



## Safety Data Sheet

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LOCTITE MR 5414 BLACK CONTACT ADHESIVE known as  
Loctite® Black Contact Adhesiv

SDS No. : 237275

V001.4

Date of issue: 25.07.2016

### Section 1. Identification of the substance/preparation and of the company/undertaking

**Product name:** LOCTITE MR 5414 BLACK CONTACT ADHESIVE known as Loctite® Black Contact Adhesiv

**Intended use:** Contact adhesive

**Supplier:**  
Henkel Australia Pty Ltd  
135-141 Canterbury Road  
Kilsyth, Victoria, 3137  
Australia

Phone: +61 (3) 9724 6444

**Emergency information:** 24 HOUR EMERGENCY CONTACT NUMBER: 1800 032 379

### Section 2. Hazards identification

#### Classification of the substance or mixture

Hazardous according to the criteria of Safe Work Australia.

#### GHS Classification:

<u>Hazard Class</u>	<u>Hazard Category</u>	<u>Target organ</u>
Flammable liquids	Category 2	
Skin irritation	Category 2	
Serious eye irritation	Category 2A	
Toxic to reproduction	Category 1A	
Target Organ Systemic Toxicant - Single exposure	Category 3	Central Nervous System
Target Organ Systemic Toxicant - Repeated exposure	Category 2	
Aspiration hazard	Category 1	
Acute hazards to the aquatic environment	Category 3	
Chronic hazards to the aquatic environment	Category 3	

#### Hazard pictogram:



**Signal word:** Danger

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<b>Hazard statement(s):</b>	H225 Highly flammable liquid and vapor. H304 May be fatal if swallowed and enters airways. H315 Causes skin irritation. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness. H360 May damage fertility or the unborn child. H373 May cause damage to organs through prolonged or repeated exposure. H412 Harmful to aquatic life with long lasting effects.
<b>Precautionary Statement(s):</b>	
<b>Prevention:</b>	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. P233 Keep container tightly closed. P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical/ventilating/lighting/equipment. 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. P271 Use only outdoors or in a well-ventilated area. P273 Avoid release to the environment. P280 Wear protective gloves, eye protection, and face protection. P281 Use personal protective equipment as required.
<b>Response:</b>	P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. P304+P340+P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. 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. P331 Do NOT induce vomiting. P332+P313 If skin irritation occurs: Get medical advice/attention. P337+P313 If eye irritation persists: Get medical advice/attention. P362 Take off contaminated clothing. P370+P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
<b>Storage:</b>	P403+P233 Store in a well-ventilated place. Keep container tightly closed. P403+P235 Store in a well-ventilated place. Keep cool. P405 Store locked up.
<b>Disposal:</b>	P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations.

Classification of material F - Highly flammable Xn - Harmful N - Dangerous for the environment

**Risk phrases:**

R11 Highly flammable.  
R36/38 Irritating to eyes and skin.  
R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.  
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R62 Possible risk of impaired fertility.  
R63 Possible risk of harm to the unborn child.  
R65 Harmful: may cause lung damage if swallowed.  
R66 Repeated exposure may cause skin dryness or cracking.  
R67 Vapours may cause drowsiness and dizziness.

**Safety phrases:**

S16 Keep away from sources of ignition - No smoking.  
 S23 Do not breathe gas/fumes/vapour/spray.  
 S24/25 Avoid contact with skin and eyes.  
 S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
 S27 Take off immediately all contaminated clothing.  
 S28 After contact with skin, wash immediately with plenty of water and soap.  
 S33 Take precautionary measures against static discharges.  
 S36/37 Wear suitable protective clothing and gloves.  
 S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
 S61 Avoid release to the environment. Refer to special instructions/Safety data sheets.  
 S62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.  
 S9 Keep container in a well-ventilated place.

**Dangerous Goods information:**

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

**Signal word:**

HAZARDOUS

**Section 3. Composition / information on ingredients**

**General chemical description:** Mixture  
solvent  
**Type of preparation:** Solvent based adhesive

**Identity of ingredients:**

Chemical ingredients	CAS-No.	Proportion
Butanone	78-93-3	10- 30 %
Toluene	108-88-3	10- 30 %
Acetone	67-64-1	10- 30 %
n-Hexane	110-54-3	< 20 %
non hazardous ingredients~		10- 30 %

**Section 4. First aid measures**

**Ingestion:** Do not induce vomiting.  
Aspiration may cause pulmonary edema and pneumonitis.  
Get immediate medical attention.

**Skin:** Remove contaminated clothing and footwear.  
Immediately flush skin with plenty of water (using soap, if available).  
Wash clothing before reuse.  
If symptoms develop and persist, get medical attention.

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes.  
Get medical attention.

**Inhalation:** Move to fresh air.  
If breathing is difficult, give oxygen.  
If not breathing, give artificial respiration.  
If symptoms develop and persist, get medical attention.

**First Aid facilities:** Eye wash and safety shower  
Normal washroom facilities

**Medical attention and special treatment:** Treat symptomatically.

### Section 5. Fire fighting measures

**Suitable extinguishing media:** Foam, extinguishing powder, carbon dioxide.  
Water spray jet

**Improper extinguishing media:** High pressure waterjet

**Combustion behaviour:** Solvent containing flammable product. In case of fire toxic gases are released.

**Decomposition products in case of fire::** Upon decomposition, this product may yield gaseous nitrogen oxides, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

**Particular danger in case of fire::** Can form explosive gas/air mixtures.

**Special protective equipment for fire-fighters:** Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

**Additional fire fighting advice:** If ignition sources are present, there is danger of fire breaking out and spreading. In case of fire, keep containers cool with water spray.

**Hazchem code:** •3YE

### Section 6. Accidental release measures

**Personal precautions:** Wear protective equipment.  
Keep unprotected persons away.  
Remove sources of ignition.  
Ensure adequate ventilation.  
See advice in section 8

**Environmental precautions:** Do not empty into drains / surface water / ground water.  
Inform authorities in the event of product spillage to water courses or sewage systems.  
Prevent further leakage or spillage if safe to do so.

**Clean-up methods:** Remove mechanically.  
For small spills wipe up with paper towel and place in container for disposal.  
For large spills absorb onto inert absorbent material and place in sealed container for disposal.  
Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment during clean-up.  
Dispose of contaminated material as waste according to Section 13.

### Section 7. Handling and storage

**Precautions for safe handling:** Ventilate working rooms thoroughly. Avoid naked flames, sparking and sources of ignition. Switch off electrical devices. Do not smoke, do not weld. Do not empty waste into waste water drains.  
Take measures to prevent the build-up of electrostatic charges.  
See advice in section 8  
Do not store or use near heat, spark, open flame or other sources of ignition.  
Prolonged or repeated skin contact should be avoided to minimise any risk of sensitisation.  
Do not spray onto flames or red-hot objects.

**Conditions for safe storage:** Store in sealed original container.  
Close the container carefully after use and store it at a good ventilated place.  
Keep container tightly sealed.  
Keep away from heat and direct sunlight.  
Do not store near sources of heat or ignition, or reactive materials.  
Must be stored in the facility for the dangerous goods  
Do not store together with oxidants.

## Section 8. Exposure controls / personal protection

### National exposure standards:

Ingredient [Regulated substance]	form of exposure	TWA (ppm)	TWA (mg/m3)	Peak Limit. (ppm)	Peak Limit. (mg/m3)	STEL (ppm)	STEL (mg/m3)
METHYL ETHYL KETONE (MEK) 78-93-3		150	445	-	-	-	-
METHYL ETHYL KETONE (MEK) 78-93-3		-	-	-	-	300	890
TOLUENE 108-88-3		50	191	-	-	-	-
TOLUENE 108-88-3		-	-	-	-	150	574
ACETONE 67-64-1		500	1,185	-	-	-	-
ACETONE 67-64-1		-	-	-	-	1,000	2,375
HEXANE (N-HEXANE) 110-54-3		20	72	-	-	-	-

**Engineering controls:** Ventilate working rooms thoroughly. Avoid naked flames, sparking and sources of ignition. Switch off electrical devices. Do not smoke, do not weld. Do not empty waste into waste water drains.

**Eye protection:** Wear safety glasses; chemical goggles (if splashing is possible).

**Skin protection:** Use of protective coveralls and long sleeves is recommended.  
Suitable protective gloves.  
Silver Shield gloves.  
Please note that in practice the working life of chemical resistant gloves may be considerably reduced as a result of many influencing factors (e.g. temperature). Suitable risk assessment should be carried out by the end user. If signs of wear and tear are noticed then the gloves should be replaced.

**Respiratory protection:** If inhalation risk exists, wear a respirator or air supplied mask complying with the requirements of AS/NZS 1715 and AS/NZS 1716.

## Section 9. Physical and chemical properties

**Appearance:** black  
liquid

**Odor:** characteristic

**Specific gravity:** 0.88

**Boiling point:** 56 °C (132.8 °F)

**Flash point:** -24 °C (-11.2 °F)

**Vapor pressure:** 241 hPa  
(; 20 °C (68 °F))

**Vapor density:** 2.71

**max. VOC content:** 452 g/l  
**VOC content:** 76 %  
(2010/75/EC)

### Section 10. Stability and reactivity

**Stability:** Stable under normal conditions of temperature and pressure.

**Conditions to avoid:** Take measures to prevent the build-up of electrostatic charges.  
Excessive heat.  
Heat, flames, sparks and other sources of ignition.

**Incompatible materials:** Oxidizing agents.  
Acids and bases.

**Hazardous decomposition products:** In case of fire toxic gases can be released.  
Irritating organic vapours.  
Oxides of carbon.

**Hazardous polymerization:** Will not occur.

### Section 11. Toxicological information

**Health Effects:**

**Ingestion:** Aspiration may occur during swallowing or vomiting, resulting in lung damage.  
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Skin:** Causes skin irritation.  
Symptoms may include redness, burning, drying, cracking and skin burns.  
May cause an allergic skin reaction.

**Eyes:** Causes serious eye irritation.  
Symptoms may include severe irritation, pain, tearing, blurred vision.

**Inhalation:** Vapours may cause drowsiness and dizziness.  
Inhalation of product mist may cause irritation of the nose, throat, and respiratory tract.

**Chronic effects:**

**Toluene  
108-88-3:** Functional disturbances/damage to the central-nervous system, skin damage (through contact with the liquid); in humans severe central nervous system effects including brain atrophy have been found at very high exposure levels. Neuropsychological effects, effects on the inner ear in humans and finding of nonmalignant tumours in mice are reported. Case studies on high-level toluene exposure of pregnant women (sniffing) provide evidence of developmental toxicity (physical and neurological abnormalities).

**Toxicity for reproduction:** Toxic to reproduction, category 1A, May damage fertility or the unborn child.

**Acute toxicity:**

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Butanone 78-93-3	Acute toxicity estimate (ATE) LD50 LC50 LD50	2,600 mg/kg	oral	6 h	rat rat rabbit	Expert judgement
		2,600 - 5,400	oral			
		mg/kg	inhalation			
		> 5000 ppm	dermal			
Toluene 108-88-3	LD50 LC50 LD50	5,580 mg/kg	oral	4 h	rat rat rabbit	Draize Test
		28.1 mg/l	inhalation			
		> 5,000 mg/kg	dermal			
		5,800 mg/kg	oral			
Acetone 67-64-1	LD50 LC50 LD50	76 mg/l	inhalation	4 h	rat rat rabbit	Draize Test
		> 15,688 mg/kg	dermal			
		16,000 mg/kg	oral			
		> 2,000 mg/kg	inhalation			
n-Hexane 110-54-3	LD50 LC50 LD50	16,000 mg/kg	oral	24 h	rat rat rabbit	OECD Guideline 401 (Acute Oral Toxicity) OECD Guideline 403 (Acute Inhalation Toxicity)
		> 2,000 mg/kg	inhalation			
			dermal			

**Skin corrosion/irritation:**

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Butanone 78-93-3	moderately irritating		rabbit	
Toluene 108-88-3	irritating		rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Acetone 67-64-1	not irritating		guinea pig	

**Serious eye damage/irritation:**

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Butanone 78-93-3	irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Acetone 67-64-1	irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
n-Hexane 110-54-3	not irritating		rabbit	

**Respiratory or skin sensitization:**

Hazardous components CAS-No.	Result	Test type	Species	Method
Butanone 78-93-3	not sensitising	Guinea pig maximisation test	guinea pig	
Acetone 67-64-1	not sensitising	Guinea pig maximisation test	guinea pig	
n-Hexane 110-54-3	not sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)

**Germ cell mutagenicity:**

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Butanone 78-93-3	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Toluene 108-88-3	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		
Acetone 67-64-1	negative negative negative	bacterial reverse mutation assay (e.g Ames test) in vitro mammalian chromosome aberration test mammalian cell gene mutation assay	with and without with and without without		OECD Guideline 471 (Bacterial Reverse Mutation Assay) OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Acetone 67-64-1	negative	oral: drinking water		mouse	
n-Hexane 110-54-3	negative negative	bacterial reverse mutation assay (e.g Ames test) mammalian cell gene mutation assay	with and without with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay) OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
n-Hexane 110-54-3	negative negative	inhalation: vapour inhalation: vapour		mouse rat	OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration Test)

**Repeated dose toxicity:**

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
Butanone 78-93-3	NOAEL=2500 ppm	inhalation	90 days 6 hours/day, 5 days/week	rat	
Butanone 78-93-3	LOAEL=5000 ppm	inhalation	90 days 6 hours/day, 5 days/week	rat	
Acetone 67-64-1	NOAEL=900 mg/kg	oral: drinking water	13 wdaily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
n-Hexane 110-54-3	NOAEL=586 mg/kg	oral: gavage	90 d5 d/w	rat	
n-Hexane 110-54-3	NOAEL=500 ppm	inhalation: vapour	90 d6 h/d; 5 d/w	mouse	OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)



**General ecological information:** Do not empty into drains, soil or bodies of water.

**Ecotoxicity:** Harmful to aquatic life with long lasting effects.

**Toxicity:**

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
Butanone 78-93-3	LC50	3,220 mg/l	Fish	96 h	Pimephales promelas	OECD Guideline 203 (Fish, Acute Toxicity Test)
Butanone 78-93-3	EC50	5,091 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Butanone 78-93-3	EC50	> 1,000 mg/l	Algae			OECD Guideline 201 (Alga, Growth Inhibition Test)
Butanone 78-93-3	EC 50	> 1,000 mg/l	Bacteria			OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Toluene 108-88-3	NOEC	3.2 mg/l	Fish	28 d	Cyprinodon variegatus	OECD Guideline 204 (Fish, Prolonged Toxicity Test: 14-day Study)
Toluene 108-88-3	LC50	5.5 mg/l	Fish	96 h	Oncorhynchus kisutch	OECD Guideline 203 (Fish, Acute Toxicity Test)
Toluene 108-88-3	EC50	11.5 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Toluene 108-88-3	IC50	12 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Toluene 108-88-3	NOEC	29 mg/l	Bacteria	16 h	Pseudomonas putida	DIN 38412, part 8 (Pseudomonas Zellvermehrungshe mm-Test)
Acetone 67-64-1	LC50	8,120 mg/l	Fish	96 h	Pimephales promelas	OECD Guideline 203 (Fish, Acute Toxicity Test)
Acetone 67-64-1	EC50	8,800 mg/l	Daphnia	48 h	Daphnia pulex	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Acetone 67-64-1	NOEC	530 mg/l	Algae	8 d	Microcystis aeruginosa	DIN 38412-09
Acetone 67-64-1	EC10	1,000 mg/l	Bacteria	30 min	Pseudomonas putida	DIN 38412, part 27 (Bacterial oxygen consumption test)
n-Hexane 110-54-3	LC50	> 1 - 10 mg/l	Fish			OECD Guideline 203 (Fish, Acute Toxicity Test)
n-Hexane 110-54-3	EC50	2.1 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
n-Hexane 110-54-3	EC50	> 1 - 10 mg/l	Algae			OECD Guideline 201 (Alga, Growth Inhibition Test)
n-Hexane 110-54-3	EC 50	> 1 - 10 mg/l	Bacteria			OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)

**Persistence and degradability:**

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
Butanone 78-93-3	readily biodegradable	aerobic	> 60 %	OECD 301 A - F
Toluene 108-88-3	readily biodegradable	aerobic	80 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Acetone 67-64-1	readily biodegradable	aerobic	81 - 92 %	EU Method C.4-E (Determination of the "Ready" Biodegradability Closed Bottle Test)
n-Hexane 110-54-3	readily biodegradable, but failing 10-day window	aerobic	> 60 %	

**Bioaccumulative potential / Mobility in soil:**

Hazardous components CAS-No.	LogKow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
Butanone 78-93-3	0.29					
Toluene 108-88-3		90	3 d	Leuciscus idus melanotus		OECD Guideline 305 (Bioconcentration: Flow-through Fish Test)
Toluene 108-88-3	2.73				20 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Acetone 67-64-1	-0.24					OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
n-Hexane 110-54-3	4					

**Section 13. Disposal considerations**

- Waste disposal of product:** Collection and delivery to recycling enterprise or other registered elimination institution. Dispose of in accordance with local and national regulations.
- Disposal for uncleaned package:** Only completely empty containers are to be disposed of as recoverable materials. Packaging that cannot be cleaned are to be disposed of in the same manner as the product.

**Section 14. Transport information****Road and Rail Transport:**

- Dangerous Goods information: Classified as Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code).
- UN no.: 1133
- Proper shipping name: ADHESIVES
- Class or division: 3
- Packing group: II
- Hazchem code: •3YE
- Emergency information: Refer to the Dangerous Goods - Initial Emergency Response Guide HB 76.

**Marine transport IMDG:**

UN no.:	1133
Proper shipping name:	ADHESIVES
Class or division:	3
Packing group:	II
EmS:	F-E ,S-D
Seawater pollutant:	-

**Air transport IATA:**

UN no.:	1133
Proper shipping name:	Adhesives
Class or division:	3
Packing group:	II
Packing instructions (passenger)	353
Packing instructions (cargo)	364

**Section 15. Regulatory information**

**SUSMP Poisons Schedule** 5

**AICS:** All components are listed or are exempt from listing on the Australian Inventory of Chemical Substances (AICS).

**Section 16. Other information**

**Abbreviations/acronyms:** ADGC - Australian Dangerous Goods Code  
IATA-DGR: International Air Transport Association – Dangerous Goods Regulations  
IMDG: International Maritime Dangerous Goods code  
STEL - Short term exposure limit  
TWA - Time weighted average

**Reason for issue:** Reviewed MSDS. Reissued with new date. involved chapters: 1 - 16

**Date of previous issue:** 28.07.2014

**Disclaimer:** The percentage weight (% w/w) of ingredients is not to be taken as a specification guaranteed by Henkel Australia Pty. Limited, but only as an approximate guide to the content of hazardous ingredients in the material. The information contained herein does not constitute a guarantee by Henkel Australia Pty. Limited concerning the properties of the material. The information contained in the Safety Data Sheet is offered in good faith and has been developed from what is believed to be accurate and reliable sources. The information is offered without warranty, representation, inducement or licence and Henkel Australia Pty. Limited assumes no legal responsibility for reliance upon same. Henkel Australia Pty. Limited disclaims any liability for loss, injury or damage incurred in connection with the use of the material or its associated Safety Data Sheet. This information is not to be construed as a representation that the material is suitable for any particular purpose or use except those conditions and warranties implied by either Commonwealth or State statutes. Customers are encouraged to make their own enquiries as to the material's characteristics and, where appropriate, to conduct their own tests in the specific context of the material's intended use.

