



## Hazardous Substance, Dangerous Goods

### 1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

Product name: **Bostik 1669 Sole Attaching Cement**

Synonyms:	Mancode
Bostik 1669 Sole Attaching Cement, 4 Litre	179442
Bostik 1669 Sole Attaching Cement, 20 Litre	174149
Bostik 1669 Sole Attaching Cement, 200 Litre	174130

**Recommended use:** A polyurethane solvent based adhesive designed for bonding leather, PVC, PU and TPR.

**Supplier:** Bostik Australia Pty Ltd  
**ABN:** 79 003 893 838  
**Street Address:** 51-71 High Street  
Thomastown VIC 3074  
Australia  
**Telephone:** +613 9279-9333  
**Facsimile:** +613 9279-9342

**Emergency telephone number:** 1800 033 111

### 2. HAZARDS IDENTIFICATION

This material is hazardous according to health criteria of NOHSC Australia.

**Hazard Category:**

Xn Harmful  
Xi Irritant

**Risk Phrase(s):**

R20: Harmful by inhalation.  
R36/37/38: Irritating to eyes, respiratory system and skin.

**Safety Phrase(s):**

S23: Do not breathe vapour.  
S24/25: Avoid contact with skin and eyes.  
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.  
S38: In case of insufficient ventilation, wear suitable respiratory equipment.

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail.

**Class:** 3 Flammable Liquid

**Poisons Schedule (Aust):** S5

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



### 3. COMPOSITION INFORMATION

CHEMICAL ENTITY	CAS NO.	PROPORTION
Acetone	67-64-1	10-30%
Methyl ethyl ketone	78-93-3	10-30%
Toluene	108-88-3	10-30%
Non-hazardous ingredients	-	Balance
		100%

### 4. FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126, New Zealand 0800 764 766).

**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 a qualified person give oxygen through a facemask. If breathing has stopped apply artificial respiration at once. In the event of cardiac arrest, apply external cardiac massage. Seek immediate medical advice.

**Skin contact:** For gross contamination, immediately drench with water and remove clothing. Continue to flush skin and hair with plenty of water (and soap if material is insoluble). For skin burns, cover with a clean, dry dressing until medical help is available. If blistering occurs, do NOT break blisters. If swelling, redness, blistering, or irritation occurs seek medical assistance.

**Eye contact:** If in eyes, hold eyelids apart and flush the eyes continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a Doctor; or for at least 15 minutes and transport to Doctor or Hospital.

**Ingestion:** Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water to drink. Never give anything by the mouth to an unconscious patient. If vomiting occurs give further water. Seek medical advice.

**Notes to physician:** Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

**Specific hazards:** Flammable liquid. May form flammable vapour mixtures with air. Flameproof equipment necessary in area where this chemical is being used. Nearby equipment must be earthed. Electrical requirements for work area should be assessed according to AS3000. Vapour may travel a considerable distance to source of ignition and flash back. Avoid all ignition sources. 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.

**Fire fighting further advice:** Heating can cause expansion or decomposition leading to violent rupture of containers. If safe to do so, remove containers from path of fire. Keep containers cool with water spray. On burning may emit toxic fumes. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion.

**Hazchem Code:** 3[Y]E.



**Suitable extinguishing media:** If material is involved in a fire use foam, dry agent (carbon dioxide, dry chemical powder).

## 6. ACCIDENTAL RELEASE MEASURES

### SMALL SPILLS

Wear protective equipment to prevent skin and eye contamination. Avoid inhalation of vapours. Wipe up with absorbent (clean rag or paper towels). Collect and seal in properly labelled containers or drums for disposal.

### LARGE SPILLS

Shut off all possible sources of ignition. Clear area of all unprotected personnel. Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Use a spark-free shovel. Collect and seal in properly labelled containers or drums for disposal. If contamination of sewers or waterways has occurred advise local emergency services.

**Dangerous Goods – Initial Emergency Response Guide No: 14**

## 7. HANDLING AND STORAGE

**Handling:** Avoid skin and eye contact and inhalation of vapour.

**Storage:** Store in a cool, dry, well-ventilated place and out of direct sunlight. Store away from incompatible materials described in Section 10. Store away from sources of heat or ignition. Keep containers closed when not in use - check regularly for leaks.

This material is classified as a Dangerous Good Class 3 Flammable Liquid as per the criteria of the Australian Dangerous Goods Code and must be stored in accordance with the relevant regulations.

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 (NOHSC Australia).

However for:

	TWA		STEL		CARCINOGEN CATEGORY	NOTICES
	ppm	mg/m3	ppm	mg/m3		
Acetone	500	1,190	1,000	2,380	-	-
Methyl ethyl ketone	150	445	300	890	-	-
Toluene	100	377	150	565	-	-

As published by the National Occupational Health & Safety Commission (NOHSC Australia).

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TWA - The time-weighted average airborne concentration 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 workday.

These Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept too as low a level as is workable. These 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.

If the directions for use on the product label are followed, exposure of individuals using the product should not exceed the above standard. The standard was created for workers who are routinely, potentially exposed during product manufacture.

**Biological Limit Values:** As per the "National Model Regulations for the Control of Workplace Hazardous Substances [NOHSC: 1005 (1994)]" the ingredients in this material do not have a Biological Limit Allocated.

**Engineering measures:** Ensure ventilation is adequate to maintain air concentrations below Exposure Standards. Use with local exhaust ventilation or while wearing appropriate respirator. 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, RESPIRATOR.

Wear overalls, chemical goggles and impervious gloves. Use with adequate ventilation. If inhalation risk exists wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Available information suggests that gloves made from nitrile rubber should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Form / Colour / Odour:** Clear viscous liquid.

<b>Solubility:</b>	1
<b>Specific Gravity (20 °C):</b>	0.8
<b>Relative Vapour Density (air=1):</b>	2*
<b>Vapour Pressure (20 °C):</b>	24 kPa*
<b>Flash Point (°C):</b>	<0
<b>Flammability Limits (%):</b>	LEL – 2.6; UEL – 12.8*
<b>Autoignition Temperature (°C):</b>	N Av
<b>Melting Point/Range (°C):</b>	-95.4*
<b>Boiling Point/Range (°C):</b>	56*
<b>pH:</b>	N App
<b>Evaporation Rate (n-Butyl acetate=1):</b>	6*

\* values for acetone

(Typical values only - consult specification sheet)

N Av = Not available

N App = Not applicable

## 10. STABILITY AND REACTIVITY

**Chemical stability:** This material is thermally stable when stored and used as directed.

**Conditions to avoid:** Elevated temperatures and sources of ignition.

**Incompatible Materials:** Oxidising agents.

**Hazardous decomposition products:** Oxides of carbon and nitrogen, smoke and other toxic fumes.

**Hazardous reactions:** No information available.

## 11. TOXICOLOGICAL INFORMATION

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

### Acute Effects

**Inhalation:** Material is 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 co-ordination, impaired judgement and if exposure is prolonged, unconsciousness.

**Skin contact:** Contact with skin will result in irritation.

**Eye contact:** An eye irritant.

**Ingestion:** Swallowing can result in nausea, vomiting and irritation of the gastrointestinal tract.

**Long Term Effects:** No information available for product.

### Acute toxicity / Chronic toxicity

No LD50 data available for the product. However, for the constituent:

#### Toluene

Oral LD50 (rat):	636 mg/kg
Dermal LD50 (rabbit):	14,100 uL/kg
SKIN: (Draize):	Mild to moderate irritant
EYES: (Draize):	Mild to moderate irritant

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.

Both bioassay tests and other available data (including two human studies) indicate that toluene is not carcinogenic.

Based on available in-vivo data, studies of humans are inconclusive with regard to genotoxicity, while most in-vitro studies indicate negative results for toluene.

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While there have been some reported developmental effects in experimental animal testing involving toluene, studies do not provide evidence that toluene is teratogenic following inhalation.

## Acetone

Oral LD50 (rat): 5,800-8,393 mg/kg  
Dermal LD50 (rabbit): >15,688 (no deaths recorded)  
Inhalation LC50 (rat): 50.1 mg/l/8 hr  
Inhalation LC50 (rat): 76.0 mg/l/4 hr  
EYES (rabbit): Redness of conjunctiva - 2.3

100uL of acetone was applied to six New Zealand white albino rabbits according to a modified draize test. Overall the results show that acetone is a mild eye irritant.

Subjects exposed to vapour concentrations of 500-1000 ppm experienced irritation to the eyes.

Vapour concentrations above 500 ppm are irritating to the nose and throat. Higher concentrations above 1000 ppm have resulted in narcotic effects.

## Methyl ethyl ketone

Oral LD50 (rat): 2,737 mg/kg  
Inhalation LC50 (rat): 23,500 mg/m<sup>3</sup>/8 hr  
Dermal LD50 Range (rabbit): 5,000-13,000 mg/kg  
EYES (rabbit): Moderate irritant. Eye irritation reported in humans exposed to vapour at 350 ppm

**MUTAGENICITY:** Methyl ethyl ketone has been shown to be without genotoxic activity in a variety of in vitro and in vivo tests. Among the tests, which produced negative results, are assays for point mutation (eg. Ames test and mouse lymphoma), chromosomal aberration (rat liver cells in vitro and mouse bone marrow in vivo), DNA damage (unscheduled DNA synthesis in rat hepatocytes), and morphologic transformation (BALB 3T3 morphologic transformation).

**REPRODUCTIVE/DEVELOPMENTAL EFFECTS:** No human studies have been reported. An initial inhalation study with rats indicated fetotoxicity (eg. delayed foetal development) and possible teratogenicity at 3000 ppm. However, a comprehensive follow-up study in rats showed only slight fetotoxicity accompanied by maternal toxicity at 3000 ppm, but no teratogenic effects. No significant differences were seen between rats exposed to 1000 ppm or 400 ppm methyl ethyl ketone and the control. Likewise, an inhalation study with mice showed only fetotoxicity at 3000 ppm and no effects at 1000 ppm or 400 ppm methyl ethyl ketone.

Methyl ethyl ketone is not neurotoxic. It has been shown to potentiate the neurotoxic effects of hexane, 2,5-hexanedione and methyl-n-butyl ketone and has also potentiated the liver toxicity of halogenated solvents (eg. chloroform and carbon tetrachloride) in animal studies.

Not a skin sensitiser based on human patch test.

## 12. ECOLOGICAL INFORMATION

Avoid contaminating waterways. No data available for the product. However, for the constituent:

### Toluene

Toxic to aquatic organisms. Avoid contaminating waterways.

Material is moderately toxic to aquatic organisms on an acute basis (LC50 between 1 and 10 mg/L in most sensitive species).

LC50 (Daphnia magna): 60-313 mg/L

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## Acetone

Avoid contaminating waterways.

LC50 (bluegill sunfish):	8300 mg/L
24 hr LC50 (rainbow trout):	6,100 mg/L (flow through)
96 hr LC50 (Daphnia magna):	>10,000 mg/L
24 Hr LC50 (fingerling trout):	6,100 mg/L (flow through)
14 d LC50 guppy (Poecilia reticular):	7,032 ppm
24 hr EC50 (Daphnia Magna):	>10,000 mg/L
48 hr EC50 (Daphnia magna):	13,500 mg/L
IC0 (Pseudomonas putida):	1,700 mg/L
7-8 Day Toxicity Threshold (Blue-green algae):	530 mg/L
7-8 Day Toxicity Threshold (Green algae):	7,500 mg/L

## Persistence & Biodegradability

Acetone has negligible potential to bioaccumulate.

Octanol/ water Partition Coefficient Log Kow: -0.24

## 13. DISPOSAL CONSIDERATIONS

Refer to State/Territory Land Waste Management Authority.

## 14. TRANSPORT INFORMATION

### ROAD AND RAIL TRANSPORT

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail.

<b>UN No:</b>	1133
<b>Dangerous Goods Class:</b>	3
<b>Packing Group:</b>	II
<b>Hazchem Code:</b>	3[Y]E
<b>Emergency Response Guide No:</b>	14

**Proper Shipping Name:** ADHESIVE containing flammable liquids

**Segregation Dangerous Goods:** Not to be loaded with explosives (Class 1), flammable gases (Class 2.1), if both are in bulk, toxic 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 Code) for transport by sea.

<b>UN No:</b>	1133
<b>Dangerous Goods Class:</b>	3
<b>Packing Group:</b>	II

**Proper Shipping Name:** ADHESIVE containing flammable liquids

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## AIR TRANSPORT

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

**UN No:** 1133  
**Dangerous Goods Class:** 3  
**Packing Group:** II

**Proper Shipping Name:** ADHESIVE containing flammable liquids

## 15. REGULATORY INFORMATION

**Poisons Schedule (Aust):** S5

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

## 16. OTHER INFORMATION

### Literary reference

This Material Safety Data Sheet has been prepared by Chemical Data Services Pty Ltd on behalf of its client.

Reason(s) For Issue: First Issue

Material Safety Data Sheets are updated frequently. Please ensure that you have a current copy.

This MSDS summarises at the date of issue our best knowledge of the health and safety hazard information of the product, and in particular how to safely handle and use the product in the workplace. Since Bostik Australia Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, review this MSDS in the context of how the user intends to handle and use the product in the workplace.

If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact this company.

Our responsibility for product as sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available upon request.