



Armourbit® BP14

40 / 60 Pen Grade Bitumen



MATERIAL SAFETY DATA SHEET Latest Revision - March 2020

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PRODUCT: Armourbit Bitumen
OTHER NAMES: Armourbit
STOCK CODES: BP14

1. SUBSTANCE / PREPARATION & COMPANY IDENTIFICATION:

CHEMICAL NATURE: Bitumen specially formulated for emulsion production.

COMPANY: Walker Sealants Limited
Outland Head Works
Hope Valley, Bradwell
Derbyshire, S33 9JP

TEL: +44 (0)1433 621 600
EMAIL: sales@walkersealants.co.uk **WEB:** www.walkersealants.co.uk

2. COMPOSITION / INFORMATION ON INGREDIENTS:

CONTAINS: Hydrogen sulphide which can accumulate in tanks and confined spaces and reach potentially hazardous concentrations.

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

3. HAZARD IDENTIFICATION:

EC CLASSIFICATION: Not classified as dangerous under EC 1272/2008 as amended criteria.

HEALTH HAZARDS: At ambient temperature Bitumen presents no health hazard.

4. FIRST AID MEASURES:

In all cases if symptoms are severe, persist or cause concern obtain immediate medical advice. First aid procedures apply when the product is at elevated temperature.

INHALATION: In case of symptoms arising from inhalation of bitumen fumes, mists or vapour: remove casualty to a quiet and well ventilated place if safe to do so.

Exposure to Hydrogen sulphide: If there is any suspicion of inhalation of H₂S (hydrogen sulphide); Rescuers must wear breathing apparatus, belt and safety rope, and follow rescue procedures. Remove casualty to fresh air as quickly as possible. Immediately begin artificial respiration if breathing has ceased. Provision of oxygen may help. Obtain medical advice for further treatment. Vapor from hot product may contain Hydrogen Sulfide which can be harmful or fatal if inhaled.

EYES:

HOT PRODUCT: If hot product is splashed into the eye, it should be cooled down immediately to dissipate heat, under cold running water. Immediately obtain specialist medical assessment and treatment for the casualty.



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COLD PRODUCT: In the event of eye contact with cold product, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation, blurred vision or swelling occurs and persists, obtain medical advice from a specialist.

SKIN:

HOT PRODUCT: In the event of accidental skin contact with hot product, the injured part should be immediately plunged under cold running water for at least 10 minutes. Body hypothermia must be avoided. No attempt must be made to remove the bitumen adherent to the skin at the worksite. In the case of a circumferential burn with adhesion of the bitumen, the adhering material should be split to prevent a tourniquet effect as it cools. Do not put ice on the burn. Remove non-sticking garments carefully. DO NOT attempt to remove portions of clothing glued to burnt skin but cut round them. Seek medical attention in all cases of serious burns. Never use gasoline, kerosene or other solvents for washing of contaminated skin.

COLD PRODUCT: Wash contaminated skin with soap and water. Wash with soap and water.

INGESTION: Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. Never give anything by mouth to an unconscious person. Remove victim to fresh air and keep at rest in a position comfortable for breathing.

PROTECTION OF FIRST AIDERS: No action shall be taken involving any personal risk or without suitable training.

Hydrogen sulphide (H₂S) can accumulate in the headspace of product storage tanks and reach potentially hazardous concentrations. If there is any suspicion of inhalation of H₂S (hydrogen sulphide); Rescuers must wear breathing apparatus, belt and safety rope, and follow rescue procedures. Before attempting to rescue casualties, isolate area from all potential sources of ignition including disconnecting electrical supply. Ensure adequate ventilation and check that a safe, breathable atmosphere is present before entry into confined spaces.

5. FIRE FIGHTING MEASURES:

SUITABLE EXTINGUISHING MEDIA: Dry chemical, CO₂, water spray (fog) or foam.

UNSUITABLE EXTINGUISHING MEDIA: Do not use direct water jets on the burning product; they could cause splattering and spread the fire. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

PROTECTIVE EQUIPMENT: Use full protective clothing and self-contained breathing apparatus. Fires in confined spaces should be dealt with by trained personnel wearing approved breathing apparatus.

SPECIAL HAZARDS: In a fire or if heated, a pressure increase will occur and the container may burst. Contact of hot product with water will result in a violent expansion as the water turns to steam. This may cause splashing of hot product, or damage to, or complete loss of the tank roof. Respiratory problems or

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nausea by excessive exposure to hot product fumes.

Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates, gases, including carbon monoxide, H₂S, SO_x (sulfur oxides) or sulfuric acid and unidentified organic and inorganic compounds.

ADVICE FOR FIREFIGHTERS: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

6. ACCIDENTAL RELEASE MEASURES:

No problem at ambient temperature when product is solid. Avoid contact with spilled or released material.

PROTECTIVE MEASURES: Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate bafflers.

CLEAN UP METHODS: Local authorities should be advised if significant spillages cannot be contained.

Small spillage: normal antistatic working clothes are usually adequate. Wear suitable gloves. Splash goggles. Stop leak if without risk. Absorb spilled product with suitable non-combustible materials. Collect solidified product with suitable means (e.g. shovels).

Large spillage: full body suit of chemically resistant and thermal resistant material should be used. Work gloves providing adequate chemical resistance, specifically to aromatic hydrocarbons. If contact with hot product is possible or anticipated, gloves should be heat-resistant and thermally insulated. Safety helmet with integrated full face visor and neck protection. antistatic non-skid safety shoes or boots.

RESPIRATORY PROTECTION: A half or full-face respirator with filter(s) for organic vapours (and when applicable for H₂S) a Self Contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.

Prevent product from entering sewers, rivers or other bodies of water. If necessary dike the product with dry earth, sand or similar non-combustible materials.

When inside buildings or confined spaces, ensure adequate ventilation. Transfer collected product and other contaminated materials to suitable containers for recovery or safe disposal. Let hot product cool down naturally. If necessary, cautiously use water fog to help the cooling. Do not play direct jets of foam or water on the spilled molten product, as this may cause splattering.



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7. HANDLING & STORAGE:

For quality, technical, health, safety and environmental reasons, bitumen should not be over-heated. Bitumen temperature should be kept at least 30°C below flash point and should never exceed the industry recommended maximum temperature of 200°C. Excessive heating above the maximum recommended handling and storage temperature may cause degradation of the substance and evolution of irritant vapours and fumes.

Avoid contact of hot product with water. Risk of splashing of hot material. Do not allow water or any liquid to contact with hot product since this could cause splashing of hot material or boil-over. Do not breathe fumes from hot product.

Concentration of H₂S in tank headspaces may reach hazardous values, especially in case of prolonged storage. This situation is especially relevant for those operations which involve direct exposure to the vapours in the tank.

A specific assessment of inhalation risks from the presence of H₂S in tank headspaces, confined spaces, product residue, tank waste and waste water, and unintentional releases must be made to help determine controls appropriate to local circumstances.

HANDLING: Do not ingest. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid contact with eyes, skin and clothing.

Prevent the risk of slipping. Take precautionary measures against static discharge. Avoid splash filling of bulk volumes when handling hot liquid product. Ground/bond container and receiving equipment.

TRANSPORTATION: Hot mastic asphalt materials can only be transported in suitably heated and mechanically agitated mixer equipment. Mastic asphalt in block form may be transported loose, tipped in bulk carriers or palletised, banded or film wrapped.

Storage area layout, tank design, equipment and operating procedures must comply with the relevant regional, national or local legislation. Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations. Use adequate personal protective equipment as needed.

Before entering storage tanks and commencing any operation in a confined area, check the atmosphere for oxygen content, hydrogen sulphide (H₂S) and flammability.

Store separately from oxidising agents.

Recommended materials for containers, or container linings use mild steel, stainless steel. Not suitable : Some synthetic materials may be unsuitable for containers or container linings depending on the material specification and intended use. Compatibility should be checked with the manufacturer.

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Self-heating leading to auto ignition at the surfaces of porous or fibrous materials impregnated with oils or bitumen, can occur at temperatures as low as 100°C. Oil and bitumen contamination of thermal insulation materials and the accumulation of oily rags or similar material near hot surfaces, should therefore be avoided, and lagging should be replaced where necessary by a non-absorbent type of insulation. Deposits (carbonaceous materials and iron sulphides) can develop on the internal walls and roofs of tanks in case of long term storage. These deposits may be pyrophoric and self-ignite in contact with the air.

Keep only in the original container or in a suitable container for this kind of product. Keep container tightly closed and sealed until ready for use. Do not store in unlabelled containers. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Product tanks may be heated by hot oil, electricity or flame tubes. Under circumstances where bitumen is being pumped from a tank containing heater tubes precautions should be taken to prevent the level dropping 150 mm above the tubes unless the heat has been switched off for a period of sufficient cooling. Where the product is being pumped from a storage tank or road tank care should be taken to avoid the risk of fire or explosion as a result of exposing hot heater tubes. Protect from sunlight.

8. EXPOSURE CONTROL / PERSONAL PROTECTION:

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include adequate ventilation to control airborne concentrations below the exposure guidelines/limits. PPE should meet recommended national standards. Check PPE suppliers.

SKIN PROTECTION: Wear protective clothing for operations with hot material: heat resistant coveralls (with trousers legs over boots and sleeves over cuffs of gloves), heat resistant heavy duty antiskid boots (e. g. leather). Coveralls should be changed at the end of the work shift and cleaned as necessary to avoid transfer of product to clothes or underwear.

For loading/unloading operations: wear safety helmet with integrated full face visor and neck protection.

HAND PROTECTION: Heat resistant gloves with long cuffs, or gauntlets (EN 374 - 407). Gloves must be periodically inspected and changed in case of wear, perforations or contaminations.

FOOT PROTECTION: Suitable safety footwear should be worn during the preparation of block materials for charging into site re-melting equipment. Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

EYE PROTECTION: Wear suitable goggles or face protection

INHALATION: No respiratory protection is ordinarily required under normal conditions of use.

SUBSTANCE: Advise applicable when handling the product at elevated temperatures

OCCUPATIONAL EXPOSURE STANDARD:

Long-term exposure limit 8-hour TWA.

Short-term Exposure limited to 15 minutes.



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Limestone: 10 mg/rn3 total inhalable dust 4 mg/rn3 respirable dust
Asphalt, petroleum fumes: 5 mg/rn3 10 mg/rn3
Hydrogen sulphide: 14 mg/m3 21 mg/rn3

9. PHYSICAL & CHEMICAL PROPERTIES:

APPEARANCE:	Black
FORM:	Solid at ambient temperatures
ODOUR:	Characteristic
SOFTENING POINT:	80°C - 120°C
FLASH POINT:	>300°C
RELATIVE DENSITY:	2.4 (@15°C)

10. STABILITY & REACTIVITY:

STABILITY:	Stable under normal conditions.
CONDITIONS TO AVOID:	Heating above maximum recommended storage and handling temperatures will cause binder degradation and evolution of vapours.

11. TOXICOLOGICAL INFORMATION:

Under normal conditions of use and exposure, no significant adverse health effects. Avoid vapours from heated materials to prevent exposure to potentially toxic/irritating fumes.

INGESTION: Practically non-toxic.

EYES: Expected to be slightly irritating. Hot product may cause severe eye burns and/or blindness.

SKIN: Exposure to vapour or mist may cause irritation to the respiratory system.

CARCINOGENICITY: Bitumens are not classified as dangerous under EC criteria. Bitumens contain low concentrations of Polycyclic Aromatic Compounds (PACs). In undiluted bitumens these PACs are not considered to be bio-available. Despite the known presence of PACs there is no evidence that exposure to undiluted bitumens or their flumes is harmful.

12. TRANSPORT INFORMATION:

FLASHPOINT: >300°C

NOT CLASSIFIED AS HAZARDOUS FOR TRANSPORT

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13. DISPOSAL INFORMATION:

Recover or recycle if possible. Unused mastic asphalt in cold state is inert and if not recycled should be disposed of in accordance with local waste regulations.

14. ECOLOGICAL INFORMATION:

Avoid losses to the environment wherever possible. No known risks.

MOBILITY: Should not be allowed to enter drains or watercourses.

BIODEGRADABILITY: Non - Biodegradable.

ECOTOXICITY: Not expected to be toxic to organisms.

96 Hours LC50 (mg/L): Insoluble - Non-Toxic.

15. REGULATORY INFORMATION:

HAZARD LABEL: Not classified as dangerous under the chemicals (Hazard Information and Packaging for Supply) Regulations 2002 (chip 3)

16. OTHER INFORMATION:

PRODUCT USE:

The provisions of Safety Data Sheets come under the REACH and CHIP regulations. This is in addition to the users of products supplied by Walker Sealants Limited should take appropriate measures to ensure working practices are in accordance with the Control of Substances Hazardous to Health (COSHH).

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