

**SECTION 1 - IDENTIFICATION OF THE MATERIAL AND SUPPLIER**

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Chemical nature: Perchloroethylene presented as an aerosol.
Trade Name: WUNDA BRAKE CLEANER SPRAY
Part Number: WBC
Product Use: Used to clean electric motors and brakes.
Creation Date: June, 2014
This version issued: June, 2019 and is valid for 5 years from this date.

SECTION 2 - HAZARD IDENTIFICATION**Statement of Hazardous Nature**

This product is classified as: Xn, Harmful. N, Dangerous to the environment. Hazardous according to the criteria of SWA.

Dangerous according to Australian Dangerous Goods (ADG) Code, IATA or IMSBC criteria.

Risk Phrases: R40, R66, R67, R51/53. Limited evidence of a carcinogenic effect. Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness. Toxic to aquatic organisms, may cause long-term adverse effects to the aquatic environment.

Safety Phrases: S16, S23, S36, S51, S61, S24/25. Keep away from sources of ignition - No smoking. Do not breathe vapours or mists. Wear suitable protective clothing. Use only in well ventilated areas. Avoid release to the environment. Refer to special instructions/Safety Data Sheets. Avoid contact with skin and eyes.

SUSMP Classification: S6

ADG Classification: Class 2.1: Flammable gases. Sub Risk: Class 6.1: Toxic substances.

UN Number: 1950, AEROSOLS

**GHS Signal word: WARNING****HAZARD STATEMENT:**

H223: Flammable aerosol
H280: Contains gas under pressure; may explode if heated.
AUH066: Repeated exposure may cause skin dryness or cracking.
H336: May cause drowsiness or dizziness.
H351: Suspected of causing cancer.
H411: Toxic to aquatic life with long lasting effects.

PREVENTION

P102: Keep out of reach of children.
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P210: Keep away from heat, sparks, open flames and hot surfaces. - No smoking.
P211: Do not spray on an open flame or other ignition source.
P251: Pressurized container: Do not pierce or burn, even after use.
P261: Avoid breathing fumes, mists, vapours or spray.
P262: Do not get in eyes, on skin, or on clothing.
P271: Use only outdoors or in a well ventilated area.
P273: Avoid release to the environment.
P281: Use personal protective equipment as required.

RESPONSE

P312: Call a POISON CENTRE or doctor if you feel unwell.
P352: Wash with plenty of soap and water.

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P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P308+P313: If exposed or concerned: Get medical advice.
P372: Explosion risk in case of fire.
P391: Collect spillage.
P370+P378: In case of fire, use carbon dioxide, dry chemical, foam, water fog. Water fog or fine spray is the preferred medium for large fires.

STORAGE

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

DISPOSAL

P501: Dispose of small quantities and empty containers by wrapping with paper and putting in garbage. For larger quantities, if recycling or reclaiming is not possible, use a commercial waste disposal service.

Emergency Overview

Physical Description & Colour: Clear colourless liquid.

Odour: Chloroform-like odour.

Major Health Hazards: limited evidence of a carcinogenic effect, repeated exposure may cause skin dryness or cracking, vapours may cause drowsiness and dizziness.

Potential Health Effects**Inhalation:**

Short Term Exposure: High vapour pressures may cause drowsiness and dizziness. In addition product may be mildly irritating, although unlikely to cause anything more than mild transient discomfort. Intentional misuse by deliberately concentrating and inhaling contents of aerosol containers can be harmful or fatal.

Long Term Exposure: This product is carcinogenic by inhalation exposure. Vapours may cause drowsiness and dizziness.

Skin Contact:

Short Term Exposure: Major health effect from this product is misuse of the aerosol function. If sprayed continuously on skin or in eyes, it can cause frostbite.

Long Term Exposure: Repeated exposure may cause skin dryness or cracking.

Eye Contact:

Short Term Exposure: If sprayed directly in the eye, this product will irritate. If spraying is prolonged, it may cause damage through frostbite.

Long Term Exposure: No data for health effects associated with long term eye exposure.

Ingestion:

Short Term Exposure: Significant oral exposure is considered to be unlikely. However, this product may be irritating to mucous membranes but is unlikely to cause anything more than transient discomfort.

Long Term Exposure: No data for health effects associated with long term ingestion.

Carcinogen Status:

SWA: Perchloroethylene is classified by SWA as a Class 3 Carcinogen, possibly carcinogenic to humans. See the SWA website for further details. A web address has not been provided as addresses frequently change.

NTP: Perchloroethylene is classified by NTP as reasonably anticipated to be carcinogenic to humans. See the NTP website for further details. A web address has not been provided as addresses frequently change.

IARC: No significant ingredient is classified as carcinogenic by IARC.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS No	Conc,%	TWA (mg/m ³)	STEL (mg/m ³)
Perchloroethylene	127-18-4	>60	340	1020
Hydrocarbon propellant	68476-85-7	10-30	1800	not set

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.

The SWA TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak" is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

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SECTION 4 - FIRST AID MEASURES

General Information:

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 13 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this SDS with you when you call.

Inhalation: No first aid measures normally required. However, if inhalation has occurred, and irritation has developed, remove to fresh air and observe until recovered. If irritation becomes painful or persists more than about 30 minutes, seek medical advice.

Skin Contact: Gently blot away excess liquid. Wash gently and thoroughly with water (use non-abrasive soap if necessary) for 5 minutes or until chemical is removed.

Eye Contact: Quickly and gently blot material from eyes. No effects expected. If irritation does occur, flush contaminated eye(s) with lukewarm, gently flowing water for 5 minutes or until the product is removed. Obtain medical advice if irritation becomes painful or lasts more than a few minutes. Take special care if exposed person is wearing contact lenses.

Ingestion: If product is swallowed or gets in mouth, do NOT induce vomiting; wash mouth with water and give some water to drink. If symptoms develop, or if in doubt contact a Poisons Information Centre or a doctor.

SECTION 5 - FIRE FIGHTING MEASURES

Fire and Explosion Hazards: The major hazard in fires is usually inhalation of heated and toxic or oxygen deficient (or both), fire gases. There is a moderate risk of an explosion from this product if commercial quantities are involved in a fire. Firefighters should take care and appropriate precautions. Violent steam generation or eruption may occur upon application of direct water stream on hot liquids. Vapours from this product are heavier than air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures. They may also flash back considerable distances.

Fire decomposition products from this product may be toxic if inhaled. Take appropriate protective measures.

Extinguishing Media: In case of fire, use carbon dioxide, dry chemical, foam, water fog. Water fog or fine spray is the preferred medium for large fires. Try to contain spills, minimise spillage entering drains or water courses.

Fire Fighting: If a significant quantity of this product is involved in a fire, call the fire brigade. There is a danger of a violent reaction or explosion if significant quantities of this product are involved in a fire. Recommended personal protective equipment is full fire kit and breathing apparatus. Cool closed, undamaged containers exposed to fire with water spray.

Flash point: Not available

Upper Flammability Limit: Not available

Lower Flammability Limit: Not available

Autoignition temperature: No data.

Flammability Class: No data.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Accidental release: This product is sold in small packages, and the accidental release from one of these is not usually a cause for concern. For minor spills, clean up, rinsing to sewer and put empty container in garbage. Although no special protective clothing is normally necessary because of occasional minor contact with this product, it is good practice to wear impermeable gloves when handling chemical products. In the event of a major spill, prevent spillage from entering drains or water courses and call emergency services.

SECTION 7 - HANDLING AND STORAGE

Handling: Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this SDS for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.

Storage: This product is a Scheduled Poison. Observe all relevant regulations regarding sale, transport and storage of this schedule of poison. Store in a cool, well ventilated area, and make sure that surrounding electrical devices and switches are suitable. Do not expose to temperatures exceeding 50°C. Check containers and valves periodically for leaks. If you keep more than 25kg of flammable gases, you are probably required to license the premises or notify

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your Dangerous Goods authority. If you have any doubts, we suggest you contact your Dangerous Goods authority in order to clarify your obligations. Check packaging - there may be further storage instructions on the label.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

The following Australian Standards will provide general advice regarding safety clothing and equipment:

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Occupational Protective Clothing: AS/NZS 4501 set 2008, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

SWA Exposure Limits	TWA (mg/m ³)	STEL (mg/m ³)
Perchloroethylene	340	1020
Hydrocarbon propellant	1800	not set

No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

Ventilation: This product should only be used in a well ventilated area. If natural ventilation is inadequate, use of a fan is suggested.

Eye Protection: Eye protection such as protective glasses or goggles is recommended when this product is being used.

Skin Protection: You should avoid contact even with mild skin irritants. Therefore you should wear suitable impervious elbow-length gloves and facial protection when handling this product. See below for suitable material types.

Protective Material Types: We suggest that protective clothing be made from the following materials: rubber, PVC, nitrile.

Respirator: Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned above. Otherwise, not normally necessary.

Safety deluge showers should, if practical, be provided near to where this product is being handled commercially.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES:

Note: The following properties are for Perchloroethylene. Those of the aerosol are not available.

Physical Description & colour:	Clear colourless liquid.
Odour:	Chloroform-like odour.
Boiling Point:	121°C at 100kPa
Freezing/Melting Point:	Approx -22°C
Volatiles:	Completely volatile at 100°C.
Vapour Pressure:	1.71 kPa at 20°C
Vapour Density:	5.8
Specific Gravity:	1.60-1.65
Water Solubility:	Insoluble.
pH:	No data.
Volatility:	No data.
Odour Threshold:	No data.
Evaporation Rate:	No data.
Coeff Oil/water Distribution:	No data
Autoignition temp:	No data.

SECTION 10 - STABILITY AND REACTIVITY

Reactivity: This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf life properties.

Conditions to Avoid: This product should be kept in a cool place, preferably below 30°C. Keep containers and surrounding areas well ventilated.

Incompatibilities: strong oxidising agents.

Fire Decomposition: Combustion forms carbon dioxide, and if incomplete, carbon monoxide and possibly smoke. Water is also formed. May form hydrogen chloride gas, other compounds of chlorine. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

Polymerisation: This product will not undergo polymerisation reactions.

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SECTION 11 - TOXICOLOGICAL INFORMATION

Local Effects:**Target Organs:**

Adverse liver and kidney effects have been observed in workers with long-term exposure to Perchloroethylene. Perchloroethylene will also defat the skin, causing irritation and dryness.

Classification of Hazardous Ingredients

Ingredient**Risk Phrases**

Perchloroethylene

Conc>=1%: Xn; R40

The major route of absorption of Perchloroethylene (PCE) is through the Lung: 80% to 90% of inhaled vapour is absorbed. Skin exposure can appreciably increase absorption. For example, immersion of one thumb in PCE gives an exposure equivalent to breathing about 10 ppm. Additionally, exercising while exposed increases uptake by 50% to 300% or more as compared to a resting state.

PCE has been shown to increase the rate of spontaneously occurring malignant tumours in certain laboratory rats and mice. Other long-term inhalation studies in rats failed to show tumourigenic response. Epidemiology studies are limited and have not established an association between Perchloroethylene exposure and cancer. Perchloroethylene is not believed to pose a measurable carcinogenic risk to man when handled as recommended.

Birth defects are unlikely. Exposures having no effect on the mother should have no effect on the foetus. Did not cause birth defects in animals. Other effects were seen in the foetus only at doses which caused toxic effects to the mother.

In high concentrations, in air, with closed or poorly ventilated areas, single exposures to Perchloroethylene may cause central nervous system effects leading to dizziness, headache, sleepiness, confusion, nausea, difficulty in speaking or walking, and possibly unconsciousness and death. It is a narcotic at high levels. It is classified by the SWA as a Category 3 carcinogen (substance that causes concern for humans owing to possible carcinogenic effects but in respect of which the available information is not adequate for making a satisfactory assessment).

The following data relate to Perchloroethylene:

LD₅₀ (Oral), Rat 2629mg/kgLD₅₀ (Dermal), Rabbit >3228mg/kgLC₅₀ Inhal, 4hr Rat 4000ppm

SECTION 12 - ECOLOGICAL INFORMATION

Toxic to aquatic organisms, may cause long-term adverse effects to the aquatic environment. Chlorinated solvents have a relatively short life-time in the atmosphere. If spilt into water or soil, Perchloroethylene will usually evaporate into the air, where it is quickly broken down. Perchloroethylene displays very slow biodegradation and responsible end-users will be very careful to avoid spillages.

SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal: Dispose of small quantities and empty containers by wrapping with paper and putting in garbage. For larger quantities, if recycling or reclaiming is not possible, use a commercial waste disposal service.

SECTION 14 - TRANSPORT INFORMATION

ADG Code: 1950, AEROSOLS**Hazchem Code:** 2YE**Special Provisions:** 63, 190, 277**Limited quantities:** ADG 7 specifies a Limited Quantity value of 120mL for this class of product.**Dangerous Goods Class:** Class 2.1: Flammable gases.**Sub Risk:** Class 6.1, Toxic Substances.**Packaging Group:** Not set**Packaging Method:** P003

Class 2.1 Flammable gases shall not be loaded in the same vehicle or packed in the same freight container with Classes 1 (Explosives), 3 (Flammable Liquids) (where both flammable liquids and flammable gases are in bulk), 4.1 (Flammable Solids), 4.2 (Spontaneously Combustible Substances), 4.3 (Dangerous When Wet Substances), 5.1 (Oxidising Agents), 5.2 (Organic Peroxides), and 7 (Radioactive Substances). They may however be loaded in the same vehicle or packed in the same freight container with Classes 2.2 (Non-flammable Non-Toxic gases), 3 (Flammable liquids except where both flammable liquids and flammable gases are in bulk), 6 (Toxic Substances), 8 (Corrosive Substances) 9 (Miscellaneous dangerous goods), Foodstuffs and foodstuff empties.

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SECTION 15 - REGULATORY INFORMATION

AICS: All of the significant ingredients in this formulation are compliant with NICNAS regulations. The following ingredient: Perchloroethylene, is mentioned in the SUSMP.

SECTION 16 - OTHER INFORMATION

This SDS contains only safety-related information. For other data see product literature.

Acronyms:

ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail (7 th edition)
AICS	Australian Inventory of Chemical Substances
SWA	Safe Work Australia, formerly ASCC and NOHSC
CAS number	Chemical Abstracts Service Registry Number
Hazchem Code	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
IARC	International Agency for Research on Cancer
NOS	Not otherwise specified
NTP	National Toxicology Program (USA)
R-Phrase	Risk Phrase
SUSMP	Standard for the Uniform Scheduling of Medicines & Poisons
UN Number	United Nations Number

THIS SDS SUMMARISES OUR BEST KNOWLEDGE OF THE HEALTH AND SAFETY HAZARD STATEMENT: INFORMATION OF THE PRODUCT AND HOW TO SAFELY HANDLE AND USE THE PRODUCT IN THE WORKPLACE. EACH USER MUST REVIEW THIS SDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THE WORKPLACE.

IF CLARIFICATION OR FURTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY SO WE CAN ATTEMPT TO OBTAIN ADDITIONAL INFORMATION FROM OUR SUPPLIERS. OUR RESPONSIBILITY FOR PRODUCTS SOLD IS SUBJECT TO OUR STANDARD TERMS AND CONDITIONS, A COPY OF WHICH IS SENT TO OUR CUSTOMERS AND IS ALSO AVAILABLE ON REQUEST.

Please read all labels carefully before using product.

This SDS is prepared in accord with the SWA document "Preparation of Safety Data Sheets for Hazardous Chemicals - Code of Practice" (December 2011)
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