
Chronic exposure may produce central nervous system damage including confusion, delusions, slurred speech, memory impairment, anxiety, focal seizures, encephalopathy and visual and auditory hallucinations. These effects are probably due to chronic carbon monoxide poisoning resulting from methylene chloride metabolism.
Two epidemiological studies of workers exposed to methylene chloride have been published. An excess in pancreatic tumours was noted in one study. Chronic exposure to methylene chloride (approximately 30-120 ppm TWA) did not appear to increase the risk of deaths arising from lung cancer or cardiovascular disease. A study from Zeneca's Central Toxicology Laboratory added further support to the claim that solvent methylene chloride is not a human carcinogen. This study supported a previous finding by the European Centre of Ecology and Toxicology (ECETOC) that methylene chloride inducedcancers, previously identified in mice, were a consequence of a unique metabolic pathway found only in mice.
Chronic solvent inhalation exposures may result in nervous system impairment and liver and blood changes. [PATTYS]

	Toxicity	**Irritation**
Spray Adhesive Aerosol	Inhalation (Rat) LC50: 52 g/m3[2]	N/A
	Oral (Rat) LD50: 1600 mg/kg[2]	

Methylene chloride	Dermal (rat) LD50: >2000 mg/kg[1]	Eye(rabbit): 162 mg - moderate
	Inhalation (rat) LC50: 76 mg/L/4hr[2]	Eye(rabbit): 500 mg/24hr - mild
	Oral (rat) LD50: 985 mg/kg[2]	Skin (rabbit): 100mg/24hr-moderate
		Skin (rabbit): 810 mg/24hr-SEVERE
Naphtha petroleum, light, hydroheated	Dermal (rabbit) LD50: >1900 mg/kg[1]	N/A
	Oral (rat) LD50: >2000 mg/kg[1]	
Hydrocarbon propellant	Inhalation (mouse) LC50: >15.6-<17.9 mm/l/2hr[1]	N/A
	Inhalation (mouse) LC50: >15.6-<17.9 mm/l/2hr[1]	
	Inhalation (mouse) LC50: 410000 ppm/2hr[1]	
	Inhalation (mouse) LC50: 410000 ppm/2hr[1]	
	Inhalation (rat) LC50: >800000 ppm15 min[1]	
	Inhalation (rat) LC50: >800000 ppm15 min[1]	
	Inhalation (rat) LC50: 1354.944 mg/L15 min[1]	
	Inhalation (rat) LC50: 1355 mg/l15 min[1]	
	Inhalation (rat) LC50: 1442.738 mg/L15 min[1]	
	Inhalation (rat) LC50: 1442.738 mg/L15 min[1]	
	Inhalation (rat) LC50: 1443 mg/l15 min[1]	
	Inhalation (rat) LC50: 1443 mg/l15 min[1]	
	Inhalation (rat) LC50: 570000 ppm15 min[1]	
Legend	*1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS.* *Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances*	

Methylene Chloride

The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
The material may produce severe skin irritation after prolonged or repeated exposure, and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) thickening of the epidermis.
Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.
Prolonged contact is unlikely, given the severity of response, but repeated exposures may produce severe ulceration.

WARNING: This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans.
Inhalation (human) TCLo: 500 ppm/ 1 y - I Eye(rabbit): 10 mg - mild

Naphtha Petroleum, Light, Hydrotreatred

Studies indicate that normal, branched and cyclic paraffins are absorbed from the mammalian gastrointestinal tract and that the absorption of n-paraffins is inversely proportional to the carbon chain length,with little absorption above C30. With respect to the carbon chain lengths likely to be present in mineral oil, n-paraffins may be absorbed to a greater extent that iso- or cyclo-paraffins.
The major classes of hydrocarbons have been shown to be well absorbed by the gastrointestinal tract in various species. In many cases, the hydrophobic hydrocarbons are ingested in association with dietary lipids. The dependence of hydrocarbon absorption on concomitant triglyceride digestion and absorption,is known as the "hydrocarbon continuum hypothesis", and asserts that a series of solubilising phases in the intestinal lumen, created by dietary triglycerides and their digestion products, afford hydrocarbons a route to the lipid phase of the intestinal absorptive cell (enterocyte) membrane. While some hydrocarbons may traverse the mucosal epithelium unmetabolised and appear as solutes in lipoprotein particles in intestinal lymph, there is evidence that most hydrocarbons partially separate from nutrient lipids and undergo metabolic transformation in the enterocyte. The enterocyte may play a major role in determining the proportion of an absorbed hydrocarbon that, by escaping initial biotransformation, becomes available for deposition in its unchanged form in peripheral tissues such as adipose tissue, or in the liver.
For petroleum:
This product contains benzene which is known to cause acute myeloid leukaemia and n-

hexane which has been shown to metabolize to compounds which are neuropathic.
This product contains toluene. There are indications from animal studies that prolonged exposure to high concentrations of toluene may lead to hearing loss.
This product contains ethyl benzene and naphthalene from which there is evidence of tumours in rodents.
Carcinogenicity: Inhalation exposure to mice causes liver tumours, which are not considered relevant to humans. Inhalation exposure to rats causes kidney tumours which are not considered relevant to humans.
Mutagenicity: There is a large database of mutagenicity studies on gasoline and gasoline blending streams, which use a wide variety of endpoints and give predominantly negative results. All in vivo studies in animals and recent studies in exposed humans (e.g. petrol service station attendants) have shown negative results in mutagenicity assays.
Reproductive Toxicity: Repeated exposure of pregnant rats to high concentrations of toluene (around or exceeding 1000 ppm) can cause developmental effects, such as lower birth weight and developmental neurotoxicity, on the foetus. However, in a two-generation reproductive study in rats exposed to gasoline vapour condensate, no adverse effects on the foetus were observed.
Human Effects: Prolonged/ repeated contact may cause defatting of the skin which can lead to dermatitis and may make the skin more susceptible to irritation and penetration by other materials.
Lifetime exposure of rodents to gasoline produces carcinogenicity although the relevance to humans has been questioned.
Gasoline induces kidney cancer in male rats as a consequence of accumulation of the alpha2-microglobulin protein in hyaline droplets in the male (but not female) rat kidney. Such abnormal accumulation represents lysosomal overload and leads to chronic renal tubular cell degeneration, accumulation of cell debris, mineralisation of renal medullary tubules and necrosis. A sustained regenerative proliferation occurs in epithelial cells with subsequent neoplastic transformation with continued exposure. The alpha2-microglobulin is produced under the influence of hormonal controls in male rats but not in females and, more importantly, not in humans.
The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

Hydrocarbon Propellant

For Petroleum Hydrocarbon Gases:
In many cases, there is more than one potentially toxic constituent in a refinery gas. In those cases, the constituent that is most toxic for a particular endpoint in an individual refinery stream is used to characterize the endpoint hazard for that stream. The hazard potential for each mammalian endpoint for each of the petroleum hydrocarbon gases is dependent upon each petroleum hydrocarbon gas constituent endpoint toxicity values (LC50, LOAEL, etc.) and the relative concentration of the constituent present in that gas. It should also be noted that for an individual petroleum hydrocarbon gas, the constituent characterizing toxicity may be different for different mammalian endpoints, again, being dependent upon the concentration of the different constituents in each, distinct petroleum hydrocarbon gas.
All Hydrocarbon Gases Category members contain primarily hydrocarbons (i.e., alkanes and alkenes) and occasionally asphyxiant gases like hydrogen. The inorganic components of the petroleum hydrocarbon gases are less toxic than the C1 - C4 and C5 - C6 hydrocarbon components to both mammalian and aquatic organisms. Unlike other petroleum product categories (e.g. gasoline, diesel fuel, lubricating oils, etc.), the inorganic and hydrocarbon constituents of hydrocarbon gases can be evaluated for hazard individually to then predict the screening level hazard of the Category members.
Acute toxicity: No acute toxicity LC50 values have been derived for the C1 -C4 and C5-C6 hydrocarbon (HC) fractions because no mortality was observed at the highest exposure levels tested (~ 5 mg/l) for these petroleum hydrocarbon gas constituents. The order of acute toxicity of petroleum hydrocarbon gas constituents from most to least toxic is: C5-C6 HCs (LC50 > 1063 ppm) > C1-C4 HCs (LC50 > 10,000 ppm) > benzene (LC50 = 13,700 ppm) > butadiene (LC50 = 129,000 ppm) > asphyxiant gases (hydrogen, carbon dioxide, nitrogen).

Repeat dose toxicity: With the exception of the asphyxiant gases, repeated dose toxicity has been observed in individual selected petroleum hydrocarbon gas constituents. Based upon LOAEL values, the order of order of repeated-dose toxicity of these constituents from most toxic to the least toxic is:
Benzene (LOAEL .>=10 ppm) >C1-C4 HCs (LOAEL = 5,000 ppm; assumed to be 100% 2-butene) > C5-C6 HCs (LOAEL = 6,625 ppm) > butadiene (LOAEL = 8,000 ppm) > asphyxiant gases (hydrogen, carbon dioxide, nitrogen).
Genotoxicity:
In vitro: The majority of the Petroleum Hydrocarbon Gases Category components are negative for in vitro genotoxicity. The exceptions are: benzene and 1,3-butadiene, which are genotoxic in bacterial and mammalian in vitro test systems.
In vivo: The majority of the Petroleum Hydrocarbon Gases Category components are negative for in vivo genotoxicity. The exceptions are benzene and 1,3-butadiene, which are genotoxic in in vivo test systems.
Developmental toxicity: Developmental effects were induced by two of the petroleum hydrocarbon gas constituents, benzene and the C5 -C6 hydrocarbon fraction. No developmental toxicity was observed at the highest exposure levels tested for the other petroleum hydrocarbon gas constituents tested for this effect. The asphyxiant gases have not been tested for developmental toxicity. Based on LOAEL and NOAEL values, the order of acute toxicity of these constituents from most to least toxic is:
Benzene (LOAEL = 20 ppm) > butadiene (NOAEL .>=1,000 ppm) > C5-C6 HCs (LOAEL = 3,463 ppm) > C1-C4 HCs (NOAEL >=5,000 ppm; assumed to be 100% 2-butene) > asphyxiant gases (hydrogen, carbon dioxide, nitrogen).
Reproductive toxicity: Reproductive effects were induced by only two petroleum hydrocarbon gas constituents, benzene and isobutane (a constituent of the the C1-C4 hydrocarbon fraction). No reproductive toxicity was observed at the highest exposure levels tested for the other petroleum hydrocarbon gas constituents tested for this effect. The asphyxiant gases have not been tested for reproductive toxicity. Based on LOAEL and NOAEL values, the order of reproductive toxicity of these constituents from most to least toxic is:
Benzene (LOAEL = 300 ppm) > butadiene (NOAEL .>=6,000 ppm) > C5-C6 HCs (NOAEL .>=6,521 ppm) > C1-C4 HCs (LOAEL = 9,000 ppm; assumed to be 100% isobutane) > asphyxiant gases (hydrogen, carbon dioxide, nitrogen)

Acute Toxicity	✔	**Carcinogenicity**	✔
Skin Irritation/Corrosionb	✔	**Reproductivity**	⊘
Serious Eye Damage/Irritation	⊘	**STOT – Single Exposure**	✔
Respiratory or Skin Sensitisation	⊘	**STOT – Repeated Exposure**	⊘
Mutagenicity	⊘	**Aspiration Hazard**	⊘

Legend
✖ - Data available but does not fill the criteria for classification
✔ - Data required to make classification available
⊘ - Data not available to make classification

12. Ecological Information

Toxicity

Ingredient	Endpoint	Test Duration (hr)	Species	Value	Source
methylene chloride	LC50	96	Fish	=13.1mg/L	1
methylene chloride	EC50	48	Crustacea	0.13580307mg/L	4
methylene chloride	EC50	96	Algae or other aquatic plants	161.874mg/L	3
methylene chloride	EC50	3	Algae or other aquatic plants	1.477782mg/L	4
methylene chloride	NOEC	96	Algae or other aquatic plants	56mg/L	4
naphtha petroleum, light, hydrotreated	LC50	96	Fish	2.1-61.1mg/L	2
naphtha petroleum, light, hydrotreated	EC50	48	Crustacea	4.7mg/L	2

naphtha petroleum, light, hydrotreated	EC50	96	Algae or other aquatic plants	1.6-16.3mg/L	2
naphtha petroleum, light, hydrotreated	EC50	72	Algae or other aquatic plants	12.4mg/L	2
naphtha petroleum, light, hydrotreated	NOEC	72	Algae or other aquatic plants	6.47mg/L	2
hydrocarbon propellant	LC50	96	Fish	24.11mg/L	2
hydrocarbon propellant	EC50	96	Algae or other aquatic plants	7.71mg/L	2
hydrocarbon propellant	EC50	96	Algae or other aquatic plants	8.57mg/L	2
hydrocarbon propellant	LC50	96	Fish	24.11mg/L	2
hydrocarbon propellant	EC50	96	Algae or other aquatic plants	7.71mg/L	2
hydrocarbon propellant	EC50	96	Algae or other aquatic plants	8.57mg/L	2
Legend	*Extracted from:* *1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity3. EPIWIN Suite V3.12 - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data*				

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
methylene chloride	LOW (Half-life = 56 days)	HIGH (Half-life = 191 days)

Bioaccumulative potential

Ingredient	Bioaccumulation
methylene chloride	LOW (BCF = 40)

Mobility in soil

Ingredient	Mobility
methylene chloride	LOW (KOC = 23.74)

13. Disposal Considerations

Waste treatment methods

Product/Packaging Disposal

-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.

14. Transport Information

Labels required

Marine Pollutant

HAZCHEM N/A

Land Transport (ADG)

UN Number	1950	
UN Proper shipping Name	AEROSOLS	
Transport hazard class(es)	Class	2.1
	Subrisk	N/A
Packing Group	N/A	
Environmental hazard	N/A	
Special precautions for user	Special provisions	63 190 277 327 344

	Limited quantity	1000ml

Air transport (ICAO-IATA/DGR)

UN Number	1950	
UN Proper shipping Name	Aerosols, flammable; Aerosols, flammable (engine starting fluid)	
Transport hazard class(es)	ICAO/IATA Class	2.1
	ICAO/IATA Subrisk	N/A
	ERG Code	10L
Packing Group	N/A	
Environmental hazard	N/A	
Special precautions for user	Special provisions	A145A167A802; A1A145A167A802
	Cargo Only Packing Instructions	203
	Cargo Only Maximum Qty / Pack	150 KG
	Passenger and Cargo Packing Instructions	203; Forbidden
	Passenger and Cargo Maximum Qty / Pack	75 kg; Forbidden
	Passenger and Cargo Limited Quantity Packing Instructions	Y203; Forbidden
	Passenger and Cargo Limited Maximum Qty / Pack	30 kg G; Forbidden

Sea transport (IMDG-Code / GGVSee)

UN Number	1950	
UN Proper shipping Name	AEROSOLS	
Transport hazard class(es)	IMDG Class	2.1
	IMDG Subrisk	N/A
Packing Group	N/A	
Environmental hazard	Marine pollutant	
Special precautions for user	EMS Number	F-D, S-U
	Special provisions	63 190 277 327 344 959
	Limited Quantities	1000ml

Transport in bulk according to Annex II of MARPOL and the IBC code
Not Applicable

15. Regulatory Information

Safety, health and environmental regulations / legislation specific for the substance or mixture

METHYLENE CHLORIDE(75-09-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS
Australia Exposure Standards
Australia Hazardous Substances Information System - Consolidated Lists
Australia Inventory of Chemical Substances (AICS)
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

NAPHTHA PETROLEUM, LIGHT, HYDROTREATED(64742-49-0.) IS FOUND ON THE FOLLOWING REGULATORY LISTS
Australia Hazardous Substances Information System - Consolidated Lists
Australia Inventory of Chemical Substances (AICS)

HYDROCARBON PROPELLANT(68476-85-7.) IS FOUND ON THE FOLLOWING REGULATORY LISTS
Australia Exposure Standards
Australia Hazardous Substances Information System - Consolidated Lists
Australia Inventory of Chemical Substances (AICS)
International Air Transport Association (IATA) Dangerous Goods Regulations - Prohibited List Passenger and Cargo Aircraft

National Inventory	
Australia - AICS	Y
Canada – DSL	Y
Canada – NDSL	N (hydrocarbon propellant; methylene chloride; naphtha petroleum, light, hydrotreated)
China – IECSC	Y

Europe – EINEC / ELINCS / NLP	Y
Japan – ENCS	N (naphtha petroleum, light, hydrotreated)
Korea – KECI	Y
New Zealand – NZIoC	Y
Philippines – PICCS	Y
USA - TSCA	Y
Legend	*Y = All ingredients are on the inventory* *N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing (see specific ingredients in brackets)*

16. Other Information

Ingredients with multiple cas numbers

Name	**CAS No**
hydrocarbon propellant	68476-85-7., 68476-86-8.

Definitions and abbreviations

PC—TWA: Permissible Concentration-Time Weighted Average
PC—STEL: Permissible Concentration-Short Term Exposure Limit
IARC: International Agency for Research on Cancer
ACGIH: American Conference of Governmental Industrial Hygienists
STEL: Short Term Exposure Limit
TEEL: Temporary Emergency Exposure Limit。
IDLH: Immediately Dangerous to Life or Health Concentrations
OSF: Odour Safety Factor
NOAEL :No Observed Adverse Effect Level
LOAEL: Lowest Observed Adverse Effect Level
TLV: Threshold Limit Value
LOD: Limit Of Detection
OTV: Odour Threshold Value
BCF: BioConcentration Factors

Date of preparation or last revision of SDS 27/07/16

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13 11 26 (Australia)
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