

MATERIAL SAFETY DATA SHEET

PRODUCT: E-Primer Cure
REVISION DATE: May 5th, 2011

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SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER/SUPPLIER: 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 **E-Primer Cure**
(AS USED ON LABEL AND LIST):
PRODUCT USE: Curing Agent for E-Primer 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, OXIDES OF CARBON, CARBOXYLIC ACIDS, ALDEHYDES.

SPECIFIC HAZARDS:
ELEVATED TEMPERATURES

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>
PHENOL, 4,4'-(1-METHYLETHYLIDENE)BIS-	80-05-7	201-245-8	10-30	X _n	R37, R41, R43, R62, R52
1-(2-,AMINOETHYL) PIPERAZINE (AEP)	140-31-8	205-411-0	10-30	C	R21/22, R34, R43, R52/53
NONYL PHENOL	25154-52-3	246-672-0	10-30	C, N	R22, R34, R62, R63, R50/53
POLYETHYLENEPOLYAMINES	29320-38-5	NA	10-30	X _n	R22, R36
BENZYL ALCOHOL	100-51-6	202-859-9	5-10	X _n	R20/22
BENZYLDIMETHYLAMINE	103-83-3	203-149-1	1-5	C	R10, R20/21/22, R34, R52/53
1,2-ETHANEDIAMINE, N-(3-(TRIMETHOXYSILYL)PROPYL-	1760-24-3	217-164-6	1-5	--	--
TETRAETHYLENE POLYAMINES	112-57-2	203-986-2	1-5	C, N	R21/22, R34, R43, R51/53

SECTION 4 - FIRST-AID MEASURES

EYE CONTACT:

FLUSH WITH WATER FOR 15 MINUTES. GET MEDICAL ATTENTION.

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.

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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:

DO NOT USE DIRECT STREAM OF WATER

THERMAL DECOMPOSITION BY-PRODUCTS:

THERMAL DECOMPOSITION MAY CAUSE THE RELEASE OF TOXIC, IRRITATING AND FLAMMABLE PRODUCTS, OXIDES OF NITROGEN, CARBON OXIDES, 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.

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 SOURCES OF IGNITION.

INCOMPATIBLE MATERIALS:

STRONG ACIDS, OXIDIZERS (PERCHLORATES, NITRATES)

VENTILATION:

ADEQUATE GENERAL VENTILATION IS RECOMMENDED

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SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION
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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/HANDLING. 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.

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>
PHENOL, 4,4'-(1-METHYLETHYLIDENE)BIS-	80-05-7	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE
1-(2-,AMINOETHYL) PIPERAZINE (AEP)	140-31-8	RAT (ORAL) 2140 ^{mg} / _{kg} RAT (DERMAL) 880 ^{mg} / _{kg}	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE
NONYL PHENOL	25154-52-3	MOUSE (ORAL) 1231 ^{mg} / _{kg} RAT (DERMAL) 2000 ^{mg} / _{kg}	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE
POLYETHYLENE POLYAMINES	29320-38-5	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE
BENZYL ALCOHOL	100-51-6	RAT (ORAL) 1230 ^{mg} / _{kg} RAT (DERMAL) 2000 ^{mg} / _{kg}	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE
BENZYLDIMETHYL AMINE	103-83-3	RAT (ORAL) 265 ^{mg} / _{kg} RAT (DERMAL) 1800 ^{mg} / _{kg}	Mouse, 2H: 1800 mg/m ³	NOT APPLICABLE	NOT APPLICABLE
1,2-ETHANEDIAMINE, N-(3-(TRIMETHOXYSILYL) PROPYL-	1760-24-3	RAT (ORAL) 7460 ^{mg} / _{kg}	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE
TETRAETHYLENE POLYAMINES	112-57-2	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE

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SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DATA:

PHYSICAL STATE:	LIQUID
FORM:	MODERATELY VISCOUS
COLOUR:	AMBER
ODOUR:	AMMONIA LIKE
ODOUR THRESHOLD (PPM):	NOT AVAILABLE
BOILING POINT:	> 200°C
FREEZING POINT:	- 8°C
MELTING POINT:	- 2°C
EVAPORATION RATE:	NOT APPLICABLE
VAPOUR PRESSURE (mmHg):	NOT APPLICABLE
VAPOUR DENSITY (AIR = 1):	NOT APPLICABLE
pH:	NOT APPLICABLE
SPECIFIC GRAVITY (WATER = 1):	1.040
COEFFICIENT OF WATER/OIL DISTRIBUTION:	NOT AVAILABLE
SOLUBILITY IN WATER:	6 mg/L (pH 7)

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:	> 300°C
FLASHPOINT:	> 120°C closed cup
AUTOIGNITION TEMPERATURE:	> 200°C

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS:

THERMAL DECOMPOSITION MAY CAUSE THE RELEASE OF TOXIC, IRRITATING AND FLAMMABLE PRODUCTS, OXIDES OF NITROGEN, OXIDES OF CARBON, 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

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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:	POSSIBLE RISK OF IMPAIRED FERTILITY
TERATOGENICITY:	POSSIBLE RISK OF HARM TO THE UNBORN CHILD
MUTAGENICITY:	NOT AVAILABLE
SYNERGISTIC MATERIALS:	NOT AVAILABLE

SECTION 12 - ECOLOGICAL INFORMATION

ECOTOXICITY DATA:

TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.

OTHER EFFECTS AND INFORMATION:

NOT AVAILABLE

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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:

NONE

SECTION 14 - TRANSPORT INFORMATION

SHIPPING INFORMATION:

SHIPPING NAME:	E-Primer 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.

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.

GENERAL MATERIAL INFORMATION:

WHMIS CLASSIFICATION:

D1B -  , D2A, D2B -  , E - 

EUROPEAN CLASSIFICATION

Xn -  , C -  , N - 

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COMPONENT ANALYSIS – LIST STATUS:

<u>INGREDIENT</u>	<u>CAS #</u>	<u>CANADA WHMIS IDL</u>	<u>US CERCLA PRIORITY LIST</u>
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
POLYETHYLENE POLYAMINES	29320-38-5	NO	NO
BENZYL ALCOHOL	100-51-6	YES	NO
BENZYLDIMETHYL AMINE	103-83-3	YES	NO
1,2-ETHANEDIAMINE, N-(3-(TRIMETHOXYSILYL)PROPYL-	1760-24-3	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>
PHENOL, 4,4'-(1-METHYLETHYLIDENE)BIS-	80-05-7	YES	YES	YES, 201-245-8	YES
1-(2-,AMINOETHYL) PIPERAZINE (AEP)	140-31-8	YES	YES	YES, 205-411-0	YES
NONYL PHENOL	25154-52-3	YES	YES	YES, 246-672-0	YES
POLYETHYLENE POLYAMINES	29320-38-5	YES	YES	NO	YES
BENZYL ALCOHOL	100-51-6	YES	YES	YES, 202-859-9	YES
BENZYLDIMETHYL AMINE	103-83-3	YES	YES	YES, 203-149-1	YES

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1,2-ETHANEDIAMINE, N-(3-(TRIMETHOXSILYL)PROPYL-	1760-24-3	YES	YES	YES, 217-164-6	YES
TETRAETHYLENE POLYAMINES	112-57-2	YES	YES	YES, 203-986-2	YES

SECTION 16 - OTHER INFORMATION

PREPARED BY: SHAWCOR LTD.
TELEPHONE NUMBER: (416) 743-7111
DATE PREPARED: May 5th, 2011

ADDITIONAL INFORMATION:

EUROPEAN/INTERNATIONAL HAZARD SYMBOLS AND RISK AND SAFETY PHRASES

HAZARD SYMBOLS:

X_n: HARMFUL
C: CORROSIVE
N: DANGEROUS FOR THE ENVIRONMENT

RISK PHRASES:

R10: FLAMMABLE
R20/22: HARMFUL BY INHALATION AND IF SWALLOWED
R20/21/22: HARMFUL BY INHALATION IN CONTACT WITH SKIN AND IF SWALLOWED
R21/22: HARMFUL IN CONTACT WITH SKIN AND IF SWALLOWED
R22: HARMFUL IF SWALLOWED
R34: CAUSES BURNS
R36: IRRITATING TO EYES
R36/37/38: HARMFUL BY INHALATION IN CONTACT WITH SKIN AND IF SWALLOWED
R38: IRRITATING TO SKIN
R41: RISK OF SERIOUS DAMAGE TO THE EYES
R43: MAY CAUSE SENSITIZATION BY SKIN CONTACT
R62: RISK OF IMPAIRED FERTILITY
R23/24/25: TOXIC BY INHALATION IN CONTACT WITH SKIN AND IF SWALLOWED
R42/43: MAY CAUSE SENSITIZATION BY INHALATION OR 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

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SAFETY PHRASES:

- S1/2: KEEP LOCKED AND OUT OF REACH OF CHILDREN
- S2: KEEP OUT OF REACH OF CHILDREN
- S24: AVOID CONTACT WITH SKIN
- S25: AVOID CONTACT WITH EYES
- S26: IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE
- S36: WEAR SUITABLE PROTECTIVE CLOTHING
- S36/37: WEAR SUITABLE PROTECTIVE CLOTHING AND GLOVES
- S36/37/39: WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYES/FACE PROTECTION
- S37/39: WEAR SUITABLE GLOVES AND EYES/FACE PROTECTION
- S39: WEAR EYES/FACE PROTECTION
- S45: IN CASE OF AN ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE)
- S46: IF SWALLOWED, SEEK MEDICAL ADVISCE IMMEDIATELY AND SHOW THIS CONTAINER OR LABEL
- S60: THIS MATERIAL AND/OR ITS CONTAINER MUST BE DISPOSED OF AS HAZARDIOUS WASTE.
- S61: AVOID RELEASE TO THE ENVIRONMENT. REFER TO SPECIAL INSTRUCTIONS / SAFETY DATA SHEETS

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