Material Safety Data Sheet

1 . Identification of the material and supplier

Product name	**Brake Fluid NATO H-542**
SDS no.	460848
Product use	Brake fluids. For specific application advice see appropriate Technical Data Sheet or consult our company representative.
Supplier	BP Australia Pty Ltd (ABN 53 004 085 616) Melbourne Central, 360 Elizabeth Street, Melbourne, Victoria 3000, Australia Tel: +61 (03) 9268 4111 Fax: +61 (03) 9268 3321
EMERGENCY TELEPHONE NUMBER	+61 29032 0460 (or 1800 14 14 74 within Australia)
Product code	460848-AU10

2 . Hazards identification

Statement of hazardous/dangerous nature	NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS.

3 . Composition/information on ingredients

Polyglycol ether borate ester. Corrosion inhibitors. Proprietary performance additives.

This product does not contain any hazardous ingredients at or above regulated thresholds.

4 . First-aid measures

Eye contact	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.
Skin contact	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if irritation develops.
Inhalation	If inhaled, remove to fresh air. Get medical attention if symptoms appear.
Ingestion	Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If potentially dangerous quantities of this material have been swallowed, call a physician immediately.
Advice to doctor	Treatment should in general be symptomatic and directed to relieving any effects.

5 . Fire-fighting measures

Extinguishing media	
Suitable	In case of fire, use water fog, foam, dry chemical or carbon dioxide extinguisher or spray.
Not suitable	Do not use water jet.
Hazardous decomposition products	No specific data.
Unusual fire/explosion hazards	This material is not explosive as defined by established regulatory criteria.
Special fire-fighting procedures	None identified.
Protection of fire-fighters	Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

6 . Accidental release measures

Personal precautions	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment (see section 8).
Environmental precautions	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Large spill	Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.
Small spill	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7 . Handling and storage

Handling	Wash thoroughly after handling. Avoid strong oxidisers.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area.
Combustibility Classification	Combustible liquid Class C2 (AS 1940).

8 . Exposure controls/personal protection

Occupational exposure limits	**No exposure standard allocated.**
Biological Limit Values	No biological limit allocated.
Exposure controls	
Occupational exposure controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective occupational exposure limits.
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.
Personal protective equipment	
Respiratory protection	None required. However, use of adequate ventilation is good industrial practice.
Skin and body	None required; however, use of protective clothing is good industrial practice.
Hand protection	Wear chemical resistant gloves. Recommended: nitrile gloves The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove will break down after repeated chemical exposures). Most gloves provide only a short time of protection before they must be discarded and replaced. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Gloves should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.
Eye protection	Safety glasses with side shields.

9 . Physical and chemical properties

Physical state	Liquid.
Colour	Amber. [Light]
Odour	Mild
Flash point	155 to 156 °C (Closed cup)
Vapour pressure	Not available.
Vapour density	Not available.
Viscosity	Dynamic: 0.005 Pa·s (5 cP) at 20°C Kinematic: 1.5 mm^2/s (1.5 cSt) at 100°C
pH	7.5
Boiling point / range	283 to 286°C (541.4 to 546.8°F)
Melting point / range	Not available.
Relative density/Specific gravity	1.08
Solubility	Partially soluble in water

10 . Stability and reactivity

Stability The product is stable.

Conditions to avoid Avoid extreme temperatures, strong oxidizers, fire.

Incompatibility with various substances/Hazardous Reactions Reactive or incompatible with the following materials: oxidizing materials.

Hazardous decomposition products No specific data.

11 . Toxicological information

Effects and symptoms

Eyes May cause eye irritation.

Skin May cause skin irritation. Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.

Inhalation Inhalation may cause headaches, dizziness, drowsiness, and nausea.

Ingestion Following ingestion the polyglycol ether borate ester component is likely to hydrolyse to form a polyglycol ether and boric acid.

For polyglycol ethers: Initial symptoms following a massive dose (>100 mL in a single dose) are those of alcohol intoxication. These symptoms soon progress to vomiting, cyanosis (bluish skin discolouration), headache, tachypnea (excessive respiration frequency), tachycardia (abnormally rapid heart rate), hypotension (abnormally low blood pressure), pulmonary oedema, muscle tenderness, stupor, anuria (urine suppression), prostration and unconsciousness with convulsions. Hypoglycaemia (glucose deficiency in bloodstream) may occur. Death may occur within a few hours from respiratory failure or within the first 24 hours from pulmonary oedema.

Chronic toxicity

Other chronic toxicity data Following ingestion the polyglycol ether borate ester component is likely to hydrolyse to form a polyglycol ether and boric acid.

For polyglycol ethers: Animal studies have shown that long term repeated exposure to high doses of polyglycol ethers in the diet causes kidney and liver injury.

Carcinogenic effects No component of this product at levels greater than or equal to 0.1% is identified as a carcinogen by ACGIH, the International Agency for Research on Cancer (IARC), the European Commission (EC), or the National Occupational Health and Safety Commission (Australia).

Mutagenic effects No known significant effects or critical hazards.

12 . Ecological information

Ecotoxicity Not classified as environmentally hazardous in accordance with the 'Approved Criteria for Classifying Hazardous Substances' [NOHSC (1008)/2004 as amended and adapted].

Biodegradability

Persistence/degradability The biodegradability of this material has not been determined.

13 . Disposal considerations

Disposal considerations / Waste information The generation of waste should be avoided or minimised wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Special Precautions for Landfill or Incineration No additional special precautions identified.

14 . Transport information

International transport regulations

Not classified as dangerous for transport (ADG, IMDG, ICAO/IATA).

Special precautions for user No known special precautions required. See Section: "Handling and storage" for additional information.

15 . Regulatory information

Standard for the Uniform Scheduling of Drugs and Poisons

Not regulated.

Control of Scheduled Carcinogenic Substances

Ingredient name	Schedule
No Listed Substance	

Other regulations

Europe inventory	Not determined.
United States inventory (TSCA 8b)	Not determined.
Australia inventory (AICS)	All components are listed or exempted.
Canada inventory	Not determined.
China inventory (IECSC)	Not determined.
Japan inventory (ENCS)	Not determined.
Korea inventory (KECI)	Not determined.
Philippines inventory (PICCS)	Not determined.

16 . Other information

Key to abbreviations

AMP = Acceptable Maximum Peak
ACGIH = American Conference of Governmental Industrial Hygienists, an agency that promulgates exposure standards.
ADG = Australian Code for the Transport of Dangerous Goods by Road and Rail
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CAS Number = Chemical Abstracts Service Registry Number
HAZCHEM Code = Emergency action code of numbers and letters which gives information to emergency services. Its use is required by the ADG Code for Dangerous Goods in bulk.
ICAO = International Civil Aviation Organization.
IATA = International Air Transport Association, the organization promulgating rules governing shipment of goods by air.
IMDG = International Maritime Organization Rules, rules governing shipment of goods by water.
IP 346 = A chemical screening assay for dermal toxicity. The European Commission has recommended that Method IP 346 be used as the basis for labelling certain lubricant oil base stocks for carcinogenicity. The EU Commission has stipulated that the classification as a carcinogen need not apply if it can be shown that the substance contains less than 3% DMSO extract as measured by IP 346. (See Note L, European Commission Directive 67/548/EEC as amended and adapted.) DMSO is a solvent.
NOHSC = National Occupational Health & Safety Commission, Australia
TWA = Time weighted average
STEL = Short term exposure limit
UN Number = United Nations Number, a four digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods.

History

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Prepared by	Product Stewardship

Notice to reader

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from us.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The BP Group shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken.