

# Permatex Non-Chlorinated Brake & Parts Cleaner Aerosol

ITW AAMTech

Chemwatch Hazard Alert Code: 3

Chemwatch: 5058-12

Issue Date: 03/10/2014

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Material Safety Data Sheet according to NOHSC and ADG requirements

Initial Date: **Not Available**

S.Local.AUS.EN

## SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

### Product Identifier

<b>Product name</b>	Permatex Non-Chlorinated Brake & Parts Cleaner Aerosol
<b>Synonyms</b>	PX82220
<b>Proper shipping name</b>	AEROSOLS
<b>Other means of identification</b>	Not Available

### Relevant identified uses of the substance or mixture and uses advised against

<b>Relevant identified uses</b>	<p>Application is by spray atomisation from a hand held aerosol pack Use according to manufacturer's directions.</p> <p>The use of a quantity of material in an unventilated or confined space may result in increased exposure and an irritating atmosphere developing. Before starting consider control of exposure by mechanical ventilation.</p> <p>Solvent cleaner for brakes and other machinery parts.</p>
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### Details of the manufacturer/importer

<b>Registered company name</b>	ITW AAMTech	ITW AAMTech
<b>Address</b>	Unit 2/38 Trugood Drive 2013 New Zealand	100 Hassall Street 2164 NSW Australia
<b>Telephone</b>	+64 9272 1940	1800 177 989
<b>Fax</b>	+64 9272 1949	1800 308 556
<b>Website</b>	www.aamtech.co.nz	www.aamtech.com.au
<b>Email</b>	info@aamtech.co.nz	info@aamtech.com.au

### Emergency telephone number

<b>Association / Organisation</b>	Not Available	Not Available
<b>Emergency telephone numbers</b>	+800 2436 2255	1800 039 008
<b>Other emergency telephone numbers</b>	Not Available	+61 3 9573 3112

## SECTION 2 HAZARDS IDENTIFICATION

### Classification of the substance or mixture

**HAZARDOUS SUBSTANCE. DANGEROUS GOODS. According to the Criteria of NOHSC, and the ADG Code.**

<b>Poisons Schedule</b>	S5												
<b>Risk Phrases [1]</b>	<table border="1"> <tr> <td><b>R23/24/25</b></td> <td>Toxic by inhalation, in contact with skin and if swallowed.</td> </tr> <tr> <td><b>R36/38</b></td> <td>Irritating to eyes and skin.</td> </tr> <tr> <td><b>R51/53</b></td> <td>Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.</td> </tr> <tr> <td><b>R67</b></td> <td>Vapours may cause drowsiness and dizziness.</td> </tr> <tr> <td><b>R44</b></td> <td>Risk of explosion if heated under confinement.</td> </tr> <tr> <td><b>R66</b></td> <td>Repeated exposure may cause skin dryness and cracking.</td> </tr> </table>	<b>R23/24/25</b>	Toxic by inhalation, in contact with skin and if swallowed.	<b>R36/38</b>	Irritating to eyes and skin.	<b>R51/53</b>	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.	<b>R67</b>	Vapours may cause drowsiness and dizziness.	<b>R44</b>	Risk of explosion if heated under confinement.	<b>R66</b>	Repeated exposure may cause skin dryness and cracking.
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Continued...

**Permatex Non-Chlorinated Brake & Parts Cleaner Aerosol**

	<b>R39/23 /24/25</b>	<b>Toxic:</b> Danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
	<b>R12</b>	Extremely flammable.
<b>Legend:</b>	1. Classified by Chemwatch; 2. Classification drawn from HSIS ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI	
<b>GHS Classification</b> <sup>[1]</sup>	Flammable Aerosol Category 1, Acute Toxicity (Oral) Category 3, Acute Toxicity (Dermal) Category 3, Acute Toxicity (Inhalation) Category 2, Skin Corrosion/Irritation Category 2, Eye Irritation Category 2A, STOT - SE Category 1, STOT - SE (Narcosis) Category 3, Acute Aquatic Hazard Category 2, Chronic Aquatic Hazard Category 2	
<b>Legend:</b>	1. Classified by Chemwatch; 2. Classification drawn from HSIS ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI	

**Label elements**

<b>GHS label elements</b>	
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<b>SIGNAL WORD</b>	<b>DANGER</b>
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**Hazard statement(s)**

<b>H222</b>	Extremely flammable aerosol
<b>H301</b>	Toxic if swallowed
<b>H311</b>	Toxic in contact with skin
<b>H330</b>	Fatal if inhaled
<b>H315</b>	Causes skin irritation
<b>H319</b>	Causes serious eye irritation
<b>H370</b>	Causes damage to organs
<b>H336</b>	May cause drowsiness or dizziness
<b>H401</b>	Toxic to aquatic life
<b>H411</b>	Toxic to aquatic life with long lasting effects
<b>AUH044</b>	Risk of explosion if heated under confinement
<b>AUH066</b>	Repeated exposure may cause skin dryness and cracking

**Precautionary statement(s) Prevention**

<b>P210</b>	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
<b>P211</b>	Do not spray on an open flame or other ignition source.
<b>P251</b>	Do not pierce or burn, even after use.
<b>P260</b>	Do not breathe dust/fume/gas/mist/vapours/spray.

**Precautionary statement(s) Response**

<b>P301+P310</b>	IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician/first aider
<b>P304+P340</b>	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
<b>P307+P311</b>	IF exposed: Call a POISON CENTER/doctor/physician/first aider
<b>P330</b>	Rinse mouth.

**Precautionary statement(s) Storage**

<b>P403+P233</b>	Store in a well-ventilated place. Keep container tightly closed.
<b>P405</b>	Store locked up.
<b>P410+P412</b>	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

**Precautionary statement(s) Disposal**

<b>P501</b>	Dispose of contents/container to authorised chemical landfill or if organic to high temperature incineration
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Label elements



Relevant risk statements are found in section 2

Indication(s) of danger	F+, N, T, Xi
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SAFETY ADVICE	
S01	Keep locked up.
S02	Keep out of reach of children.
S04	Keep away from living quarters.
S09	Keep container in a well ventilated place.
S13	Keep away from food, drink and animal feeding stuffs.
S15	Keep away from heat.
S16	Keep away from sources of ignition. No smoking.
S20	When using do not eat or drink.
S21	When using do not smoke.
S23	Do not breathe gas/fumes/vapour/spray.
S26	In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre.
S281	After contact with skin, wash immediately with detergent and plenty of water.
S29	Do not empty into drains.
S33	Take precautionary measures against static discharges.
S35	This material and its container must be disposed of in a safe way.
S36	Wear suitable protective clothing.
S37	Wear suitable gloves.
S38	In case of insufficient ventilation, wear suitable respiratory equipment.
S38	In case of insufficient ventilation, wear suitable respiratory equipment.
S39	Wear eye/face protection.
S40	To clean the floor and all objects contaminated by this material, use water and detergent.
S41	In case of fire and/or explosion, DO NOT BREATHE FUMES.
S43	In case of fire use...
S45	In case of accident or if you feel unwell IMMEDIATELY contact Doctor or Poisons Information Centre (show label if possible).
S46	If swallowed, seek medical advice immediately and show this container or label.
S51	Use only in well ventilated areas.
S52	Not recommended for interior use on large surface areas.
S56	Dispose of this material and its container at hazardous or special waste collection point.
S57	Use appropriate container to avoid environmental contamination.
S61	Avoid release to the environment. Refer to special instructions/Safety data sheets.
S63	In case of accident by inhalation: remove casualty to fresh air and keep at rest.
S64	If swallowed, rinse mouth with water (only if the person is conscious).

Other hazards	
	Cumulative effects may result following exposure*.
	May produce discomfort of the respiratory system*.
	May be harmful to the foetus/ embryo*.
	May affect fertility*.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

Permatex Non-Chlorinated Brake & Parts Cleaner Aerosol

See section below for composition of Mixtures

**Mixtures**

CAS No	%[weight]	Name
67-64-1	50-60	<u>acetone</u>
67-56-1	20-30	<u>methanol</u>
142-82-5	10-20	<u>heptane</u>
1330-20-7	<10	<u>xylylene</u>
124-38-9	<10	<u>carbon dioxide</u>

**SECTION 4 FIRST AID MEASURES**

**Description of first aid measures**

<b>Eye Contact</b>	<p>If aerosols come in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▶ Immediately hold the eyelids apart and flush the eye continuously for at least 15 minutes with fresh running water.</li> <li>▶ 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.</li> <li>▶ Transport to hospital or doctor without delay.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>
<b>Skin Contact</b>	<p>If skin contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Immediately remove all contaminated clothing, including footwear.</li> <li>▶ Flush skin and hair with running water (and soap if available).</li> <li>▶ Seek medical attention in event of irritation.</li> </ul>
<b>Inhalation</b>	<p>If aerosols, fumes or combustion products are inhaled:</p> <ul style="list-style-type: none"> <li>▶ Remove to fresh air.</li> <li>▶ Lay patient down. Keep warm and rested.</li> <li>▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>▶ 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.</li> <li>▶ Transport to hospital, or doctor.</li> </ul>
<b>Ingestion</b>	<p>Not considered a normal route of entry.</p> <ul style="list-style-type: none"> <li>▶ <b>If swallowed do NOT induce vomiting.</b></li> <li>▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> <li>▶ Observe the patient carefully.</li> <li>▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.</li> <li>▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.</li> <li>▶ Seek medical advice.</li> </ul>

**Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

**SECTION 5 FIREFIGHTING MEASURES**

**Extinguishing media**

	<p><b>SMALL FIRE:</b></p> <ul style="list-style-type: none"> <li>▶ Water spray, dry chemical or CO2</li> </ul> <p><b>LARGE FIRE:</b></p> <ul style="list-style-type: none"> <li>▶ Water spray or fog.</li> </ul>
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**Special hazards arising from the substrate or mixture**

<b>Fire Incompatibility</b>	<ul style="list-style-type: none"> <li>▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result</li> </ul>
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**Advice for firefighters**

<b>Fire Fighting</b>	<ul style="list-style-type: none"> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ May be violently or explosively reactive.</li> <li>▶ Wear breathing apparatus plus protective gloves.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water course.</li> </ul>
<b>Fire/Explosion Hazard</b>	<ul style="list-style-type: none"> <li>▶ Liquid and vapour are highly flammable.</li> <li>▶ Severe fire hazard when exposed to heat or flame.</li> <li>▶ Vapour forms an explosive mixture with air.</li> </ul>

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- ▶ Severe explosion hazard, in the form of vapour, when exposed to flame or spark.

**SECTION 6 ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures**

<b>Minor Spills</b>	<ul style="list-style-type: none"> <li>▶ Clean up all spills immediately.</li> <li>▶ Avoid breathing vapours and contact with skin and eyes.</li> <li>▶ Wear protective clothing, impervious gloves and safety glasses.</li> <li>▶ Shut off all possible sources of ignition and increase ventilation.</li> </ul>
<b>Major Spills</b>	<ul style="list-style-type: none"> <li>▶ Clear area of personnel and move upwind.</li> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ May be violently or explosively reactive.</li> <li>▶ Wear breathing apparatus plus protective gloves.</li> </ul>

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

**SECTION 7 HANDLING AND STORAGE**

**Precautions for safe handling**

<b>Safe handling</b>	<ul style="list-style-type: none"> <li>▶ Avoid all personal contact, including inhalation.</li> <li>▶ Wear protective clothing when risk of exposure occurs.</li> <li>▶ Use in a well-ventilated area.</li> <li>▶ Prevent concentration in hollows and sumps.</li> </ul>
<b>Other information</b>	<ul style="list-style-type: none"> <li>▶ Keep dry to avoid corrosion of cans. Corrosion may result in container perforation and internal pressure may eject contents of can</li> <li>▶ Store in original containers in approved flammable liquid storage area.</li> <li>▶ <b>DO NOT store in pits, depressions, basements or areas where vapours may be trapped.</b></li> <li>▶ No smoking, naked lights, heat or ignition sources.</li> </ul>

**Conditions for safe storage, including any incompatibilities**

<b>Suitable container</b>	<ul style="list-style-type: none"> <li>▶ Aerosol dispenser.</li> <li>▶ Check that containers are clearly labelled.</li> </ul>
<b>Storage incompatibility</b>	<ul style="list-style-type: none"> <li>▶ Avoid reaction with oxidising agents</li> </ul>

**PACKAGE MATERIAL INCOMPATIBILITIES**

Not Available

**SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Control parameters**

**OCCUPATIONAL EXPOSURE LIMITS (OEL)**

**INGREDIENT DATA**

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	acetone	Acetone	1185 mg/m3 / 500 ppm	2375 mg/m3 / 1000 ppm	Not Available	Not Available
Australia Exposure Standards	methanol	Methyl alcohol	262 mg/m3 / 200 ppm	328 mg/m3 / 250 ppm	Not Available	Sk
Australia Exposure Standards	heptane	Heptane (n-Heptane)	1640 mg/m3 / 400 ppm	2050 mg/m3 / 500 ppm	Not Available	Not Available
Australia Exposure Standards	xylene	Xylene (o-, m-, p- isomers)	350 mg/m3 / 80 ppm	655 mg/m3 / 150 ppm	Not Available	Not Available
Australia Exposure Standards	carbon dioxide	Carbon dioxide / Carbon dioxide in coal mines	9000 mg/m3 / 22500 mg/m3 / 5000 ppm / 12500 ppm	54000 mg/m3 / 30000 ppm	Not Available	Not Available

**EMERGENCY LIMITS**

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
acetone	Acetone	Not Available	Not Available	Not Available
methanol	Methyl alcohol; (Methanol)	Not Available	Not Available	Not Available

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heptane	Heptane	440 ppm	440 ppm	5000 ppm
xylene	Xylenes	Not Available	Not Available	Not Available
carbon dioxide	Carbon dioxide	30,000 ppm	30000 ppm	50000 ppm

Ingredient	Original IDLH	Revised IDLH
acetone	20,000 ppm	2,500 [LEL] ppm
methanol	25,000 ppm	6,000 ppm
heptane	5,000 ppm	750 ppm
xylene	1,000 ppm	900 ppm
carbon dioxide	50,000 ppm	40,000 ppm

**Exposure controls**

<b>Appropriate engineering controls</b>	<p>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.</p> <p>The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>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.</p>
<b>Personal protection</b>	
<b>Eye and face protection</b>	<p>No special equipment for minor exposure i.e. when handling small quantities.</p> <p><b>OTHERWISE:</b> For potentially moderate or heavy exposures:</p> <ul style="list-style-type: none"> <li>▶ Safety glasses with side shields.</li> <li>▶ <b>NOTE:</b> Contact lenses pose a special hazard; soft lenses may absorb irritants and <b>ALL</b> lenses concentrate them.</li> </ul>
<b>Skin protection</b>	See Hand protection below
<b>Hands/feet protection</b>	<ul style="list-style-type: none"> <li>▶ No special equipment needed when handling small quantities.</li> <li>▶ <b>OTHERWISE:</b></li> <li>▶ For potentially moderate exposures:</li> <li>▶ Wear general protective gloves, eg. light weight rubber gloves.</li> <li>▶ For potentially heavy exposures:</li> <li>▶ Wear chemical protective gloves, eg. PVC. and safety footwear.</li> </ul>
<b>Body protection</b>	See Other protection below
<b>Other protection</b>	<ul style="list-style-type: none"> <li>▶ 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.</li> <li>▶ Avoid dangerous levels of charge by ensuring a low resistivity of the surface material worn outermost.</li> </ul> <p>BREThERICK: Handbook of Reactive Chemical Hazards.</p>
<b>Thermal hazards</b>	Not Available

**Recommended material(s)**

**GLOVE SELECTION INDEX**

Glove selection is based on a modified presentation of the: **"Forsberg Clothing Performance Index"**.  
The effect(s) of the following substance(s) are taken into account in the **computer-generated** selection:  
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Material	CPI
BUTYL	C
BUTYL/NEOPRENE	C
CPE	C
HYPALON	C
NAT+NEOPR+NITRILE	C
NATURAL RUBBER	C
NATURAL+NEOPRENE	C
NEOPRENE	C
NEOPRENE/NATURAL	C

**Respiratory protection**

Type AX Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

Required minimum protection factor	Maximum gas/vapour concentration present in air p.p.m. (by volume)	Half-face Respirator	Full-Face Respirator
up to 10	1000	AX-AUS / Class1	-
up to 50	1000	-	AX-AUS / Class 1
up to 50	5000	Airline *	-
up to 100	5000	-	AX-2
up to 100	10000	-	AX-3

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NITRILE	C
NITRILE+PVC	C
PE/EVAL/PE	C
PVA	C
PVC	C
PVDC/PE/PVDC	C
SARANEX-23	C
SARANEX-23 2-PLY	C
TEFLON	C
VITON	C
VITON/NEOPRENE	C

100+		Airline**
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\* - Continuous Flow \*\* - Continuous-flow or positive pressure demand  
A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

\* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

**NOTE:** As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

\* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Appearance</b>	Clear flammable liquid with a solvent odour; slightly miscible with water.		
<b>Physical state</b>	Liquid	<b>Relative density (Water = 1)</b>	0.8
<b>Odour</b>	Not Available	<b>Partition coefficient n-octanol / water</b>	Not Available
<b>Odour threshold</b>	Not Available	<b>Auto-ignition temperature (°C)</b>	Not Available
<b>pH (as supplied)</b>	Not Applicable	<b>Decomposition temperature</b>	Not Available
<b>Melting point / freezing point (°C)</b>	Not Available	<b>Viscosity (cSt)</b>	Not Available
<b>Initial boiling point and boiling range (°C)</b>	56-149	<b>Molecular weight (g/mol)</b>	Not Applicable
<b>Flash point (°C)</b>	-17 (acetone)	<b>Taste</b>	Not Available
<b>Evaporation rate</b>	>1 BuAC = 1	<b>Explosive properties</b>	Not Available
<b>Flammability</b>	HIGHLY FLAMMABLE.	<b>Oxidising properties</b>	Not Available
<b>Upper Explosive Limit (%)</b>	12.8	<b>Surface Tension (dyn/cm or mN/m)</b>	Not Available
<b>Lower Explosive Limit (%)</b>	2.6	<b>Volatile Component (%vol)</b>	35.5 (VOC - by wt)
<b>Vapour pressure (kPa)</b>	UNDER PRESSURE	<b>Gas group</b>	Not Available
<b>Solubility in water (g/L)</b>	Partly Miscible	<b>pH as a solution (1%)</b>	Not Applicable
<b>Vapour density (Air = 1)</b>	>1	<b>VOC g/L</b>	Not Available

## SECTION 10 STABILITY AND REACTIVITY

<b>Reactivity</b>	See section 7
<b>Chemical stability</b>	<ul style="list-style-type: none"> <li>▶ Elevated temperatures.</li> <li>▶ Presence of open flame.</li> <li>▶ Product is considered stable.</li> </ul>

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	▶ Hazardous polymerisation will not occur.
<b>Possibility of hazardous reactions</b>	See section 7
<b>Conditions to avoid</b>	See section 7
<b>Incompatible materials</b>	See section 7
<b>Hazardous decomposition products</b>	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

<b>Inhaled</b>	Inhalation of high concentrations of gas/vapour causes lung irritation with coughing and nausea, central nervous depression with headache and dizziness, slowing of reflexes, fatigue and inco-ordination. If exposure to highly concentrated solvent atmosphere is prolonged this may lead to narcosis, unconsciousness, even coma and possible death. <b>WARNING: Intentional misuse by concentrating/inhaling contents may be lethal.</b> Minor but regular methanol exposures may effect the central nervous system, optic nerves and retinae.
<b>Ingestion</b>	Not normally a hazard due to physical form of product. Methanol may produce a burning or painful sensation in the mouth, throat, chest, and stomach. This may be accompanied by nausea, vomiting, headache, dizziness, shortness of breath, weakness, fatigue, leg cramps, restlessness, confusion, drunken behaviour, visual disturbance, drowsiness, coma and death.
<b>Skin Contact</b>	Skin contact with the material may be harmful; systemic effects may result following absorption. Entry into the blood-stream, through, for example, cuts, abrasions 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. Spray mist may produce discomfort The material may cause moderate inflammation of the skin either following direct contact or after a delay of some time.
<b>Eye</b>	Not considered to be a risk because of the extreme volatility of the gas. There is evidence that material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation. Severe inflammation may be expected with pain.
<b>Chronic</b>	Long-term exposure to methanol vapour, at concentrations exceeding 3000 ppm, may produce cumulative effects characterised by gastrointestinal disturbances (nausea, vomiting), headache, ringing in the ears, insomnia, trembling, unsteady gait, vertigo, conjunctivitis and clouded or double vision. Liver and/or kidney injury may also result. Workers exposed to acetone for long periods showed inflammation of the airways, stomach and small bowel, attacks of giddiness and loss of strength. Exposure to acetone may enhance the liver toxicity of chlorinated solvents.

Permatex Non-Chlorinated Brake & Parts Cleaner Aerosol	TOXICITY	IRRITATION
	Not Available	Not Available
acetone	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 20000 mg/kg <sup>[2]</sup>	Eye (human): 500 ppm - irritant
	Inhalation (rat) LC50: 50.1 mg/L/8 hr <sup>[2]</sup>	Eye (rabbit): 20mg/24hr -moderate
	Oral (rat) LD50: 5800 mg/kgE <sup>[2]</sup>	Eye (rabbit): 3.95 mg - SEVERE
		Skin (rabbit): 500 mg/24hr - mild
	Skin (rabbit):395mg (open) - mild	
methanol	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 15800 mg/kg <sup>[2]</sup>	Eye (rabbit): 100 mg/24h-moderate
	Inhalation (rat) LC50: 64000 ppm/4h <sup>[2]</sup>	Eye (rabbit): 40 mg-moderate
	Oral (rat) LD50: >11872769 mg/kg <sup>[1]</sup>	Skin (rabbit): 20 mg/24 h-moderate
heptane	TOXICITY	IRRITATION
	Oral (rat) LD50: >5000 mg/kg/4H <sup>[1]</sup>	Nil reported
xylene	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >1700 mg/kg <sup>[2]</sup>	Eye (human): 200 ppm irritant
	Inhalation (rat) LC50: 5000 ppm/4h <sup>[2]</sup>	Eye (rabbit): 5 mg/24h SEVERE
	Oral (rat) LD50: 4300 mg/kg <sup>[2]</sup>	Eye (rabbit): 87 mg mild

Permatex Non-Chlorinated Brake & Parts Cleaner Aerosol

		Skin (rabbit):500 mg/24h moderate
carbon dioxide	<b>TOXICITY</b>	<b>IRRITATION</b>
	Inhalation (mouse) LC50: 200000 ppm/2H <sup>[2]</sup>	Not Available
	Inhalation (mouse) LC50: 361 mg/L/2H <sup>[2]</sup>	
	Inhalation (rat) LC50: 470000 ppm/30M <sup>[2]</sup>	
<b>Legend:</b>	1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. * Value obtained from manufacturer's msds. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances	

<b>ACETONE</b>	<p>The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.</p> <p>for acetone: The acute toxicity of acetone is low. Acetone is not a skin irritant or sensitiser but is a defatting agent to the skin. Acetone is an eye irritant.</p>
<b>XYLENE</b>	<p>The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.</p> <p>The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.</p> <p>The substance is classified by IARC as Group 3: <b>NOT</b> classifiable as to its carcinogenicity to humans. Reproductive effector in rats</p>
<b>CARBON DIOXIDE</b>	- pulmonary effects IDLH: 50,000 ppm
<b>Permatex Non-Chlorinated Brake &amp; Parts Cleaner Aerosol &amp; METHANOL</b>	The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

<b>Acute Toxicity</b>	✓	<b>Carcinogenicity</b>	⊘
<b>Skin Irritation/Corrosion</b>	✓	<b>Reproductivity</b>	⊘
<b>Serious Eye Damage/Irritation</b>	✓	<b>STOT - Single Exposure</b>	✓
<b>Respiratory or Skin sensitisation</b>	⊘	<b>STOT - Repeated Exposure</b>	⊘
<b>Mutagenicity</b>	⊘	<b>Aspiration Hazard</b>	⊘

**Legend:** ✓ – Data required to make classification available  
 ✗ – Data available but does not fill the criteria for classification  
 ⊘ – Data Not Available to make classification

**CMR STATUS**

<b>REPROTOXIN</b>	xylene	ILO Chemicals in the electronics industry that have toxic effects on reproduction
	carbon dioxide	ILO Chemicals in the electronics industry that have toxic effects on reproduction
<b>SKIN</b>	methanol	Australia Exposure Standards - Skin Sk

**SECTION 12 ECOLOGICAL INFORMATION**

**Toxicity**

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
acetone	LOW (Half-life = 14 days)	MEDIUM (Half-life = 116.25 days)
methanol	LOW	LOW
heptane	LOW	LOW
xylene	HIGH (Half-life = 360 days)	LOW (Half-life = 1.83 days)

**Permatex Non-Chlorinated Brake & Parts Cleaner Aerosol**

carbon dioxide	LOW	LOW
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**Bioaccumulative potential**

Ingredient	Bioaccumulation
acetone	LOW (BCF = 69)
methanol	LOW (BCF = 10)
heptane	HIGH (LogKOW = 4.66)
xylene	MEDIUM (BCF = 740)
carbon dioxide	LOW (LogKOW = 0.83)

**Mobility in soil**

Ingredient	Mobility
acetone	HIGH (KOC = 1.981)
methanol	HIGH (KOC = 1)
heptane	LOW (KOC = 274.7)
carbon dioxide	HIGH (KOC = 1.498)

**SECTION 13 DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

<b>Product / Packaging disposal</b>	<ul style="list-style-type: none"> <li>Consult State Land Waste Management Authority for disposal.</li> <li>Discharge contents of damaged aerosol cans at an approved site.</li> <li>Allow small quantities to evaporate.</li> <li><b>DO NOT incinerate or puncture aerosol cans.</b></li> </ul>
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**SECTION 14 TRANSPORT INFORMATION**

**Labels Required**

	
<b>Marine Pollutant</b>	
<b>HAZCHEM</b>	2YE

**Land transport (ADG)**

<b>UN number</b>	1950
<b>Packing group</b>	Not Applicable
<b>UN proper shipping name</b>	AEROSOLS
<b>Environmental hazard</b>	No relevant data
<b>Transport hazard class(es)</b>	Class : 2.1 Subrisk : Not Applicable
<b>Special precautions for user</b>	Special provisions : 63 190 277 327 344 Limited quantity : See SP 277

**Air transport (ICAO-IATA / DGR)**

<b>UN number</b>	1950
<b>Packing group</b>	Not Applicable
<b>UN proper shipping name</b>	Aerosols, flammable; Aerosols, flammable (engine starting fluid)
<b>Environmental hazard</b>	No relevant data

**Permatex Non-Chlorinated Brake & Parts Cleaner Aerosol**

<b>Transport hazard class(es)</b>	ICAO/IATA Class	2.1
	ICAO / IATA Subrisk	Not Applicable
	ERG Code	10L
<b>Special precautions for user</b>	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)**

<b>UN number</b>	1950	
<b>Packing group</b>	Not Applicable	
<b>UN proper shipping name</b>	AEROSOLS	
<b>Environmental hazard</b>	Not Applicable	
<b>Transport hazard class(es)</b>	IMDG Class	2.1
	IMDG Subrisk	Not Applicable
<b>Special precautions for user</b>	EMS Number	F-D , S-U
	Special provisions	63 190 277 327 344 959
	Limited Quantities	See SP277

**Transport in bulk according to Annex II of MARPOL 73 / 78 and the IBC code**

Source	Ingredient	Pollution Category
IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk	methanol	Y
IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk	heptane	X
IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk	xylene	Y

**SECTION 15 REGULATORY INFORMATION**

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

<b>acetone(67-64-1) is found on the following regulatory lists</b>	"Australia Exposure Standards", "Australia Hazardous Substances Information System - Consolidated Lists"
<b>methanol(67-56-1) is found on the following regulatory lists</b>	"Australia Exposure Standards", "Australia Hazardous Substances Information System - Consolidated Lists"
<b>heptane(142-82-5) is found on the following regulatory lists</b>	"Australia Exposure Standards", "Australia Hazardous Substances Information System - Consolidated Lists"

## Permatex Non-Chlorinated Brake &amp; Parts Cleaner Aerosol

<b>xylene(1330-20-7) is found on the following regulatory lists</b>	"Australia Exposure Standards", "International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs", "Australia Hazardous Substances Information System - Consolidated Lists"
<b>carbon dioxide(124-38-9) is found on the following regulatory lists</b>	"Australia Exposure Standards", "Australia Hazardous Substances Information System - Consolidated Lists"

National Inventory	Status
Australia - AICS	Y
Canada - DSL	Y
China - IECSC	Y
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	Y
Korea - KECI	Y
New Zealand - NZIoC	Y
Philippines - PICCS	Y
USA - TSCA	Y
<b>Legend:</b>	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)

## SECTION 16 OTHER INFORMATION

## Other information

## Ingredients with multiple cas numbers

Name	CAS No
heptane	142-82-5, 31394-54-4

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

[www.chemwatch.net](http://www.chemwatch.net)

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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