Material Safety Data Sheet

1 . Identification of the material and supplier

Product name	**BP Precoat APT2**
SDS no.	0000002915
Historic SDS no.	CASCC
Product use	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	1800 638 556
OTHER PRODUCT INFORMATION	BP Bitumen Technical Helpline: 1 800 24 88 66
Product code	0000002915

2 . Hazards identification

Statement of hazardous/dangerous nature	HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS.
Risk phrases	R40- Limited evidence of a carcinogenic effect. R38- Irritating to skin. R66- Repeated exposure may cause skin dryness or cracking. R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety phrases	S23- Do not breathe fumes/vapour/spray S24- Avoid contact with skin. S36/37- Wear suitable protective clothing and gloves. S51- Use only in well-ventilated areas. S61- Avoid release to the environment. Refer to special instructions/safety data sheet. S62- If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

3 . Composition/information on ingredients

Bitumens contain polycyclic aromatic hydrocarbons (PAH) which become more bio-available when the bitumen is cut back with a petroleum solvent. Some PAHs have been shown by experimental studies to induce skin cancer.

Ingredient name	CAS no.	%
Bitumen or Bitumen , oxidized	8052-42-4 64742-93-4	20 - 50 20 - 50
fuel, diesel no. 2 or Fuels, diesel	68476-34-6 68334-30-5	50 - 100 50 - 100
Alkenyl amine	7173-62-8	0.1 - 1

4 . First-aid measures

Eye contact

Cold product - Wash eye thoroughly with copious quantities of water, ensuring eyelids are held open. Obtain medical advice if any pain or redness develops or persists.
Hot product - Flood with water to dissipate heat. In the event of any product remaining, do not try to remove it other than by continued irrigation with water. Obtain medical attention immediately.

Skin contact

Cold Product - Wash contaminated skin with soap and water. Remove contaminated clothing and wash underlying skin as soon as reasonably practicable.
Hot product - Flood with water to dissipate heat. In the event of any product remaining, do not try to remove it other than by continued irrigation with water. Obtain medical attention immediately

Inhalation

If inhaled, remove to fresh air. Get medical attention if symptoms appear.

EXPOSURE TO HYDROGEN SULPHIDE:
Casualties suffering ill effects as a result of exposure to hydrogen sulphide should be immediately removed to fresh air and medical assistance obtained without delay.

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. Inhalation of hydrogen sulphide may cause central respiratory depression leading to coma and death. It is irritant to the respiratory tract causing chemical pneumonitis and pulmonary oedema. The onset of pulmonary oedema may be delayed for 24 to 48 hours. Treat with oxygen and ventilate as appropriate. Administer broncho-dilators if indicated and consider administration of corticosteroids. Keep casualty under surveillance for 48 hours in case pulmonary oedema develops.

5 . Fire-fighting measures

Extinguishing media

Suitable

In case of fire, use foam, dry chemical or carbon dioxide extinguisher or spray. This material is harmful to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Not suitable

Do not use water jet. Avoid spraying directly into storage containers because of the danger of boil-over. Boil-over is the rapid increase in volume caused by the presence of water in hot product and the subsequent overflow from a tank.

Hazardous decomposition products

Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
sulphur oxides (SO_2, SO_3, etc.)
Hydrogen Sulphide (H2S)

Unusual fire/explosion hazards

Combustible liquid and vapour. Vapours may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Special fire-fighting procedures

For major fires call the Fire Service. Ensure an escape path is always available from any fire. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. First move people out of line-of-sight of the scene and away from windows. Use water spray to keep fire-exposed containers cool. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

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

Immediately contact emergency personnel. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. This material can contain hydrogen sulphide (H2S), a very toxic and extremely flammable gas. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8). When handling hot material, wear heat resistant protective gloves, clothing and face shield that are able to withstand the temperature of the heated product.

Entry into a confined space or poorly ventilated area contaminated with vapour, mist or fume is extremely hazardous without the correct respiratory protective equipment and a safe system of work.

Environmental precautions

Storage tanks must be positioned within a bunded area. Depending upon its temperature the product may be liquid, semi-solid or solid. Protect drains from spills and prevent entry of product, since this may result in blockage on cooling. Should blockage occur, notify the appropriate authority immediately.

Large spill

Stop leak if without risk. Eliminate all ignition sources. Move containers from spill area. Approach the release from upwind. Any spillage at a temperature greater than the flash point should be considered as a potential fire or explosion risk. This product will be a liquid under standard conditions of use. A solid product will be formed if the hydrocarbon solvents are allowed to evaporate. Do not wash product into drainage system since this may result in a blockage if the hydrocarbon solvents evaporate.
Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. 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. For small spills, add absorbent (soil may be used in the absence of other suitable materials), scoop up material and place in a sealable, liquid-proof container for disposal. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

7 . Handling and storage

Handling

Contact with hot product may cause burns. Avoid contact with skin and clothing. Avoid prolonged or repeated contact with skin. Avoid breathing vapours, spray or mists. Avoid contact of spilt material and runoff with soil and surface waterways. Wash thoroughly after handling.

When bitumen is heated to high temperatures, vapour, mists or fumes will be given off and may condense, contaminating the skin or clothing of operatives. Prolonged or repeated contact with this condensate may give rise to dermatitis or other skin conditions of a serious or irreversible nature.Regular periodic self inspection of the skin is recommended, especially those areas subject to contamination. In the event of any localised changes in appearance or texture of the skin being noticed, medical advice should be sought without delay.

Storage

Keep container tightly closed. Keep container in a cool, well-ventilated area. Store and use away from heat, sparks, open flame or any other ignition source. Under no circumstances should water be allowed to contact hot product because of the danger of boil-over. Particular care should be taken to ensure that bulk storage tanks are watertight and that any steam heating coils are regularly checked for leaks. For bulk product, the storage temperature should not fluctuate above and below 100°C as this increases the risk of water condensation leading to boil-over. Care must always be exercised when heating product through 100°C.

This material can contain hydrogen sulphide (H2S), a very toxic and extremely flammable gas. Vapors containing hydrogen sulfide may accumulate during storage or transport and may also be vented during filling of tanks. Hydrogen sulfide has a typical "bad egg" smell but at high concentrations the sense of smell is rapidly lost, therefore do not rely on sense of smell for detecting hydrogen sulfide. Use specially designed measuring instruments for determining its concentration.

Light hydrocarbon vapours can build up in the headspace of tanks. These can cause flammability/explosion hazards even at temperatures below the normal flash point (note: flash point must not be regarded as a reliable indicator of the potential flammability of vapour in tank headspaces). Tank headspaces should always be regarded as potentially flammable and care should be taken to avoid static electrical discharge and all ignition sources during filling, ullaging and sampling from storage tanks. When the product is pumped (e.g. during filling, discharge or ullaging) and when sampling, there is a risk of static discharge. Ensure equipment used is properly earthed or bonded to the tank structure. Electrical equipment should not be used unless it is intrinsically safe (i.e. will not produce sparks).

Combustibility Classification

Combustible liquid Class C1 (AS 1940).

Additional information-Storage

This product must be handled in compliance with Australian Standard and local regulations: The storage and handling of flammable and combustible liquids [Standard 1940-2004 as amended and adapted].

8 . Exposure controls/personal protection

Ingredient name	Occupational exposure limits
Bitumen	**SWA (Australia).** TWA: 5 mg/m³ 8 hour(s). Issued/Revised: 5/1995 Form: Fume
fuel, diesel no. 2	**ACGIH TLV (United States). Absorbed through skin.** TWA: 100 mg/m³, (measured as total hydrocarbons) 8 hour(s). Issued/Revised: 1/2002 Form: Total hydrocarbons
Fuels, diesel	**ACGIH TLV (United States). Absorbed through skin.** TWA: 100 mg/m³, (measured as total hydrocarbons) 8 hour(s). Issued/Revised: 1/2002 Form: Total hydrocarbons
Naphthalene	**SWA (Australia).** STEL: 79 mg/m³ 15 minute(s). Issued/Revised: 5/1995 STEL: 15 ppm 15 minute(s). Issued/Revised: 5/1995 TWA: 52 mg/m³ 8 hour(s). Issued/Revised: 5/1995 TWA: 10 ppm 8 hour(s). Issued/Revised: 5/1995

For information and guidance, the ACGIH values are included. For further information on these please consult your supplier.

Whilst specific OELs for certain components are included in this SDS, it should be noted that other components of the preparation will be present in any mist, vapour or dust produced. For this reason, the specific OELs may not be applicable to the product and are provided for guidance purposes.

Biological Limit Values

No biological limit allocated.

Exposure controls

Occupational exposure controls

Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

All chemicals should be assessed for their risks to health and appropriate control measures put in place to prevent or adequately control exposure. A hierarchy of control measures exists (e.g. elimination, substitution, general ventilation, containment, systems of work, changing the process or activity) that must be considered before use of personal protective equipment. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained.
Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards.

The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.

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

Use only with adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

Avoid breathing of vapours, mists or spray. Select and use respirators in accordance with AS/NZS 1715/1716. When mists or vapours exceed the exposure standards then the use of the following is recommended: Approved respirator with organic vapour and dust/mist filters. Filter capacity and respirator type depends on exposure level.

Approved air-supplied breathing apparatus must be worn where there is a risk of inhaling hydrogen sulphide gas. Personal gas monitors may also provide early warning of hydrogen sulphide.

Air-filtering respirators, also called air-purifying respirators, will not be adequate under conditions of oxygen deficiency (i.e. low oxygen concentration), and would not be considered suitable where airborne concentrations of chemicals with a significant hazard are present. In these cases air-supplied breathing apparatus will be required.

Skin and body

Avoid contact with skin and clothing. Wear suitable protective clothing. Wear impervious overalls covering full body and limbs, with legs worn over protective boots.

Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required.

Thermal resistant clothing will be required when handling hot products.

Hand protection

Cold material: Wear chemical resistant gloves. Recommended: nitrile gloves.
Hot material: to prevent thermal burns wear heat resistant and impervious gauntlets/gloves.

Eye protection

Cold material: wear safety glasses with side shields.
Hot material: to prevent thermal burns wear a helmet, full face visor and heat resistant neck flap / apron.

9 . Physical and chemical properties

Physical state	Liquid.
Colour	Dark Brown.
Odour	Hydrocarbon.
Flash point	91 °C (Closed cup)
Explosive properties	Explosive in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
Explosion limits	Lower: 0.7% Upper: 6% (Based on Diesel fuel)
Vapour pressure	Not available.
Vapour density	Not available.
Viscosity	Kinematic: 50 mm^2/s (50 cSt) at 40°C
pH	Not available.
Boiling point / range	Not available.
Melting point / range	Not available.
Relative density/Specific gravity	Not available.

Density	930 kg/m^3 (0.93 g/cm^3) at 15°C
Solubility	insoluble 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	Decomposition products may include the following materials: carbon dioxide carbon monoxide sulphur oxides (SO_2, SO_3, etc.) Hydrogen Sulphide (H2S)

11 . Toxicological information

Eyes	May cause eye irritation. Will cause burns if hot material contacts eyes.
Skin	Causes skin irritation. Will cause burns if hot material contacts skin. Bitumens contain polycyclic aromatic hydrocarbons (PAH) which become more bio-available when the bitumen is cut back with a petroleum solvent. Some PAHs have been shown by experimental studies to induce skin cancer.
Inhalation	May cause nausea, dizziness, headaches and drowsiness if high concentrations of vapour are inhaled. May cause respiratory tract irritation. Vapour, mists or fumes may contain polycyclic aromatic hydrocarbons some of which are known to produce skin cancer. The inhalation of vapour, mists or fumes over long periods may therefore be hazardous. Avoid breathing vapour or mist.
Ingestion	May cause burns to mouth, throat and stomach.
Acute toxicity	Will cause burns if hot material contacts skin. Will cause burns if hot material contacts skin. May cause irritation to eyes, nose and throat due to exposure to vapour, mists or fumes.
Chronic toxicity	
Carcinogenic effects	POSSIBLE CANCER HAZARD - CONTAINS MATERIAL WHICH MAY CAUSE CANCER, BASED ON ANIMAL DATA. Risk of cancer depends on duration and level of exposure.
Mutagenic effects	No known significant effects or critical hazards.
Other information	Bitumens contain polycyclic aromatic hydrocarbons (PAH) which become more bio-available when the bitumen is cut back with a petroleum solvent. Some PAHs have been shown by experimental studies to induce skin cancer.

12 . Ecological information

Ecotoxicity	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Biodegradability	
Persistence/degradability	The biodegradability of this material has not been determined.
Other ecological information	Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.

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

5

Control of Scheduled Carcinogenic Substances

Ingredient name	Schedule
Fuels, diesel	Schedule

Other regulations

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

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
ADG Code = Australian Code for the Transport of Dangerous Goods by Road and Rail
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

Date of issue	26/08/2009.
Date of previous issue	No previous validation.
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.