

# PB-65 SOIL SEALANT

## MATERIAL SAFETY DATA SHEET

Manufacturer:	1 HMIS HEALTH 0 HMIS FLAMMABILITY 0 HMIS REACTIVITY C HMIS PERSONAL PROTECTION									
<b>PROBASE MANUFACTURING.SDN.BHD</b> (Company No. : 498742-K) <b>NO. 72, JALAN PINANG 23,</b> <b>TAMAN DAYA,</b> <b>81100 JOHOR BAHRU,</b> <b>JOHOR, MALAYSIA</b> <b>TEL : +607-355 6122</b> <b>FAX : +607-351 2591</b> <b>E-mail : marketing@probase.com.my</b>	<b>SECTION 1 – PRODUCT IDENTIFICATION</b>									
	PRODUCT NAME : PB-65 SOIL SEALANT CHEMICAL FAMILY : WATER BASED EMULSION CHEMICAL FORMULA : PROPRIETARY APPLICATION: BITUMEN PRODUCTS FOR BUILDING ROAD, INDUSTRIAL AND CIVIL ENGINEERING MATERIALS AND PROCESSES.									
<b>SECTION 2- COMPOSITION/ INFORMATION</b>	<b>SECTION 3 - HAZARDS IDENTIFICATION</b>									
BITUMEN EMULSIONS ARE PREPARATIONS OF PENETRATION GRADED BITUMEN AND LIQUID MIXTURES.  DANGEROUS NOT CLASSIFIED AS DANGEROUS UNDER EC CRITERIA  COMPONENTS/CONSTITUENTS:  <table border="1"> <thead> <tr> <th>Ingredient Name</th> <th>%</th> <th>CAS</th> </tr> </thead> <tbody> <tr> <td>Asphalt Bitumen</td> <td>&gt;65%</td> <td>8052-42-4</td> </tr> <tr> <td>Liquid Mixtures</td> <td>&lt;35%</td> <td>7732-18-5</td> </tr> </tbody> </table>  This product does not contain any materials listed by NTP, or IARC as c	Ingredient Name	%	CAS	Asphalt Bitumen	>65%	8052-42-4	Liquid Mixtures	<35%	7732-18-5	<b>Hazards</b> <b>Safety Hazards</b> Not classified as flammable and will not burn. Release of flammable vapours is possible on hot storage.  <b>Environmental Hazards</b> Not classified as dangerous under EC criteria.  <b>Physical and Chemical Hazards</b> Paving grade bitumen emulsions are typically stored and handled at ambient temperatures or slight higher upto 80°C. Although not classified as flammable, bitumen emulsions are hydrocarbon materials.  <b>Specific Hazards</b> Paving grade bitumen emulsions are not classified as dangerous under EC criteria but they do contain very low concentrations of Polycyclic Aromatic Compounds (PAC's). Bitumen emulsions are considered to be bio-available. Despite the known presence of PAC's there is no evidence that exposure to bitumen emulsion or their fume is harmful.
Ingredient Name	%	CAS								
Asphalt Bitumen	>65%	8052-42-4								
Liquid Mixtures	<35%	7732-18-5								

### SECTION 4 - FIRST-AID MEASURES

<b>TAKE PROPER PRECAUTIONS TO ENSURE YOUR OWN HEALTH AND SAFETY BEFORE ATTEMPTING RESCUE OR PROVIDING FIRST AID</b>	
<b>SYMPTOMS AND EFFECTS</b>	SKIN BURNS.
<b>PROTECTION OF FIRST AIDERS</b>	WEAR SELF-CONTAINED BREATHING APPARATUS IF PRESENCE OF HYDROGEN SULPHIDE IS SUSPECTED.
<b>EYE CONTACT</b>	RINSE IMMEDIATELY WITH PLENTY OF WATER FOR AT LEAST 10 MINUTES AND SEEK MEDICAL ADVICE IF IRRITATION PERSISTS.
<b>SKIN CONTACT</b>	WASH CONTAMINATED AREA IMMEDIATELY WITH SOAP AND WATER. CONTAMINATED CLOTHING MUST BE REMOVED AS SOON AS POSSIBLE. IT MUST BE LAUNDERED BEFORE REUSE.
<b>INGESTION</b>	DO NOT INDUCE VOMITING. GIVE WATER TO DRINK PROVIDED PATIENT IS CONSCIOUS. PROTECT THE AIRWAY IF VOMITING BEGINS. IF RAPID RECOVERY DOES NOT OCCUR, OBTAIN MEDICAL ATTENTION.
<b>ADVICE TO PHYSICIANS</b>	TREAT SYMPTOMATICALLY. IN THE CASE OF BURN NO ATTEMPT SHOULD BE MADE TO REMOVE FIRMLY ADHERENT BITUMEN FROM THE SKIN, IT WILL PROVIDE A STERILE DRESSING AND DETACH ITSELF AFTER A FEW DAYS. WHEN IT IS NECESSARY TO REMOVE ADHERING BITUMEN FROM THE SKIN LIBERAL AMOUNTS OF WARM MEDICINAL PARAFFIN CAN BE USED. PROLONGED EXPOSURE TO HIGH CONCENTRATIONS OF HYDROGEN SULPHIDE MAY LEAD TO A DELAYED CHEMICAL PNEUMONITIS (LUNG OEDEMA).

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### SECTION 5 - FIRE-FIGHTING MEASURES

<b>EXTINGUISHING MEDIA</b>	SAND OR EARTH MAY BE USED.
<b>-SMALL FIRES</b>	
<b>EXTINGUISHING MEDIA</b>	FOAM, CARBON DIOXIDE, DRY CHEMICAL EXTINGUISHERS.
<b>UNSUITABLE EXTINGUISHING MEDIA.</b>	WATER IN A JET. USE OF HALON EXTINGUISHERS SHOULD BE AVOIDED FOR ENVIRONMENTAL REASONS
<b>SPECIFIC HAZARDS</b>	PRODUCT IS WATER-BASED, LIQUID WILL NOT READILY BURN.
<b>PROTECTION OF FIRE FIGHTER</b>	COMPRESSED AIR BREATHING APPARATUS MUST BE WORN WHEN ENTERING CONFINED FIRE SPACE.
<b>OTHER INFORMATION</b>	KEEP ADJACENT CONTAINERS COOL BY SPRAYING WITH WATER. HOT BITUMEN CAN CAUSE VIOLENT ERUPTIONS IN CONTACT WITH WATER, AND MAY SPLATTER HOT MATERIAL.

### SECTION 6 - SPILL OR LEAK PROCEDURE

SPILL / LEAK	DIKE, CONTROL AND ABSORB WITH INERT MATERIAL. TRANSFER LIQUID TO CONTAINERS FOR RECOVERY/ DISPOSALS DO NOT ALLOW SPILLED OR LEAKED MATERIAL TO ENTER PUBLIC SEWERS OR BODIES OF WATER.
DISPOSAL METHOD	COAGULATE THE EMULSION BY THE STEPWISE ADDITION OF FERRIC CHLORIDE AND LIME. TRANSFER TO APPROVED CHEMICAL SEWER OR LANDFILL.FOLLOW STATE REGILATIONS FOR NON-HAZARDOUS MATERIALS
CONTAINER DISPOSAL	DO NOT RE-USE CONTAINERS. DO NOT WELD ON METAL CONTAINERS.

### SECTION 7 - SPECIAL PROTECTION

RESPIRATORY PROTECTION-	
OPEN	NONE
INSIDE / CONFINED SPACE	NOSH APPROVED VAPOR/MIST PROTECTION
VENTILATION	LOCAL EXHAUST
MECHANICAL EXHAUST	RECOMMENDED INSIDE BUILDING OR IN CONFINED SPACE
PROTECTED GLOVES	IMPERVIOUS TYPE RECOMMENDED
SAFETY GLASSES	RECOMMENDED
OTHER PROTCTIVE EQUIPMENT	HMIS PERSONAL PROTECTION:"C" SAFETY GLASSES, GLOVE, APRON.

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### SECTION 8 - HANDLING AND STORAGE

**MAXIMUM SAFE HANDLING AND STORAGE TEMPERATURE AT LEAST 30°C BELOW THE FLASH POINT. AVOID OVERHEATING TO MINIMIZE FUMING.**

**HANDLING** AVOID BREATHING FUMES OR VAPOURS FROM HEATED PRODUCT.  
WHEN HANDLING PRODUCT IN DRUMS, SAFETY FOOTWEAR SHOULD BE WORN AND PROPER HANDLING EQUIPMENT SHOULD BE USED.  
WHEN USING, DO NOT EAT, DRINK OR SMOKE.

**HANDLING TEMPERATURE** AMBIENT OR UP TO 80 C

**STORAGE** TANKS MUST BE SPECIFICALLY DESIGNED FOR USE WITH THIS PRODUCT.  
STORE IN COOL, DRY, WELL VENTILATED PLACE.

**RECOMMENDED MATERIALS** NORMALLY USE MILD STEEL FOR CONTAINERS.

**PRECAUTIONS DURING DISCHARGE FROM BITUMEN TANKS** WHERE BITUMEN 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.  
BITUMEN TANKS MAY BE HEATED BY HOT OIL, STEAM, 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 BELOW 150 MM ABOVE THE TUBES UNLESS THE HEAT HAS BEEN SWITCHED OFF FOR A PERIOD OF SUFFICIENT COOLING. THE BULK TEMPERATURE OF THE BITUMEN DURING HANDLING SHOULD BE KEPT AS LOW AS POSSIBLE, CONSISTENT WITH EFFICIENT DISCHARGE AND AT NO TIME SHOULD IT EXCEED THE MAXIMUM TEMPERATURE RECOMMENDED BY THE SUPPLIER. A CHECK SHOULD BE MADE TO ENSURE THAT THE RECEIVING TANK HAS SUFFICIENT ULLAGE SPACE TO ACCOMMODATE THE LOAD.

### SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES:

**FORM:** LIQUID  
**APPEARANCE:** BROWN TO BLACK.  
**ODOUR:** MILD ASPHALT/BITUMEN ODOUR  
**DENSITY:** 1.04 KG/L AT 15°C  
**FREEZING POINT:** 0°C (WATER)  
**BOILING POINT:** 100°C (WATER)  
**SOLUBILITY IN WATER:** MISCIBLE THEN PRECIPITATES BITUMEN.  
**SOLUBILITY IN OTHER SOLVENTS:** SOLUBLE  
**VAPOUR PRESSURE:** 2.37 KPA AT 20°C (WATER)  
**FLASH POINT:** N/A. WILL NOT BURN UNDER NORMAL CIRCUMSTANCES  
**VISCOSITY:** 25MM<sup>2</sup>/S AT 40°C (ASTM D455)

**PARTICLE CHARGE:** POSITIVE

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### SECTION 10 - STABILITY AND REACTIVITY:

- THE MATERIAL IS STABLE UNDER NORMAL CONDITIONS OF USE.
- AVOID HEATING MATERIAL ABOVE THE MAXIMUM RECOMMENDED STORAGE AND HANDLING TEMPERATURES AS THIS WILL CAUSE DEGRADATION AND FORMATION OF FLAMMABLE VAPOURS. AVOID HEAT, FLAMES AND SOURCES OF IGNITION.
- DO NOT ALLOW HOT MOLTEN MATERIAL TO CONTACT WATER OR OTHER LIQUIDS AS THIS CAN CAUSE VIOLENT ERUPTIONS, SPLATTER HOT MATERIAL OR IGNITE FLAMMABLE MATERIAL. AVOID CONTACT WITH STRONG OXIDISING AGENTS AS REACTIONS WILL OCCUR.
- **HAZARDOUS DECOMPOSITION PRODUCTS:** HYDROGEN SULPHIDE, CARBON MONOXIDE AND OTHER HAZARDOUS GASES.

### SECTION 11 TOXICOLOGICAL INFORMATION:

- TOXICOLOGICAL DATA HAS NOT BEEN SPECIFICALLY DETERMINED FOR THIS PRODUCT. INFORMATION GIVEN IS BASED ON DATA ON THE COMPONENTS AND TOXICOLOGY OF SIMILAR PRODUCTS. THIS PRODUCT COULD HARM AQUATIC ORGANISMS.
- **ACUTE ORAL TOXICITY:** IS EXPECTED TO BE LOW.
- **ACUTE DERMAL TOXICITY:** IS EXPECTED TO BE LOW.
- **ACUTE INHALATION TOXICITY:** NOT CONSIDERED TO BE AN INHALATION HAZARD UNDER NORMAL CONDITIONS OF USE. AVOID VAPOURS FROM HEATED PRODUCT MATERIAL TO PREVENT EXPOSURE TO POTENTIALLY TOXIC/IRRITATING FUMES (SEE 10.0).
- **SKIN IRRITATION:** EXPECTED TO BE SLIGHTLY IRRITATING. HOT PRODUCT MATERIAL WILL CAUSE THERMAL BURNS AND MAY RESULT IN PERMANENT EPIDERMAL SKIN DAMAGE.
- **EYE IRRITATION:** EXPECTED TO BE SLIGHTLY IRRITATING. HOT PRODUCT MATERIAL MAY CAUSE SEVERE EYE BURNS OR RESULT IN BLINDNESS.
- **RESPIRATORY IRRITATION:** INHALATION OF MISTS OR VAPOURS MAY CAUSE IRRITATION TO THE RESPIRATORY SYSTEM.
- **CARCINOGENICITY:** UNDER EC CRITERIA BITUMEN IS NOT CLASSIFIED AS DANGEROUS.

### SECTION 12 ECOLOGICAL INFORMATION:

- ECO-TOXICOLOGICAL DATA HAS NOT BEEN SPECIFICALLY DETERMINED FOR THIS PRODUCT. INFORMATION GIVEN IS BASED ON DATA ON THE COMPONENTS AND ECO-TOXICOLOGY OF SIMILAR PRODUCTS.
- **ACUTE TOXICITY:** EXPECTED TO BE PRACTICALLY NON TOXIC. A POORLY SOLUBLE MIXTURE.
- **MOBILITY:** HAS LOW MOBILITY AND ADSORBS TO SOIL. IN WATER WILL EITHER SINK OR FLOAT SHOWING SLIGHT TENDENCY TO DISPERSE AND PRODUCT MATERIAL WILL ADSORB TO THE SEDIMENT.
- **DEGRADABILITY:** EXPECTED TO BE NOT INHERENTLY BIODEGRADABLE.
- **BIOACCUMULATION:** HAS THE POTENTIAL TO BIO ACCUMULATE BUT IS UNLIKELY.
- **THIS PRODUCT IS NOT EXPECTED TO HAVE ANY OZONE DEPLETION POTENTIAL OR GLOBAL WARMING POTENTIAL.**

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### SECTION 13 - DISPOSAL CONSIDERATIONS:

- **MATERIAL DISPOSAL:** RECOVER SPILLAGE AND WASTE AND RECYCLE IF POSSIBLE. COMPLY WITH ALL REGULATIONS, WASTE CLASSIFICATION AND DISPOSAL METHODS. IT IS THE RESPONSIBILITY OF THE WASTE GENERATOR. DO NOT DISPOSE IN DRAINS, SEWERS AND RUNNING WATER SOURCES.
- **CONTAINER DISPOSAL:** COMPLY BY REGULATIONS AND THOSE OF LOCAL AUTHORITIES. COLLECTION OF WASTE SHOULD BE DONE BY A RECOGNISED CONTRACTOR OR COLLECTOR.
- **NOT HAZARDOUS AND IS CLASSIFIED AS 'CONTROLLED WASTES' IN THE UK WHICH HAVE NO SPECIAL REQUIREMENTS FOR THEIR DISPOSAL AT APPROPRIATELY LICENSED FACILITIES. TO PROTECT THE ENVIRONMENT FOLLOW THE ABOVE DISPOSAL TECHNIQUES.**

### SECTION 14 - TRANSPORT INFORMATION:

**U.S.DOT:** Bulk and Non-bulk proper shipping names are not regulated  
**CANADIAN TRANSPORTATION OF DANGEROUS GOODS:** Not regulated.

- **UN/IDENTIFICATION NUMBER:** NA
- **UN NUMBER (SEA TRANSPORT, IMO):** NA
- **HAZARD CLASS:** NA
- **PACKING GROUP:** NA

### SECTION 15 - REGULATORY AND INFORMATION:

EPA ACUTE	EYES
EPA CHRONIC	NO
EPA IGNITABILITY	NO
EPA REACTIVITY	NO
EPA SUDDEN RELEASE OF PRESSURE	NO
EPA HAZARDOUS WASTE NUMBER	NONE
CLEAN AIR	N/A
CLEAN WATER	N/A
CERCLA RQ VALUE	NONE
SARA TPQ	NONE
SARA RQ	NONE
SECTION 313	NO

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### **SECTION 16 - LEGISLATION AND OTHER INFORMATION:**

- HEALTH & SAFETY AT WORK, ETC. ACT 1974
- CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH REGULATIONS (COSHH) 2002
- CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH (AMENDMENT) REGULATIONS 2004
- ENVIRONMENTAL PROTECTION ACT 1990
- HSE GUIDANCE NOTE EH40 (WORKPLACE EXPOSURE LIMITS)
- ANY AUTHORISED MANUAL ON FIRST AID BY ST. JOHN'S / ST. ANDREWS / RED

THE PRODUCT DATA SAFETY INFORMATION PRESENTED ABOVE IS PROVIDED TO ASSIST OUR CUSTOMERS IN ADDRESSING COMPLIANCE WITH HEALTH, SAFETY, AND ENVIRONMENTAL REGULATIONS.

THE INFORMATION CONTAINED HEREIN IS BASED IN DATA AVAILABLE TO THE MANUFACTURER AND IS BELIEVED TO BE BOTH COMPLETE AND ACCURATE, ALTHOUGH NO GUARANTEE OR WARRANTY AS TO THE COMPREHENSIVENESS OR ACCURACY IS MADE OR IMPLIED.

THE APPLICATION OF THIS PRODUCT IS UNDER THE EXCLUSIVE CONTROL OF THE END-USER, THEREFORE, IT IS THE OBLIGATION OF THE END-USER TO DETERMINE THAT THE CONDITIONS ARE SAFE FOR THE UTILIZATION OF THIS PRODUCT.

**- THE WORLD LEADER IN SOIL STABILIZATION -**