

MATERIAL SAFETY DATA SHEET

PRODUCT: HBE-95-BG Cure
REVISION DATE: August 11th 2009

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SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER: CANUSA-CPS, A DIVISION OF SHAWCOR LTD.
ADDRESS: 25 BETHRIDGE ROAD
CITY, PROVINCE/STATE: TORONTO, ONTARIO
POSTAL CODE: M9W 1M7
EMERGENCY PHONE NUMBER: (613) 996-6666 (CANUTEC)
INFORMATION NUMBER: (416) 743-7111

PRODUCT IDENTITY **HBE-95-BG Cure**
(AS USED ON LABEL AND LIST):
PRODUCT USE: Curing Agent for Base Coating for Pipelines
PRODUCT I.D. NUMBER (PIN): N/A

SECTION 2 - HAZARDS IDENTIFICATION

ADVERSE HEALTH EFFECTS:
ADVERSE EYE, SKIN AND RESPIRATORY EFFECTS. SENSITIZATION MAY OCCUR WITH PROLONGED SKIN CONTACT.

ENVIRONMENTAL EFFECTS:
NOT AVAILABLE

PHYSICAL AND CHEMICAL HAZARDS:
THERMAL DECOMPOSITION MAY CAUSE THE RELEASE OF TOXIC, IRRITATING AND FLAMMABLE PRODUCTS, OXIDES OF NITROGEN, CARBON (CO, CO₂), CARBOXYLIC ACIDS, ALDEHYDES.

SPECIFIC HAZARDS:
NOT AVAILABLE

CARCINOGENICITY INFORMATION:
NOT AVAILABLE

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SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT</u>	<u>CAS #</u>	<u>EU- EINECS</u>	<u>%</u>	<u>HAZARD SYMBOLS</u>	<u>RISK PHRASES</u>
TRIETHYLENETETRAMINE	112-24-3	203-950-6	10-30	C	R21-34-43-52/53
PHENOL, 4,4'-(1-METHYLETHYLIDENE)BIS-	80-05-7	201-245-8	7-13	Xn	R37-41-43-52-62
1-(2-,AMINOETHYL) PIPERAZINE (AEP)	140-31-8	205-411-0	7-13	C	R21/22-34-43-52/53
NONYL PHENOL	25154-52-3	246-672-0	7-13	C, N	R22-34-50/53
BENZYL ALCOHOL	100-51-6	202-859-9	5-10	X _n	R20/22
FORMALDEHYDE POLYMER WITH TOLUENE	25155-81-8	N/A	5-10	NONE KNOWN	NONE KNOWN
POLYETHYLENEPOLYAMINES	29320-38-5	N/A	1-5	NONE KNOWN	NONE KNOWN
BENZYLDIMETHYLAMINE	103-83-3	203-149-1	0.5-1.5	C	R10-20/21/22-34-52/53
1,2-ETHANEDIAMINE, N-(3-(TRIMETHOXYSILYL)PROPYL-	1760-24-3	217-164-6	0.5-1.5	NONE KNOWN	NONE KNOWN
METHYLENEBISCYCLO HEXANAMINE	1761-71-3	217-168-8	0.1-1	NONE KNOWN	NONE KNOWN
TETRAETHYLENE POLYAMINES	112-57-2	203-986-2	0.1-1	C, N	R21/22-34-43-51/53

SECTION 4 - FIRST-AID MEASURES

EYE CONTACT:

FLUSH WITH WATER FOR 15 MINUTES. GET MEDICAL ATTENTION.

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SKIN CONTACT:

WASH WITH SOAP AND WATER FOR 15 MINUTES; REMOVE CONTAMINATED CLOTHING. SEEK MEDICAL ATTENTION.

INHALATION:

REMOVE TO FRESH AIR. IF BREATHING HAS STOPPED, A TRAINED PERSON SHOULD PERFORM ARTIFICIAL RESPIRATION. GET MEDICAL ATTENTION.

INGESTION:

SEEK IMMEDIATE MEDICAL ATTENTION. DO NOT INDUCE VOMITING.

NOTE TO PHYSICIAN:

NOT AVAILABLE

SECTION 5 - FIRE-FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA:

WATER SPRAY, DRY CHEMICAL, CARBON DIOXIDE

FIRE-FIGHTING HAZARDS:

NOT AVAILABLE

FIRE-FIGHTING PERSONAL PROTECTIVE EQUIPMENT:

USE SELF CONTAINED BREATHING APPARATUS DURING FIREFIGHTING

FIRE-FIGHTING PROCEDURES:

NOT AVAILABLE

THERMAL DECOMPOSITION BY-PRODUCTS:

THERMAL DECOMPOSITION MAY CAUSE THE RELEASE OF TOXIC, IRRITATING AND FLAMMABLE PRODUCTS, OXIDES OF NITROGEN, CARBON (CO, CO₂), CARBOXYLIC ACIDS, ALDEHYDES.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:

REMOVE ALL SOURCES OF IGNITION. WEAR APPROPRIATE SAFETY EQUIPMENT.

ENVIRONMENTAL PRECAUTIONS:

PREVENT RUN-OFF FROM REACHING STORM OR SEWER DRAINS.

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METHODS FOR CLEANING UP:

SOAK UP SPILLS WITH INERT ABSORBENT MATERIALS AND PLACE IN CLOSED CONTAINERS. DISPOSE OF IN COMPLIANCE WITH ALL FEDERAL, PROVINCIAL AND MUNICIPAL LEGISLATION.

SECTION 7 - HANDLING AND STORAGE

HANDLING REQUIREMENTS:

MAINTAIN GOOD PERSONAL HYGIENE. ALL EQUIPMENT MUST BE GROUNDED.

STORAGE REQUIREMENTS:

COOL DRY ENVIRONMENT AWAY FROM INCOMPATIBLE MATERIALS AND ALL SOURCES OF IGNITION.

INCOMPATIBLE MATERIALS:

STRONG ACIDS, OXIDIZERS (PERCHLORATES, NITRATES)

VENTILATION:

ADEQUATE GENERAL VENTILATION IS RECOMMENDED

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

ADEQUATE GENERAL VENTILATION IS RECOMMENDED

PERSONAL PROTECTIVE EQUIPMENT (PPE):

GLOVES/TYPE:	CHEMICAL RESISTANT GLOVES WHEN HANDLING MATERIAL.
RESPIRATORY/TYPE:	WEAR A NIOSH APPROVED RESPIRATOR DURING APPLICATION AND HANDLING WHERE VAPOUR/MIST IS ENCOUNTERED IN THE BREATHING ZONE. AFTER APPLICATION AND DRYING, WEAR A DUST RESPIRATOR FOR ANY SANDING, GRINDING TYPE ACTIVITIES.
EYE/TYPE:	SPLASH PROOF CHEMICAL SAFETY GOGGLES
FOOTWEAR:	IMPERVIOUS BOOTS
CLOTHING:	CHEMICAL RESISTANT APRON, COVER EXPOSED SKIN.

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INGREDIENT EXPOSURE DATA:

<u>INGREDIENT</u>	<u>CAS #</u>	<u>LD₅₀ (species and route)</u>	<u>LC₅₀ (species and route)</u>	<u>OSHA (PEL) TWA</u>	<u>ACGIH (TLV) TWA</u>
TRIETHYLENE TETRAMINE	112-24-3	Rat, Oral: 2500 mg/kg Rabbit, Dermal: 805 mg/kg	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE
PHENOL, 4,4'-(1- METHYLETHYLIDENE) BIS-	80-05-7	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE
1-(2-,AMINOETHYL) PIPERAZINE (AEP)	140-31-8	Rat, Oral: 2140 mg/kg Rat, Dermal: 880 mg/kg	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE
NONYL PHENOL	25154-52-3	Mouse, Oral: 1231 mg/kg Rabbit, Dermal: 2140 mg/kg	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE
BENZYL ALCOHOL	100-51-6	Rat, Oral: 1230 mg/kg Rabbit, Dermal: 2000 mg/kg	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE
FORMALDEHYDE POLYMER WITH TOLUENE	25155-81-8	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE
POLYETHYLENE POLYAMINES	29320-38-5	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE
BENZYLDIMETHYL AMINE	103-83-3	Rat, Oral: 265 mg/kg Rabbit, Dermal: 1660 mg/kg	Mouse, 2H: 1800 mg/m ³	NOT AVAILABLE	NOT AVAILABLE
1,2-ETHANEDIAMINE, N-(3- (TRIMETHOXSILYL) PROPYL-	1760-24-3	Rat, Oral: 7460 mg/kg	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE

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METHYLENEBISCYCLO HEXANAMINE	1761-71-3	NOT AVAILABLE	4H: 400 mg/m ³	NOT AVAILABLE	NOT AVAILABLE
TETRAETHYLENE POLYAMINES	112-57-2	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DATA:

PHYSICAL STATE:	LIQUID
FORM:	MODERATELY VISCOUS
COLOUR:	AMBER
ODOUR:	AMMONIACAL
ODOUR THRESHOLD (PPM):	NOT AVAILABLE
BOILING POINT:	NOT AVAILABLE
FREEZING POINT:	NOT AVAILABLE
MELTING POINT:	NOT AVAILABLE
EVAPORATION RATE:	NOT AVAILABLE
VAPOUR PRESSURE (mmHg):	NOT AVAILABLE
VAPOUR DENSITY (AIR = 1):	NOT AVAILABLE
pH:	NOT AVAILABLE
SPECIFIC GRAVITY (WATER = 1):	1.031
COEFFICIENT OF WATER/OIL DISTRIBUTION:	NOT AVAILABLE
SOLUBILITY IN WATER:	NOT AVAILABLE

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID:

ELEVATED TEMPERATURES

MATERIALS TO AVOID:

STRONG ACIDS, OXIDIZERS (PERCHLORATES, NITRATES)

STABILITY AND REACTIVITY DATA:

STABILITY:	UNSTABLE: _____	STABLE: _____
HAZARDOUS POLYMERIZATION:	WILL OCCUR: _____	WILL NOT OCCUR: <u> X </u>

FLAMMABILITY DATA:

DECOMPOSITION TEMPERATURE:	NOT AVAILABLE
FLASHPOINT:	NOT AVAILABLE
AUTOIGNITION TEMPERATURE:	NOT AVAILABLE

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS:

THERMAL DECOMPOSITION MAY CAUSE THE RELEASE OF TOXIC, IRRITATING AND

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FLAMMABLE PRODUCTS, OXIDES OF NITROGEN, CARBON (CO, CO₂), CARBOXYLIC ACIDS, ALDEHYDES.

EXPLOSION DATA:

STATIC DISCHARGE:	NOT AVAILABLE
MECHANICAL IMPACT:	NOT AVAILABLE
LOWER EXPLOSIVE LIMIT, LEL (%):	NOT AVAILABLE
UPPER EXPLOSIVE LIMIT, UEL (%):	NOT AVAILABLE

SECTION 11 - TOXICOLOGY INFORMATION

EFFECTS FROM EYE CONTACT:

SEVERE IRRITANT. BURNS OF EYES MAY SEVERELY DAMAGE CONTACTED TISSUE AND PRODUCE SCARRING.

EFFECTS FROM SKIN CONTACT:

CAUSES CHEMICAL BURNS. SEVERE IRRITANT. MAY CAUSE ALLERGIC SKIN REACTION

EFFECTS FROM INHALATION:

SEVERE RESPIRATORY TRACT IRRITANT, MAY SEVERELY DAMAGE CONTACTED TISSUE AND PRODUCE SCARRING

EFFECTS FROM INGESTION:

HARMFUL IF SWALLOWED. MAY CAUSE DEATH UNLESS TREATED PROMPTLY.

TOXICOLOGICAL DATA:

EFFECTS OF ACUTE EXPOSURE:	SEE ABOVE
EFFECTS OF CHRONIC EXPOSURE:	ADVERSE EYE, SKIN AND RESPIRATORY EFFECTS. SENSITIZATION MAY OCCUR WITH PROLONGED SKIN CONTACT.
IRRITANCY OF MATERIAL:	SEE ACUTE EFFECTS
SENSITIZING CAPABILITY:	YES
CARCINOGENICITY OF MATERIAL:	NOT AVAILABLE
REPRODUCTIVE TOXICITY:	NOT AVAILABLE
TERATOGENICITY:	NOT AVAILABLE
MUTAGENICITY:	NOT AVAILABLE
SYNERGISTIC MATERIALS:	NOT AVAILABLE

SECTION 12 - ECOLOGICAL INFORMATION

ECOTOXICITY DATA:

NOT AVAILABLE

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OTHER EFFECTS AND INFORMATION:
NOT AVAILABLE

SECTION 13 - DISPOSAL CONSIDERATIONS

PRODUCT AS SOLD:
DISPOSE OF IN COMPLIANCE WITH ALL FEDERAL, PROVINCIAL AND MUNICIPAL LEGISLATION.

PRODUCT PACKAGING:
DISPOSE OF IN COMPLIANCE WITH ALL FEDERAL, PROVINCIAL AND MUNICIPAL LEGISLATION.

SPECIAL INSTRUCTIONS:
NOT AVAILABLE

SECTION 14 - TRANSPORT INFORMATION

SHIPPING INFORMATION:

SHIPPING NAME:	HBE-95-BG Cure - AMINES, LIQUID, CORROSIVE, N.O.S.
PIN/UN NUMBER:	UN 2735
PACKING GROUP:	III
TDG REGULATED:	AMINES, LIQUID, CORROSIVE, N.O.S.
DOT REGULATED:	AMINES, LIQUID, CORROSIVE, N.O.S.
IATA REGULATED:	AMINES, LIQUID, CORROSIVE, N.O.S.

SPECIAL SHIPPING INSTRUCTIONS:
NOT AVAILABLE

SECTION 15 - REGULATORY INFORMATION

NOTE:
THE REGULATORY INFORMATION PROVIDED IS NOT INTENDED TO BE COMPREHENSIVE. OTHER LOCAL, STATE, PROVINCIAL, FEDERAL, INTERNATIONAL OR COUNTRY SPECIFIC REGULATIONS MAY APPLY TO THIS MATERIAL. THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CONTROLLED PRODUCTS REGULATIONS (CPR) AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE CPR.

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GENERAL MATERIAL INFORMATION:

WHMIS CLASSIFICATION:



EUROPEAN CLASSIFICATION



RISK PHRASES

R10, R20/21/22, R34, R37, R41, R43, R50/53, R51/53, R52/53
 R62, R63

SAFETY PHRASES

S1/2, S26, S36/37/39, S45, S46, S60, S61

COMPONENT ANALYSIS – LIST STATUS:

<u>INGREDIENT</u>	<u>CAS #</u>	<u>CANADA WHMIS IDL</u>	<u>US CERCLA PRIORITY LIST</u>
TRIETHYLENETETRA MINE	112-24-3	YES	NO
PHENOL, 4,4'-(1-METHYLETHYLIDENE)BIS-	80-05-7	YES	NO
1-(2-,AMINOETHYL) PIPERAZINE (AEP)	140-31-8	YES	NO
NONYL PHENOL	25154-52-3	YES	NO
BENZYL ALCOHOL	100-51-6	YES	NO
FORMALDEHYDE POLYMER WITH TOLUENE	25155-81-8	NO	NO
POLYETHYLENEPOL YAMINES	29320-38-5	NO	NO
BENZYLDIMETHYLA MINE	103-83-3	YES	NO
1,2-ETHANEDIAMINE, N-(3-(TRIMETHOXYSILYL) PROPYL-	1760-24-3	NO	NO

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METHYLENEBISCYCLO LO HEXANAMINE	1761-71-3	NO	NO
TETRAETHYLENE POLYAMINES	112-57-2	YES	NO

COMPONENT ANALYSIS – INVENTORY STATUS:

<u>INGREDIENT</u>	<u>CAS #</u>	<u>CANADA- DSL</u>	<u>US- TSCA</u>	<u>EU- EINECS</u>	<u>AUSTRALIA -AICS</u>
TRIETHYLENETETRAMINE	112-24-3	YES	YES	YES	YES
PHENOL, 4,4'-(1-METHYLETHYLIDENE) BIS-	80-05-7	YES	YES	YES	YES
1-(2-AMINOETHYL) PIPERAZINE (AEP)	140-31-8	YES	YES	YES	YES
NONYL PHENOL	25154-52-3	YES	YES	YES	YES
BENZYL ALCOHOL	100-51-6	YES	YES	YES	YES
FORMALDEHYDE POLYMER WITH TOLUENE	25155-81-8	YES	YES	NO	YES
POLYETHYLENE POLYAMINES	29320-38-5	YES	YES	NO	YES
BENZYLDIMETHYL AMINE	103-83-3	YES	YES	YES	YES
1,2-ETHANEDIAMINE, N-(3-(TRIMETHOXYSILYL) PROPYL-	1760-24-3	YES	YES	YES	YES
METHYLENEBISCYCLOHEXANAMINE	1761-71-3	YES	YES	YES	YES
TETRAETHYLENE POLYAMINES	112-57-2	YES	YES	YES	YES

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SECTION 16 - OTHER INFORMATION

PREPARED BY: SHAWCOR LTD.
TELEPHONE NUMBER: (416) 743-7111
DATE PREPARED: September 21st 2006

ADDITIONAL INFORMATION:

EUROPEAN/INTERNATIONAL HAZARD SYMBOLS AND RISK AND SAFETY PHRASES

HAZARD SYMBOLS:

D1B	POISONOUS AND INFECTION MATERIAL
D2A/D2B	POISONOUS AND INFECTIOUS MATERIAL (OTHER TOXIC)
E	CORROSIVE MATERIAL
Xn	HARMFUL
C	CORROSIVE
N	HARMFUL TO THE ENVIRONMENT

RISK PHRASES:

R10	FLAMMABLE
R20/21/22	HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED
R34	CAUSES BURNS
R37	IRRITATING TO RESPIRATORY SYSTEM
R41	RISK OF SERIOUS DAMAGE TO EYES
R43	MAY CAUSE SENSITISATION BY SKIN CONTACT
R50/53	VERY TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT
R51/53	TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT
R52/53	HARMFUL TO AQUATIC ORGANISMS, MAY CAUSE LONG TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT
R62	POSSIBLE RISK OF IMPAIRED FERTILITY
R63	POSSIBLE RISK OF HARM TO UNBORN CHILD

SAFETY PHRASES:

S1/2	KEEP LOCKED UP AND OUT OF REACH OF CHILDREN
S26	TOXIC IF SWALLOWED
S36/37/39	WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION
S45	MAY CAUSE CANCER
S46	MAY CAUSE HERITABLE GENETIC DAMAGE
S60	MAY IMPAIR FERTILITY
S61	MAY CAUSE AHRM TO UNBORN CHILD

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