Safety Data Sheet

1. SUBSTANCE IDENTIFICATION/ PREPARATION AND COMPANY DETAILS

Product Name: ADHESIVE & LACQUER REMOVER

Recommended use: Dry cleaning spotting agent.

Supplier: Stelco Chemicals International Pty Ltd
ACN: 151 834 347

Street Address: 46-48 Henderson Road
Rowville 3178
Australia

Telephone: +61 3 9757 3100
Facsimile: +61 3 9763 8243

Emergency Telephone Number: 0800 764 766

2. HAZARDS INDENTIFICATION

Hazardous according to criteria of Safe Work Australia; HAZARDOUS SUBSTANCE.

GHS classification:

Flammable liquid – category 2
Skin irritation – category 2
Eye irritation – category 2A
Specific target organ toxicity (repeated exposure) – category 2
Reproductive toxicity – category 1A
Specific target organ toxicity (single exposure) – category 3
Aspiration hazard – category 1
Carcinogenicity – category 2

Pictograms

Signal word: Danger

Hazard statements
H225: Highly flammable liquid and vapour
H315: Causes skin irritation
H319: Causes serious eye irritation
H373: May cause damage to organs through prolonged or repeated exposure
H360: May damage fertility or the unborn child
H336: May cause drowsiness or dizziness
H304: May be fatal if swallowed and enters airways
AUH066: Repeated exposure may cause skin dryness and cracking
H351: Suspected of causing cancer

Precautionary statements
Prevention
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P240: Ground/bond container and receiving equipment.
P233: Keep container tightly closed.
P242: Use only non-sparking tools.
P243: Take precautionary measures against static discharge.
P260: Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264: Wash hands thoroughly after handling.
P280: Wear protected gloves/protective clothing/eye protection/face protection.
P281: Use personal protective equipment as required.

Response
P303 + P361 + P353: IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P332 + P313: If skin irritation occurs: Get medical advice/attention.
P362: Take off contaminated clothing and wash before reuse.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313: If eye irritation persists: Get medical advice/attention.
P308 + P313: IF exposed or concerned: Get medical advice/attention.
P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312: Call a POISON CENTER or doctor/ physician if you feel unwell.
P370 + P378: In case of fire: Use foam, dry agent for extinction.
P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P331: Do NOT induce vomiting.

Storage
P403 + P235: Store in a well-ventilated place. Keep cool.

Disposal
P501: Dispose of contents/container in accordance with local/ regional/ national/ international regulations.

Classified as Dangerous Goods for the purpose of transport by road or rail. Refer to relevant regulations for storage and transport requirements.
Class: 3 Flammable Liquid

Poisons Schedule (Aust) / Toxic Substance (NZ): S5

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Proportion	Hazard Codes
Toluene	108-88-3	25 – 35%	H225, H315, H373, H360, H336, H304
n-butyl acetate	123-86-4	20 – 30%	H226, H336, AUH066
Ethyl acetate	141-78-6	10 – 15%	H225, H336, H319, AUH066
Dichloromethane	75-09-2	< 10%	H336, H351, H319, H315
Isopropyl amine alkylbezene sulphonate	68584-24-7	< 10%	H315, H317, H319
Non-Hazardous Components	-	to 100%	-

All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

4. FIRST AID MEASURES

First aid measures
If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126)

Ingestion: Rinse mouth with water. Give water to drink Do NOT induce vomiting. Seek immediate medical assistance.

Eye contact: Immediately irrigate with copious quantities of water for at least 15 minutes. Eyelids to be held open. Remove clothing if contaminated and wash skin. Seek immediate medical assistance.

Skin contact: Wash contaminated skin with plenty of soap and water. Remove contaminated clothing and wash before reuse. If irritation occurs seek medical advice.

Inhalation: Remove victim from exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If breathing laboured and patient cyanotic (blue), ensure airways are clear and have qualified person give oxygen through a face mask. If breathing has stopped apply artificial respiration at once. In event of cardiac arrest, apply external cardiac massage. Seek medical advice.

Most important symptoms and effects, both acute and delayed
Refer to section 2 and 11.

Indication of any immediate medical attention and special treatment needed
Notes to physician: Treat symptomatically

5. FIRE-FIGHTING MEASURES

Specific Hazards: Highly flammable liquid. May form flammable vapour mixtures with air. All potential sources of ignition (open flames), pilot lights, furnaces, spark producing switches and electrical equipment etc.) must be eliminated both in and near the work area. Do NOT smoke. Vapour may travel a considerable distance to source of ignition and flash back.

Fire fighting further advice: Highly flammable liquid. On burning may emit toxic fumes. Keep containers cool with water spray. Fire fighters to wear self-contained breathing apparatus if risk of exposure to vapour or products of combustion.

Suitable extinguishing media: Foam, dry agent (carbon dioxide, dry chemical powder).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Shut off all possible sources of ignition. Clear area of all unprotected personnel. Wear protective equipment to prevent skin and eye contamination and inhalation of vapours.

Environmental precautions: Avoid release to the environment.

Methods and materials for containment and clean up: Contain - prevent runoff into drains and waterways. Use absorbent (soil, sand, vermiculite or other inert material). Collect and seal in properly labelled containers for disposal. If contamination of sewers or waterways has occurred advise the local emergency services.

7. HANDLING AND STORAGE

Handling: This product is Flammable. Do not open near flame, sources of ignition or heat. No smoking. Keep container closed. Handle containers with care. Avoid skin and eye contact and breathing in vapour, mists or aerosols.

Storage: Store in well ventilated area. Store away from oxidising agents and sources of heat or ignition. Keep containers closed at all times - check regularly for leaks.

This material is a Scheduled Poison S5 and must be stored, maintained and used in accordance with the relevant regulations.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

National occupational exposure limits: No value assigned for this specific material by the National Occupational Health and Safety Commission. However, Exposure Standards for constituents:

Chemical name	CAS No.	TWA (ppm)	TWA (mg/m^3)	STEL (ppm)	STEL (mg/m^3)	Advisory carcinogen category	Other advisory information
Toluene	108-88-3	50	191	150	574	-	-
n-butyl acetate	123-86-4	150	713	200	950	-	-
Ethyl Acetate	141-78-6	200	720	400	1440	-	-
Methylene chloride	75-09-2	50	174	-	-	Carc. 2	-

As published by the National Occupational Health and Safety Commission. TWA – the Time-Weighted Average airborne concentrations over an eight-hour working day, for a five-day working week over an entire working life. STEL (Short Term Exposure Limit) – the average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour work day. According to current knowledge these concentrations should neither impair the health of, nor cause undue discomfort to, nearly all workers. Carcinogen Category 3 – substances suspected of having carcinogenic potential. The available information is not adequate for making a satisfactory assessment.
These Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. Exposure Standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Engineering measures: Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Exposure Standards. Vapour heavier than air – prevent concentration in hollows or sumps. DO NOT enter confined spaces where vapour may have collected. Keep containers closed when not in use.

Personal protection equipment: OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES(S), RESPIRATOR. Avoid skin and eye contact and inhalation of vapour. Wear overalls, chemical goggles and impervious gloves. Use with adequate ventilation. If inhalation risk exists wear organic vapour respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or reusing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form / Colour / Odour	:	Pale straw-coloured liquid with a solvent odour.
Solubility	:	Soluble in organic solvents. Insoluble in water.
Specific Gravity (20C)	:	0.9
Rel Vapour Density (air=1)	:	> 1
Boiling Point (C)	:	90
Flash Point (C)	:	4 (toluene)
% Volatile by weight	:	91
Solubility in water (g/L)	:	Insoluble

10. STABILITY AND REACTIVITY

Reactivity: Reacts with oxidising agents.

Chemical stability: Product stable under normal conditions of storage and use.

Possibility of hazardous reactions: No information available.

Conditions to avoid: Open flames. Keep away from sources of sparks or ignition.

Incompatible materials: Oxidizing agents.

Hazardous decomposition products: Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity : No data is available on the product itself. The toxicity of the product may be attributed to the solvents it contains. Additive effects may occur with mixtures of solvents. Similar effects can occur where the consumption of alcohol is also involved.

Components:

Toluene:

Oral LD50 (rat): 5580 mg/kg. Dermal LD50 (rabbit): 14000 mg/kg.

Dysfunction of the central nervous system is the primary human health concern following inhalation exposure to toluene. The major effects in humans following acute exposure to high concentrations (such as in deliberate sniffing or industrial accidents) are central nervous system dysfunction and narcosis.

Under controlled conditions, inhalation of 50, 75 or 100 ppm of toluene for 4 to 6 hours was associated with headache and irritation. There are also numerous reports of altered central nervous system performance among humans inhaling 40 ppm to more than 100 ppm.

n-Butyl acetate:
Oral LD50 (rat): 10 736 mg/kg
Dermal LD50 (rabbit): >5 g/kg and >20 mL/kg (>17.6 g/kg)
Ethyl acetate:
Oral LD50 (rat): > 5000 mg/kg
Dichloromethane:
Oral LD50 (rat)" 2100 mg/kg
Inhalation LC50 (rat): 200 mg/m^3/15 minutes.

Skin corrosion/irritation : No data is available on the product itself.
Components:
Toluene: Mild to moderate irritant
n-Butyl acetate: not irritating
Ethyl acetate: slightly irritating
Dichloromethane: irritating
Isopropyl amine alkylbenzene sulphonate: irritating

Serious eye damage/eye irritation : No data is available on the product itself.
Components:
Toluene: slightly irritating
n-Butyl acetate: not irritating
Ethyl acetate: not irritating
Dichloromethane: irritating
Isopropyl amine alkylbenzene sulphonate: irritating

Respiratory or skin sensitisation : No data is available on the product itself.
Components:
Toluene: not sensitising
n-Butyl acetate: not sensitising
Ethyl acetate: not sensitising
Dichloromethane: not sensitising
Isopropyl amine alkylbenzene sulphonate: May cause an allergic skin reaction.

Genetic Toxicity : No data is available.
Components:
Toluene: has no significant genotoxicity
n-Butyl acetate: not genotoxic
Ethyl acetate: not genotoxic
Dichloromethane: was found to be mutagenic in bacteria and not mutagenic in mammalian cells in vitro. It was found to be clastogenic in vitro.
Isopropyl amine alkylbenzene sulphonate: No data is available.

Carcinogenicity : No data is available on the product itself.
Components:
Toluene: not carcinogenic
n-Butyl acetate: No data available.
Ethyl acetate: No data available.
Dichloromethane: A chronic inhalation study in the mouse has shown that methylene chloride is carcinogenic in this species, when exposed to levels well above the exposure level, causing tumours both in the liver and the lung. Additional studies in the mouse, rat and the hamster have shown no further significant evidence of a carcinogenic effect. The effect in mice is specific to this species and is very unlikely to occur in humans. This is due to well established differences in the metabolic pathways between rodents and humans.

This material has been classified by the International Agency for Research on Cancer (IARC) as a Group 2B agent. Group 2B – The agent is possibly carcinogenic to humans.

Toxicity to reproduction : No data is available.

Components:

Toluene: Toluene showed no effects on fertility in rats, however, decreased sperm count was reported at 2000 ppm (90 days, 6 h/day). The NOAEC for this effect was 600 ppm (2261 mg/m3).
n-Butyl acetate: No data available.
Ethyl acetate: No data available.
Dichloromethane: Exposure of rats to concentrations as high as 1500 ppm methylene chloride (ca. 5300 mg/m3), which has been shown in a 2-year study to produce treatment-related liver effects and increased incidence of benign mammary tumors, did not affect any of the reproductive parameters examined.

STOT - single exposure : No data is available.

Components:

Toluene: Based on the human evidence including "toluene is rapidly absorbed mainly through inhalation and acts on the central nervous system. Toluene causes fatigue, sleepiness, dizziness and mild respiratory irritation at 50-100 ppm, excitement associated with paresthesia and nausea at 200-400 ppm and central nervous system suppression leading to drunkenness, delirium and abnormal gait at 500-800 ppm" (CERI Hazard Data 96-4, 1997) and "irritation to the eyes, nose and pharynx" (EU-RAR No. 30, 2003) and the evidence from animal studies including "anesthesia" (EU-RAR No. 30, 2003).
n-Butyl acetate: In an aerosol inhalation test in rats, congestion, alveolar hemorrhage, sloughing of the bronchiolar mucosa, necrosis of the alveolar epithelial cells, and pulmonary edema were observed at a dose level of 540 ppm/4h (2.57 mg/4h) (ACGIH (2001)). Based on this result, the substance was classified into Category 2 (respiratory system). In addition, it was reported that a worker who had been exposed to a solvent mixture composed of the substance (48%), xylene (26%) and ethylene glycol acetate (26%), experienced drowsiness with slight motor impairment (ACGIH (2001)). There is a report that very high concentration exposure may cause unconsciousness (Japanese journal of industrial health vol. 36 (1994)). In rats, after inhalation exposure to the vapour, ataxia, and narcosis were observed at 6867 ppm/4h (32.6 mg/L/4h) and decreased motor activity and hypoactivity were observed at 3000 - 6000 ppm/6h (17.5 - 34.9 mg/L/4h) (ACGIH (2001)). In mice, after inhalation exposure of 8000 ppm for 20 minutes (11 mg/L/4h), abnormal posture, decrease in arousal level, tonic/clonic movement, and delay of righting reflex were observed (PATTY (5th, 2001)). Although the neurologic symptoms observed in the worker resolved fast and was not serious, the symptoms in animals were observed at dose levels within the guidance value range of Category 2. Based on the animal results, the substance was classified into Category 2 (central nervous system). In human subjects, exposures to concentrations of 300 ppm for 2 - 5 minutes cause irritation of the pharynx (Japanese journal of industrial health vol. 36 (1994)).
Ethyl acetate: The upper respiratory tract irritation in human at 400ppm exposure is reported (ACGIH (2001), DFGOT (vol.12, 1999)). Anesthesia and lung injury are reported by explosion of near lethal level (DFGOT (vol.12, 1999)). "A respiratory-organs system : Category 1", and "Anesthesia : Category 3" were applied.
Dichloromethane: Suppression of the central nervous system, such as cyanosis, headaches, chest pains, disturbance of consciousness, progressive vigilance disturbance, increased fatigue, lethargy, memory loss and loss of time sensation, and decreased critical flicker frequency as a measure for sensory function have been observed, and then neurobehavioural effects, such as diffused vigilance and impaired combined tracking monitoring performance, and other effects such as inflammation of the skins and lung with sclerosis, lung edema with bleeding, and cerebral edema with tonsillar herniation have been observed as acute toxicity symptoms in humans (CERI-NITE Hazard Assessment Report No.15 (2004)). Moreover, there have been adverse reports such as necrosis of the epithelial cells in the bronchi and bronchioles, swollen and vacuolated Clara cells, mildly increased cell divisions and changes in somatosensory evoked responses and EEG(CERI-NITE Hazard

Assessment Report No.15 (2004)) within the guidance values for Category 2 in the single-dose studies. Based on these effects, the centralnervous system and respiratory organs are considered to be the target organs. Therefore, the substance was classified as Category 1 (central nervous system, respiratory organs) and Category 3 (narcotic effects).

STOT - repeated exposure : No data is available.

Components:

Toluene: Based on the human evidence including "Toluene induces drug dependency, and inhalant abuse of toluene causes chronic central nervous system damage including restricted vision, headache associated with nystagmus and hearing loss, tremor, ataxia and amnesia. Cerebral atrophy was found in CT tests, and renal dysfunction manifested as proteinuria and hematuria was also observed (CERI Hazard Data 96-4, 1997), "hearing loss, changes in brain-stem auditory evoked potential" (ATSDR, 2000) and "hepatic toxicity associated with an increase in SGOT, fatty degeneration of hepatic cells and lymphocytic infiltration (EU-RAR No. 30, 2003).

n-Butyl acetate: In a 14-week inhalation test in rats exposed to concentrations of 500 - 15,000 ppm/6 h (2.38 - 7.13 mg/L/6h), transient signs of sedation and hypoactivity were observed but histological examination of the central and peripheral nervous systems did not reveal any differences from the control. The NOEL was reported to be 500 ppm (2.38 mg/L/6h) (DFGOT vol. 19 (2000)). For humans, there are epidemiological tests showing that symptoms such as dizziness and vertigo, chest pain, headaches, and nausea or neurobehavioral effects are associated with occupational exposure (ACGIH (2001), PATTY (5th, 2001)).

Ethyl acetate: The case in human work exposure is combined exposure, and cannot be judged only now. Animal experiments inhalation exposure concentrations exceeds the guidance value maximum (250 ppm or 1 mg/L) of Category 2.

Dichloromethane: Based on the human evidence including "intermittent headache, nausea, flickering vision, breathlessness, temporary memory disorder and right brain damage found in electroencephalography" (CERI-NITE Hazard Assessment No.15, 2004) and "cerebropathy associated with auditory/visionary hallucinations after exposure", "memory disorder associated with intellectual impairment, loss of balance, temporary bilateral degeneration of temporal lobe" (HSDB, 2000) and the evidence from animal studies including "hepatocytes positively stained for fat, mild vacuolation of hepatocytes" and "mutant hepatocytes" (CERI-NITE Hazard Assessment No.15, 2004).

Aspiration toxicity : No data is available.

Likely routes of exposure: Skin contact. Eye contact. Inhalation.

Main symptoms: No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms that may arise if the product is mishandled are:

Ingestion: Swallowing can result in nausea, vomiting and central nervous system depression. If coordinated there is a greater likelihood of vomit entering the lungs and causing subsequent complications.

Eye contact: An eye irritant.

Skin contact: Will have a degreasing action on the skin. Contact with skin may result in irritation. Repeated or prolonged skin contact may lead to irritant contact dermatitis.

Inhalation: Vapour may be irritant to mucous membranes and respiratory tract. Inhalation of vapour can result in headaches, dizziness and possible nausea. Inhalation of high concentrations can produce central nervous system depression, which can lead to loss of coordination, impaired judgement and, if exposure is prolonged, unconsciousness.

Long term effects: Evidence indicates that repeated or prolonged exposure to toluene could result in central nervous system disorders. (1)

12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Toluene: 96 hours EC50=3.5mg/L of the crustacea (Brown Shrimp) (EU-RAR (2003) and others.).
n-Butyl acetate: 96h-LC50 = 18 mg/L for fish (Fathead minnow) (CICAD64, 2005).
Ethyl acetate: 48-hour EC50=164mg/L of Crustacea (Water flea) (IUCLID, 2000).
Dichloromethane: 48 hours LC50=27mg/L of Crustacea (Daphnia magna) (CaPSAR, 1993).

Persistence and degradability

Components:

Toluene: rapidly degrading (the decomposition by BOD: 123% (Existing Chemical Safety Inspections Data)).
n-Butyl acetate: rapidly degradable (BOD degradation rate: 98% (SIDS, 2009)).
Ethyl acetate: No data is available.
Dichloromethane: 48 hours LC50=27mg/L of Crustacea (Daphnia magna) (CaPSAR, 1993).

Bioaccumulative potential : No data is available.

Components:

Toluene: low (log Kow=2.73 (PHYSPROP Database, 2005))
n-Butyl acetate: low (log Kow = 1.78 (PHYSPROP Database, 2009)).
Ethyl acetate: No data is available.
Dichloromethane: low (BCF=40 (Existing Chemical Safety Inspections Data)).

Mobility in soil : No data is available.

13. DISPOSAL CONSIDERATIONS

Refer to State Land Waste Management Authority. Advise flammable nature. Normally suitable for incineration by approved agent.

14. TRANSPORT INFORMATION

Road and Rail Transport: Classified as Dangerous Goods for the purpose of transport by road or rail. Refer to relevant regulations for storage and transport requirements.

UN-No:	*1993*
Class:	*3 Flammable Liquid*
Hazchem code:	*3[Y] E*
EPG:	*3A1*
Packing group:	*Packing Group 2*
Proper Shipping Name:	*FLAMMABLE LIQUID N.O.S. (contains Toluene and Methylene Chloride)*

Segregation Dangerous Goods: Not to be loaded with explosives (Class 1), flammable gases (Class 2.1), if both are in bulk, poison gases (Class 2.3), spontaneously combustible substances (Class 4.2), oxidising agents (Class 5.1), organic peroxides (Class 5.2) or radioactive substances (Class 7), however exemptions may apply.

Marine Transport: Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG) for transport by sea

UN-No: *1993*
Class: *3 Flammable Liquid*
Hazchem code: *3[Y]E*
EPG: *3A1*
Packing group: *Packing Group 2*
Proper Shipping Name: *FLAMMABLE LIQUID N.O.S. (contains Toluene and Methylene Chloride)*

Air Transport: Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) for transport by air.
UN-No: *1993*
Class: *3 Flammable Liquid*
Hazchem code: *3[Y]E*
EPG: *3A1*
Packing group: *Packing Group 2*
Proper Shipping Name: *FLAMMABLE LIQUID N.O.S. (contains Toluene and Methylene Chloride)*

15. REGULATORY INFORMATION

Hazardous according to criteria of Safe Work Australia.

Poisons Schedule (Aust) / Toxic Substance (NZ): S5 Caution

All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

(1) Supplier Safety Data Sheet – Toluene;
(2) Supplier Safety Data Sheet – Methylene chloride; CDS/# 10281 – Orica Australia Pty Ltd
This Material Safety Data sheet has been prepared by Stelco Chemicals Pty Ltd

Latest Issue Date: 07.07.2021
Supersedes Previous Issue Date: 16.09.2016
Reason(s) for Issue: Five-year update.

This MSDS summarises at the date of issue our best knowledge of the health and safety information of the product, and in particular how to safely handle and use the product in the workplace. As each workplace is different each user must, prior to use, review thus MSDS in the context of how the user intends to handle and use the product in the workplace.
If clarification of further information is needed to ensure that an appropriate assessment can be made, the user should contact this company.