

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT IDENTIFICATION AND USE

PRODUCT IDENTIFIER		PERMA-BOARD		PRODUCT IDENTIFICATION NUMBER (PIN)		NONE																	
PRODUCT USE				HIGH QUALITY RECOVERY BOARD OR ROOF BASE BOARD OR A PROTECTION BARRIER OVER MEMBRANE WATERPROOFING.																			
MANUFACTURER'S NAME			HAL INDUSTRIES INC. B.C ROOFING PRODUCTS LTD.			SUPPLIER'S NAME			HAL INDUSTRIES INC. B.C ROOFING PRODUCTS LTD.														
STREET ADDRESS						9681 - 187TH STREET																	
CITY				SURREY				PROVINCE				B.C											
POSTAL CODE			V4N - 3N3			EMERGENCY TELEPHONE NO.			1- 604 888 0777 1- 800 663 0076			POSTAL CODE			V4N - 3N3			EMERGENCY TELEPHONE NO.			1- 604 888 0777 1- 800 663 0076		

SECTION 2 - HAZARDOUS AND OTHER INGREDIENTS

INGREDIENTS	CAS NUMBER	LD50 OF INGREDIENT (SPECIFY SPECIES AND ROUTE)	LC50 OF INGREDIENT (SPECIFIC SPECIES)
ASPHALT 40 - 65%	8052 - 42 -4	ORAL: LD50> 5000 MG/ KG (RAT) DERMAL: LD50> 2000 MG/KG (RABBIT)	N/A, ACGIH RECOMMENDS FOR ASPHALT FUMES: 5 MG/ M 3 HYDROGEN SULPHIDE, 10 PPM (14 MG/ M3)
INERT FILLER (PROPRIETARY)	NOT REGULATED	N/A	N/A
RECYCLED CRUMB RUBBER	NOT REGULATED	N/A	N/A
FIBER GLASS MAT 10-17%	65997 – 17 – 3 for continuous filament glass fibres	OSHA FIBER LIMITS TO 5 PPM	
UREA FORMALDEHYDE BINDER 2 - 3.5% (used in fibreglass mat, is modified and cured)	9011 – 05 - 6	10 PPM for the formaldehyde monomer	

SECTION 3 - PHYSICAL DATA

PHYSICAL STATE SOLID (ASPHALT COATED, SURFACED SHEETS)		ODOUR AND APPEARANCE BLACK WITH SLIGHT PETROLEUM ODOUR - SHEET FORMS. FILM SURFACE OR SAND SURFACE.				ODOUR THRESHOLD (PPM) NOT AVAIL			
VAPOUR PRESSURE: SOLID FORM FOR ASPHALT <1 KPA AT 38 DEG C		VAPOUR DENSITY NOT APPLICABLE		EVAPORATION RATE: < 1 1 = n- butylacetate		SOFTENING PT. ASPHALT 90 - 98 ° C		FREEZING /POUR POINT MELT	

PH NOT APPLICABLE	SPECIFIC GRAVITY NOT AVAILABLE	COEFF. WATER/OIL DIST. INSOLUBLE IN WATER	DENSITY 1.8- 2.5 G/CC AT 15 DEG C
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SECTION 4 - FIRE AND EXPLOSION DATA

FLAMMABILITY? YES (X) NO ()	IF YES, UNDER WHICH CONDITION?	COMBUSTIBLE IF EXPOSED TO HIGH HEAT AND OPEN FLAMES, (SIMILAR TO OTHER ORGANIC COMPOUNDS).
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MEANS OF EXTINCTION: WATER SPRAY, DRY CHEMICAL, CARBON DIOXIDE FOR SMALL FIRES.
USE WATER SPRAY TO COOL FIRE-EXPOSED CONTAINERS AND AS A PROTECTIVE SCREEN. DO NOT POINT SOLID WATER DIRECTLY INTO BURNING ASPHALT TO AVOID SPREADING. SELF-CONTAINED BREATHING APPARATUS SHOULD BE WORN TO PROTECT AGAINST POSSIBLE RELEASE OF HYDROGEN SULPHIDE AND SULPHUR DIOXIDE IF MATERIAL IS BURNING.

FLASH POINT (DEG C) AND METHOD Flash point for asphalt (ASTM D93)	Solid 265 DEG C	UPPER FLAMMABLE LIMIT (% BY VOLUME) NOT AVAIL.	LOWER FLAMMABLE LIMIT (% BY VOLUME) NOT AVAIL.
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ASPHALT'S BOILING POINT :	400 DEG C	HAZARDOUS COMBUSTION PRODUCTS	SMOKE, CARBON DIOXIDE, CARBON MONOXIDE AND TRACES OF OXIDES OF SULPHUR
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EXPLOSION DATA	NA	SENSITIVITY TO IMPACT	NONE	SENSITIVITY TO STATIC DISCHARGE	NONE
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SECTION 5 - REACTIVITY DATA

CHEMICAL STABILITY YES (X) NO ()	IF NO, UNDER WHICH CONDITION?	STABLE, (PRODUCT IS IN A SHEET FORM)
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INCOMPATIBILITY WITH OTHER SUBSTANCES YES (X) NO ()	IF SO, WHICH ONES)	STRONG OXIDIZING AGENTS AND SOLVENTS EFFECT ASPHALT.
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REACTIVITY, AND UNDER WHAT CONDITIONS	HAZARDOUS POLYMERIZATION WILL NOT OCCUR, DOES NOT REACT WITH WATER
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HAZARDOUS DECOMPOSITION PRODUCTS	STABLE UNDER NORMAL CONDITIONS. SEE HAZARDOUS COMBUSTION PRODUCTS FOR PRODUCTS OF THERMAL DECOMPOSITION
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SECTION 6 - TOXICOLOGICAL PROPERTIES

ROUTE OF ENTRY	() SKIN CONTACT	() SKIN ABSORPTION	() EYE CONTACT	() INHALATION	() INGESTION
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EFFECT OF ACUTE EXPOSURE TO PRODUCT:
THIS MANUFACTURED PRODUCT AS PRODUCED AND WHEN USED UNDER AMBIENT CONDITIONS POSES NO HEALTH HAZARD.
HOWEVER, IF THE PRODUCT IS HEATED BEYOND 200 DEG C OR IF IT CATCHES FIRE, THEN THE MAJOR CONSTITUENT ASPHALT (BITUMEN) WILL EMANATE SLIGHTLY TOXIC FUMES. MELTED ASPHALT (BITUMEN) FROM THE PRODUCT COULD ACT AS A FUEL AND CONTRIBUTE TO FIRE.
SKIN / EYE CONTACT : EXPOSURE TO HOT MATERIAL CAUSE THERMAL BURNS. ASPHALT FUMES ARE MODERATELY IRRITATING TO EYES.
INHALATION: PROLONG IHHALATION OF FUMES FROM HOT ASPHALT CAUSES NAUSEA, HEADACHE AND DIZZINESS.
INGESTION: INGESTION IS UNLIKELY.

EXPOSURE LIMITS NOT LISTED BY NIOSH	IRRITANCY OF PRODUCT NOT AVAIL.	SENSITIZATION TO PRODUCT NOT AVAIL.	CARCINOGENICITY NOT LISTED AS CARCINOGENS (IARC)
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TERATOGENICITY NOT AVAIL.	REPRODUCTIVE TOXICITY NOT AVAIL.	MUTAGENICITY NOT AVAIL.	SYNERGISTIC PRODUCTS NOT AVAIL.
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SECTION 7 - PREVENTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT: FOR PRODUCT AS PRODUCED AND USED, NO SPECIAL PROCEDURES OF SAFETY ARE ESSENTIAL. SHOULD PRODUCT CATCH FIRE THROUGH EXTERNAL SOURCE REMAIN UPWIND OF THE FIRE. AVOID SKIN AND EYE CONTACT, AVOID INHALATION OF FUMES.

SECTION 8 - FIRST AID MEASURES

SPECIFIC MEASURES IN CASE OF CONTACT WITH HOT MOLETEN ASPHALT.

EYE CONTACT: FLUSH WITH LARGE AMOUNTS OF WATER WHILE HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION IMMEDIATELY.

SKIN CONTACT: WASH WITH SOAP AND WATER, OR USE BABY OIL OR WATER-LESS HAND CLEANER. DO NOT USE SOLVENTS THINNERS TO CLEAN THE SKIN, GET MEDICAL ATTENTION IF IRRITATION PERSISTS.

INGESTION: IF SWALLOWED, DO NOT INDUCE VOMITING. KEEP AT REST. GET IMMEDIATE MEDICAL ATTENTION.

INHALATION: REMOVE VICTIM TO FRESH AIR. IF BREATHING IS DIFFICULT, GIVE OXYGEN AND GET MEDICAL ATTENTION IMMEDIATELY.

SECTION 9 - PREPARATION DATE OF MSDS

PREPARED BY : " TECHNICAL GROUP"	PHONE NUMBER 1 604 - 888 0777 1 800 - 663 0076	DATE Aug, 2017
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