

Safety Data Sheet **CARNOY's FLUID St. V Mod**

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SECTION 1: Identification

GHS Product identifier

Product name CARNOY's FLUID St. V Mod

Product number ACFSTV

Recommended use of the chemical and restrictions on use

Laboratory reagent.

Supplier's details

Name ChemSupply Australia Pty Ltd
Address 38-50 Bedford Street
5013 Gillman South Australia
Australia

Telephone 08 8440 2000
email www.chemsupply.com.au

National contact

Name Australian Biostain Pty Ltd
Address 16 Shipwright Road
5016 Largs North SA
Australia

Emergency phone number

CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

SECTION 2: Hazard identification

General hazard statement

Classified as dangerous goods according to the Australian Dangerous Goods Code (ADG).

Classified as Hazardous according to the Globally Harmonised System of classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

Classification of the substance or mixture

GHS classification in accordance with: UN GHS revision 7

- Acute toxicity, dermal, Cat. 3
- Acute toxicity, inhalation, Cat. 2
- Acute toxicity, oral, Cat. 3
- Carcinogenicity, Cat. 2
- Serious eye damage/eye irritation, Cat. 1
- Skin corrosion/irritation, Cat. 1A
- Specific target organ toxicity following repeated exposure, Cat. 2
- Specific target organ toxicity following single exposure, Cat. 1
- Flammable liquids, Cat. 2

GHS label elements, including precautionary statements

Pictograms



Signal word

Danger

Hazard statement(s)

H301	Toxic if swallowed
H311	Toxic in contact with skin
H314	Causes severe skin burns and eye damage
H331	Toxic if inhaled
H351	Suspected of causing cancer
H370	Causes damage to organs
H373	May cause damage to organs through prolonged or repeated exposure [route]
H225	Highly flammable liquid and vapor

Precautionary statement(s)

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof [electrical/ventilating/lighting/...] equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P310	Immediately call a POISON CENTER/doctor/physician
P361+P364	Take off immediately all contaminated clothing and wash it before reuse.
P370+P378	In case of fire: Use agents recommended in Section 5 of SDS for extinction
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

P405
P501

Store locked up.
Dispose of contents/container to an approved waste disposal facility

SECTION 3: Composition/information on ingredients

Mixtures

Components

Component	CAS no.	Concentration
Methanol (EC no.: 200-659-6; Index no.: 603-001-00-X)	67-56-1	> 75 % (weight)
CLASSIFICATIONS: Flammable liquids, Cat. 2; Acute toxicity, inhalation, Cat. 3; Acute toxicity, dermal, Cat. 3; Acute toxicity, oral, Cat. 3; Specific target organ toxicity following single exposure, Cat. 1. HAZARDS: H225 - Highly flammable liquid and vapor; H301 - Toxic if swallowed; H311 - Toxic in contact with skin; H331 - Toxic if inhaled; H370 - Causes damage to organs [organs, route]. [SCLs/M-factors/ATEs]: *; STOT SE 1; H370: C ≥ 10 %; STOT SE 2; H371: 3 % ≤ C < 10 %		
Chloroform (EC no.: 200-663-8; Index no.: 602-006-00-4)	67-66-3	< 25 % (weight)
CLASSIFICATIONS: Carcinogenicity, Cat. 2; Toxic to reproduction, Cat. 2; Acute toxicity, inhalation, Cat. 3; Acute toxicity, oral, Cat. 4; Specific target organ toxicity following repeated exposure, Cat. 1; Skin corrosion/irritation, Cat. 2; Serious eye damage/eye irritation, Cat. 2A. HAZARDS: H302 - Harmful if swallowed; H315 - Causes skin irritation; H319 - Causes serious eye irritation; H331 - Toxic if inhaled; H351 - Suspected of causing cancer [route]; H361d - ; H372 - Causes damage to organs [organs] through prolonged or repeated exposure [route]. [SCLs/M-factors/ATEs]: *; STOT RE 2; H373: C ≥ 5 %		
Acetic acid (EC no.: 200-580-7; Index no.: 607-002-00-6)	64-19-7	< 5 % (weight)
CLASSIFICATIONS: Flammable liquids, Cat. 3; Skin corrosion/irritation, Cat. 1A. HAZARDS: H226 - Flammable liquid and vapor; H314 - Causes severe skin burns and eye damage. [SCLs/M-factors/ATEs]: Skin Corr. 1A; H314: C ≥ 90 %; Skin Corr. 1B; H314: 25 % ≤ C < 90 %; Skin Irrit. 2; H315: 10 % ≤ C < 25 %; Eye Irrit. 2; H319: 10 % ≤ C < 25 %		

SECTION 4: First-aid measures

Description of necessary first-aid measures

General advice

Advice to Doctor: The severity of outcome following methanol ingestion may be more related to the time between ingestion and treatment, rather than the amount ingested. Therefore, there is a need for rapid treatment of any ingestion exposure. Ethanol (contained in alcoholic beverages) can slow the metabolism of methanol, thus reducing the potential for harmful effects.

First Aid Facilities: Maintain eyewash fountain in work area.

If inhaled

If inhaled, remove from contaminated area to fresh air immediately, avoid becoming a casualty. Make patient comfortable, keep warm and at rest until fully recovered. If breathing is difficult (or develops a bluish skin discolouration), supply oxygen by a qualified person. Apply artificial respiration with a respiratory medical device if not breathing. Do not use mouth to mouth resuscitation. Immediately medical attention is required.

In case of skin contact

Wash affected areas with copious quantities of water and soap. Remove contaminated clothing and wash before re-use. If rapid recovery does not occur, obtain medical attention

In case of eye contact

If contact with the eye(s) occurs, wash with copious amounts of water for approximately 15 minutes holding eyelid(s) open. Take care not to rinse contaminated water into the non-affected eye. Seek medical attention.

If swallowed

Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek immediate medical advice.

Most important symptoms/effects, acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of immediate medical attention and special treatment needed, if necessary

For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

SECTION 5: Fire-fighting measures

Suitable extinguishing media

Caution: Use of water spray when fighting fire may be inefficient.

Small fire: Use foam, dry chemical, CO₂ or water spray.

Large fire: Use foam, fog or water spray - Do not use water jets.

If safe to do so, move undamaged containers from fire area. Cool containers with flooding quantities of water until well after fire is out.

Avoid getting water inside containers.

Specific hazards arising from the chemical

Hazards from Combustion Products: Carbon dioxide, carbon monoxide, formaldehyde and other toxic, irritating chemicals.

HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flame. Vapours will form explosive mixtures with air. Vapours may travel to source of ignition and flash back. Vapours are heavier than air and will collect in low or confined areas (drains, basements, tanks).

Special protective actions for fire-fighters

Wear SCBA and fully-encapsulating, gas-tight suit when handling these substances. Structural firefighter's uniform is NOT effective for these materials.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition.

Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.

Methods and materials for containment and cleaning up

ELIMINATE all ignition sources (no smoking, flares, sparks or flame) within at least 50m - All equipment used when handling the product must be earthed. Do not touch or walk through spilled material. Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas. Vapour-suppressing foam may be used to control vapours - Water spray may be used to knock down or divert vapour clouds. Absorb with earth, sand or other non-combustible material. Use clean, non-sparking tools to collect absorbed material and place it into loosely-covered metal or plastic containers for later disposal. SEEK EXPERT ADVICE ON HANDLING AND DISPOSAL.

SECTION 7: Handling and storage

Precautions for safe handling

Keep locked up. Keep containers tightly sealed. Protect against physical damage. Avoid use in confined spaces. Ensure good ventilation/exhaustion at the workplace. Work under hood. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid prolonged or repeated exposure. Do not ingest. If ingested, seek medical advice immediately and show the container or the label. Wear suitable protective clothing. Safety glasses. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Keep away from heat and ignition sources - Do not smoke. Take precautions against static discharge. All electrical equipment must be flameproofed. Fumes can combine with air to form an explosive mixture. Avoid generation of vapours/aerosols. Containers should be bonded and grounded for transfers to avoid static sparks. Storage and use areas should be No Smoking areas. Use non-sparking type tools and equipment, including explosion proof ventilation. Containers of this material may be hazardous when empty since they retain product residues (vapours, liquid); observe all warnings and precautions listed for the product. Do Not attempt to clean empty containers since residue is difficult to remove. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, sparks, flame, static electricity or other sources of ignition: they may explode and cause injury or death. Do not expose to temperatures above 60 °C.

Conditions for safe storage, including any incompatibilities

Store in a locked cabinet or with access restricted to technical experts or their assistants. Store small containers in suitable flammable liquid storage cabinets when not in use. Larger drums (200L) must be kept in purpose-built stores. Outside or detached storage is preferred. Store in well-sealed, dry containers, in a cool, well-ventilated location, away from any area where the fire hazard may be acute and protected from direct sunlight. Keep away from heat, sparks, open flames and all possible sources of ignition. Protect against physical damage. Separate from incompatibles. Do not store together with oxidizing and acidic materials. Aluminium, magnesium powder. Containers should be bonded and grounded for transfers to avoid static sparks. Storage and use areas should be No Smoking areas. Use non-sparking type tools and equipment, including explosion proof ventilation. Containers of this material may be hazardous when empty since they retain product residues (vapours, liquid); observe all warnings and precautions listed for the product. Do Not attempt to clean empty containers since residue is difficult to remove. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, sparks, flame, static electricity or other sources of ignition: they may explode and cause injury or death.

SECTION 8: Exposure controls/personal protection

Control parameters

CAS: 64-19-7

Acetic acid

AU/SWA (Australia): 15 ppm; 37 mg/m³ STEL inhalation; 10 ppm; 25 mg/m³ TWA inhalation;

CAS: 67-56-1

Methanol

AU/SWA (Australia): 250 ppm; 328 mg/m³ STEL inhalation; 200 ppm; 262 mg/m³ TWA inhalation;

CAS: 67-66-3

Chloroform

AU/SWA (Australia): 2 ppm; 10 mg/m³ TWA inhalation;

Appropriate engineering controls

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, gas, etc.) below recommended exposure limits.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

Skin protection

Clean impervious clothing should be worn. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Hand Protection: Ensure hand protection complies with AS 2161, Occupational protective gloves - Selection, use and maintenance.

Body protection

Footwear: Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.

Body Protection: Clean clothing or protective clothing should be worn, preferably with and apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Respiratory protection

If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable vapor/ mist filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements. Reference should be

made to Australian Standards AS/ NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Liquid
Appearance	Clear liquid.
Color	Colourless
Odor	Methanolic, acetic, sweet
Odor threshold	No data available.
Melting point/freezing point	No data available.
Boiling point or initial boiling point and boiling range	No data available.
Flammability	Highly Flammable
Lower and upper explosion limit/flammability limit	5.7% - 36% (% by volume of air)
Flash point	12°C
Explosive properties	No data available.
Auto-ignition temperature	470°C
Decomposition temperature	No data available.
Oxidizing properties	No data available.
pH	Acidic
Kinematic viscosity	No data available.
Solubility	No data available.
Partition coefficient n-octanol/water (log value)	No data available.
Vapor pressure	No data available.
Evaporation rate	No data available.
Density and/or relative density	No data available.
Relative vapor density	No data available.
Particle characteristics	No data available.

Supplemental information regarding physical hazard classes

No data available.

Further safety characteristics (supplemental)

No data available.

SECTION 10: Stability and reactivity

Reactivity

Stable under normal conditions of storage and handling.

Risk of ignition. Vapours may form explosive mixtures with air

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Can react vigorously with oxidizers. Violent reaction with alkyl aluminium salts, acetyl bromide, chloroform + sodium methoxide, chromic anhydride, cyanuric chlorite, lead perchlorate, phosphorous trioxide, nitric acid. Incompatible with beryllium dihydride, metals (potassium and magnesium), oxidants (barium perchlorate, bromine, sodium hypochlorite, chlorine, hydrogen peroxide), potassium tert-butoxide,

carbon tetrachloride, alkali metals, metals (aluminium, potassium magnesium, zinc), and dichlormethane. May attack some plastics, rubber, and coatings.

Conditions to avoid

Heat, high temperatures, flames, static discharge, sparks and other ignition sources, confined spaces, moisture and incompatibles.

Incompatible materials

Oxidising agents, peroxides, acids, acid chlorides, acid anhydrides, alkali metals, ammonia.

Hazardous decomposition products

Carbon monoxide, carbon dioxide and formaldehyde.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Acute Toxicity - Oral: LDLo (human): 143 mg/kg; (methanol)

Ingestion: Effects are the same as those described for 'Inhalation'. There is a wide range of individual susceptibility to the toxic effects of methanol (from a fatal dose of 15 mL of 40% methanol, to survival following ingestion of 500 mL of the same solution). In general, 300 to 1000 mg/kg is considered the range of minimum lethal dose for untreated cases of methanol poisoning. Methanol can probably be easily aspirated (breathed) into the lungs) during ingestion or vomiting, based on its physical properties and comparison to related alcohols. Aspiration of methanol could cause a potentially fatal accumulation of fluid in the lungs (pulmonary edema). Ingestion is not a typical route of occupational exposure.

Inhalation: A slight irritant to the mucous membranes. Methanol is toxic and can very readily form extremely high vapour concentrations at room temperature. Inhalation is the most common route of occupational exposure. At first, methanol causes mild central nervous system (CNS) depression with symptoms such as nausea, headache, vomiting, dizziness, incoordination and an appearance of drunkenness. A time period with no obvious symptoms follows (typically 8-24 hours, but may last several hours to 2 days). This latent period is then followed by development of metabolic acidosis and severe visual effects. Symptoms such as headache, dizziness, nausea and vomiting, followed in more severe cases by abdominal and muscular pain and difficult periodic breathing have been observed. Coma and death, usually due to respiratory failure, may occur if medical treatment is not received. Visual effects may include reduced reactivity and/or increased sensitivity to light, blurred, double and/or snowy vision, and blindness. Depending on the severity of poisoning and the promptness of treatment, survivors may recover completely or may have permanent blindness, vision disturbances and/or nervous system effects.

Skin corrosion/irritation

Methanol may be moderately irritating to the skin, based on unconfirmed animal information. No human information was located. Methyl alcohol is a defatting agent and may cause skin to become dry and cracked. Skin absorption can occur; symptoms may parallel inhalation exposure.

Serious eye damage/irritation

Methanol is a mild to moderate eye irritant, based on animal information. There is no human information available. Inhalation, ingestion or skin absorption of methanol can cause significant disturbances to vision, including blindness. Refer to 'Inhalation' above for additional information.

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Carcinogenicity: Category 2. H351 Suspected of causing cancer.

Reproductive toxicity

There is no human information available. No conclusions can be drawn based on the available animal information. No effects on reproductive performance were reported in a two- generation reproductive study. Rats were administered 10-1000 ppm by inhalation for 18-20 hours/day. Some studies suggest that inhalation of methanol may affect certain hormones (e.g. testosterone and lutenizing hormone) in male rats. The results have not been consistent or dose-related.

Specific target organ toxicity (STOT) - single exposure

Causes damage to organs.

Specific target organ toxicity (STOT) - repeated exposure

H373 May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

Not classified based on available information.

Additional information

Chronic Effects: Marked impairment of vision has been reported (Methanol). Prolonged or repeated skin contact may cause dermatitis. Chronic exposure may cause effects similar to those of acute exposure. Methanol is only very slowly eliminated from the body. Because of this slow elimination, methanol should be regarded as a cumulative poison. Though a single exposure may cause no effect, daily exposures may result in the accumulation of a harmful amount. Prolonged or repeated exposure to vapours via ingestion or inhalation may cause irriversable damage to the nervous system, the heart, gastro-intestinal, liver and kidneys.

SECTION 12: Ecological information

SECTION 13: Disposal considerations

Disposal methods

Product disposal

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers.

Other disposal recommendations

Do not discharge this material into waterways, drains and sewers.

SECTION 14: Transport information

ADG (Road and Rail)

UN Number: 1992

Class: 3, 6.1

Packing Group: II

Proper Shipping Name: FLAMMABLE LIQUID, TOXIC, N.O.S. (Contains 75% Methanol, 25% Chloroform)

Hazchem emergency action code (EAC)

3WE

IMDG

UN Number: 1992

Class: 3, 6.1

Packing Group: II

Proper Shipping Name: FLAMMABLE LIQUID, TOXIC, N.O.S. (Contains 75% Methanol, 25% Chloroform)

IATA

UN Number: 1992

Class: 3, 6.1

Packing Group: II

Proper Shipping Name: FLAMMABLE LIQUID, TOXIC, N.O.S. (Contains 75% Methanol, 25% Chloroform)

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

Australia SUSMP

Poison Schedule: S6

SECTION 16: Other information

Further information/disclaimer

ChemSupply Australia Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon ChemSupply Australia Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of ChemSupply Australia Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

Preparation information

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Standard for the Uniform Scheduling of Medicines and Poisons, Commonwealth of Australia

National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'

Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', July 2020.

Safe Work Australia, 'National Guide for Classifying Hazardous Chemicals', July 2020.

Safe Work Australia, Workplace Exposure Standards for Airborne Contaminants, December 2019

Safe Work Australia, Hazardous Chemical Information System (HCIS), hcis.safeworkaustralia.gov.au

IATA, Dangerous Goods Regulations (DGR)

IMO, International Maritime Dangerous Goods Code (IMDG)