

SHELL OIL CO -- EPI-CURE U CURING AGENT, 43638 -- 8010-00-159-5056

===== Product Identification =====

Product ID:EPI-CURE U CURING AGENT, 43638

MSDS Date:12/15/1994

FSC:8010

NIIN:00-159-5056

MSDS Number: CFQVZ

=== Responsible Party ===

Company Name:SHELL OIL CO

Box:4320

City:HOUSTON

State:TX

ZIP:77210

Country:US

Info Phone Num:713-241-2252

Emergency Phone Num:713-473-9461;800-424-9300(CHEMTREC)

C

AGE:SHELO

=== Contractor Identification ===

Company Name:SHELL CHEMICAL COMPANY A DIV. OF SHELL OIL CO.

Address:1 SHELL PLAZA

Box:2463

City:HOUSTON

State:TX

ZIP:77001

Country:US

Phone:713-473-9461

CAGE:86961

Company Name:SHELL OIL CO

Box:4320

City:HOUSTON

State:TX

ZIP:77210-5000

Country:US

Phone:713-473-9461/713-241-2252

CAGE:SHELO

===== Composition/Information on Ingredients =====

Ingred Name:BISPHENOL A, EPICHLOROHYDRIN, DIETHYLENETRIAMINE ADDUCT;  
(EPOXY RESIN/POLYETHYL

ENEAMINE ADDUCT)

CAS:68610-56-0

Fraction by Wt: 73%

OSHA PEL:N/K

ACGIH TLV:N/K

Ingred Name:DIETHYLENETRIAMINE (DETA). LD50:(ORAL,RAT) 2.33 G/KG.

CAS:111-40-0

RTECS #:IE1225000

Fraction by Wt: 25%

OSHA PEL:1 PPM

ACGIH TLV:1 PPM, S

Ingred Name:PHENOL (SARA 302/313) (CERCLA). LD50:(ORAL,RAT) 530 MG/KG.

CAS:108-95-2

RTECS #:SJ3327000

Fraction by Wt: 2%

OSHA PEL:5 PPM, S

ACGIH TLV:5 PPM, S

EPA Rpt Qty:1000 LBS

DOT Rpt Qty:1000 LBS

Ingred Name:MATLS TO AVOID:PRIMARY & SECONDARY ALIPHATIC AMINES.

REACTIONS W/SOME CURING AGENTS MAY PRODUCE CONSIDERABLE HEAT.

RTECS #:9999999ZZ

Ingred Name:EFTS OF OVEREXP:CHRONIC COUGH. SKIN SENSIT

(ALLERGY):RASHES, ESP HIVES. RESP TRACT SENSIT (E.G. ALLERGY,

ASTHMA):(ING 6)

RTECS #:9999999ZZ

Ingred Name:ING 5:WHEEZING W/SHORTNESS OF BREATH & COUGH. KIDNEY

DMG:CHANGES IN URINE OUTPUT, URINE APPEAR/EDEMA (SWELL FROM (ING 7)

RTECS #:9999999ZZ

Ingred Name:ING 6:FLUID RETENTION). LIVER DMG:LOSS OF APPETITE, JAUN

(YELLOWISH SKIN COLOR) & S

OMETIMES PAIN IN UPPER ABDOM (ING 8)

RTECS #:9999999ZZ

Ingred Name:ING 7:ON RIGHT SIDE. EARLY TO MOD CNS DEPRESS:GIDD, HDCH,

DIZZ & NAUS; IN EXTREME CASES, UNCON, RESP DEPRESS & (ING 9)

RTECS #:9999999ZZ

Ingred Name:ING 8:DEATH MAY OCCUR. PHENOL IS TOX & MAY BE FATAL BY ALL

RTES OF EXPOS. MAY PRDCE LIVER, KIDNEY & HEART DMG, (ING 10)

RTECS #:9999999ZZ

Ingred Name:ING 9:CNS DEPRESS, RESP ARREST; BLADDER DMG; SKIN

DEPIGMENTATION; CARDIAC ARREST. RECENT REPRO DATA PROVIDE EVID(ING

11)

RTECS #:9999999ZZ

Ingred Name:ING 10:FOR EMBRYO & FETOTOX EFTS IN RATS AT LEVEL OF EXPOS NOT ELICITING SIGNIFICANT SYSTEMIC TOX. SIMILAR STUDY(ING 12)

RTECS #:9999999ZZ

Ingred Name:ING 11:IN MICE SHOWED EFTS W/CONCURRENT MATERNAL TOX & SUGGEST TERATOGENIC EFTS AT HIGH EXPOS. DETA HAS BEEN (ING 13)

RTECS #:9999999ZZ

Ingred Name:ING 12:FOUND TO INCR FREQUENCY OF SISTER CHROMATID EXCHANGE. IT WAS ALSO FOUND TO BE POS IN UNSCHEDULED DNA (ING 14)

RTECS #:9999999ZZ

Ingred Name:IN

G 13:MUTAGENICITY ASSAY. HISTOPATHOLOGICAL EFTS OF

KIDNEY, LIVER, SPLEEN & ADRENALS WERE OBSERVED IN TWO RAT (ING 15)

RTECS #:9999999ZZ

Ingred Name:ING 14:LIFETIME FEEDING STUDIES. PHENOL IS REPORTED TO BE TUMOR PROMOTER & AS AN INVITRO MUTAGEN IS EQUIVOCAL.

RTECS #:9999999ZZ

Ingred Name:OTHER PREC:THESE THERMAL & CHEM DECOMPS VARY WIDELY IN COMPOSITION & TOX. DO NOT GET IN EYES, ON SKIN/CLTHG. DO (ING 17)

RTECS #:9999999ZZ

Ingred Name:ING 16:NOT BREATHE VAPS/MISTS. CNTNRS EVEN THOSE THAT HAVE

BEEN EMPTIED, CAN CONTAIN HAZ PRODUCT RESIDUES.

RTECS #:9999999ZZ

Ingred Name:HYGIENE PRACT:CLTHG BEFORE REUSE. CONTAM LEATHER ARTICLES INCL SHOES CANNOT BE DECONTAM & SHOULD BE DESTROYED.

RTECS #:9999999ZZ

Ingred Name:SPILL PROC:SALVAGE VESSELS. SOAK UP RESIDUE W/ABSORB SUCH AS CLAY, SAND/OTHER SUITABLE MATL; PLACE IN NON- (ING 20)

RTECS #:9999999ZZ

Ingred Name:ING 19:LEAKING CNTNRS FOR PROPER DISP. FLUSH AREA W/WATER TO REMOVE LAST TRACES OF RESIDUE; DISP OF FL

USH SOLNS (ING 21)  
RTECS #:9999999ZZ

Ingred Name:ING 20:BY ABSORP. SM SPILLS:TAKE UP W/ABSORB MATL & PLACE  
IN NON-LEAKING CNTNRS; SEAL TIGHTLY FOR PROPER DISP. (ING 22)  
RTECS #:9999999ZZ

Ingred Name:ING 21:KEEP OUT OF SURF WATER, SEWERS & WATERWAYS  
ENTERING/LEADING TO SURF WATERS. NOTIFY AUTHS IF ANY EXPOS TO (ING  
23)  
RTECS #:9999999ZZ

Ingred Name:ING 22:GEN PUBLIC/ENVIRON OCCURS/IS LIKELY TO OCCUR. PROD  
CONSIDERED AN OIL. SPILLS INTO/LEADING TO SURF WATER (ING 24)  
RTECS #:999  
9999ZZ

Ingred Name:ING 23:THAT CAUSE A SHEEN MUST BE REPORTED TO THE NRC,  
800-424-8802. REPORTABLE QTY(RQ):PROD:50,000 LBS; ING 3:1000 LBS.  
RTECS #:9999999ZZ

Ingred Name:SUPDAT:MD. INGEST:DO NOT INDUCE VOMIT. GIVE 1 GLASS OF  
WATER UNLESS VICTIM IS DROWSY, CONVULSING/UNCON. SEEK MD IMMED.  
RTECS #:9999999ZZ

===== Hazards Identification =====

LD50 LC50 Mixture:SEE INGREDIENTS.

Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES

Reports of Carcinoge

nicity:NTP:NO IARC:NO OSHA:NO

Health Hazards Acute and Chronic:EYE CONT:CORR & MAY CAUSE SEV DMG INCL  
BLINDNESS. VAPS MAY BE IRRIT. SKIN CONT:CORR. MAY CAUSE SENSIT.  
PHENOL MAY BE TOX & MAY BE FATAL IF EVEN MOD AMTS ARE ABSORBED.  
INHAL:VAPS/MISTS MAY BE CORR TO U PPER RESP TRACT. RPTD/PRLNG EXPOS  
CAN RSLT IN LUNG DMG. MAY CAUSE RESP TRACT SENSIT. PHENOL MAY BE  
(EFTS OF OVEREXP)

Explanation of Carcinogenicity:NOT RELEVANT

Effects of Overexposure:HLTH HAZ:HIGHLY TOX & MAY BE  
FATAL IF INHALED.

INGEST:NOT EXPECTED TO BE RELEVANT RTE OF EXPOS, HOWEVER, CORR &  
MAY CAUSE SEV & PERM DMG TO MOUTH, THROAT & STOM. PROD MAY BE MOD  
TOX. SIGNS & SYMPS:IRR IT AS NOTED. LUNG DMG(SCARRING,  
BRONCH,EMPHYSEMA):SHORTNESS OF BREATH, ESP ON EXERTION & MAY BE  
ACCOMPANIED BY (ING 5)

Medical Cond Aggravated by Exposure:PREEXISTING EYE, SKIN & RESP  
DISORDERS & IMPAIRED KIDNEY, LIVER & HEART FUNCS FROM PREEXISTING  
DISORDERS MAY BE AGGRAVATED BY EXPOS TO THIS PROD

. PREEXISTING  
SKIN/RESP TRACT ALLERGIES MAY INCR(SUPDAT)

=====  
First Aid Measures  
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First Aid:EYES:IMMED FLUSH W/PLENTY OF WATER FOR @ LST 15 MINS WHILE HOLDING LIDS OPEN. RINSE CONTINUOUSLY W/WATER WHILE ON WAY TO GET MD. SKIN:IMMED REMOVE CONTAM CLTHG/SHOES. WIPE EXCESS FROM SKIN & FLUSH W/P LENTY OF WATER FOR AT LST 15 MINS. USE SOAP IF READILY AVAIL/FOLLOW BY THORO WASHING W/SOAP & WATER. DO NOT REUSE CLTHG UNTIL THORO DECON  
TAM. GET MD. INHAL:REMOVE VICTIM TO FRESH AIR & PROVIDE(SUPDAT)

=====  
Fire Fighting Measures  
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Flash Point Method:SCC  
Flash Point:>200F,>93C  
Extinguishing Media:USE WATER FOG, "ALCOHOL" FOAM, DRY CHEMICAL OR CO\*2.  
Fire Fighting Procedures:USE NIOSH APPRVD SCBA & FULL PROT EQUIP . MATL WILL NOT BURN UNLESS PREHEATED. COOL FIRE EXPOS CNTNRS W/WATER. WATER/FOG MAY CAUSE FROTHING WHICH (SUPDAT)  
Unusual Fire/Explosion Hazard:VAPS MAY BE RELS UNDER FIRE CNDTNS.  
DELAYED LUNG DMG (PULM EDEMA) CAN BE EXPER AFTER EXPOS TO COMBUST PRODS, SOMETIMES HRS AFTER EXPOS. NITROGEN OXIDES (SUPDAT)

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Accidental Release Measures  
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Spill Release Procedures:DANGER. TOX BY ALL RTES. CORR. PVNT ALL BODILY CONT W/SPILLED MATL. WEAR APPROP NIOSH APPRVD RESP & FULL-BODY PROT CLTHG. LG SPILLS:SHUT OFF LEAK ONLY IF SAFE TO DO SO. ELIM POTNTL FIRE HAZS. DIKE & C NTN. REMOVE W/VACUUM TRUCK/PUMP TO STOR/ (I  
NG  
19)  
Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

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Handling and Storage  
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Handling and Storage Precautions:STORE IN COOL, DRY PLACE W/ADEQ VENT. KEEP AWAY FROM OPEN FLAMES & HIGH TEMPS. DO NOT PRESSURIZE DRUM CNTNRS TO EMPTY THEM. DO NOT BREATHE FUMES.  
Other Precautions:HEATING THIS CURING AGENT IN PRESENCE OF AIR MAY CAUSE THERMAL OXIDATIVE DECOMP. WITH SOME EPOXY RESINS, IT MAY PRDCE EXOTHERMIC RXNS WHICH IN LG MASSES CA

N CAUSE RUNAWAY

POLYMERIZATION & CHARRING OF REACTANTS. FUMES & VAPS FROM (ING 16)

===== Exposure Controls/Personal Protection =====

Respiratory Protection:IF EXPOSURE MAY OR DOES EXCEED OCCUPATIONAL EXPOSURE LIMITS USE A NIOSH APPROVED RESPIRATOR TO PREVENT OVEREXPOSURE. IN ACCORD W/29 CFR 1910.134 USE EITHER A NIOSH APPRVD FULL-FACE, ATM-SUPPLYING RESP OR AIR-PURIFYING RESP FOR ORGANIC VAPS.

Ventilation:USE VENTILATION AS REQUIRED TO CONTROL VAPOR

CONCENTRATIONS.

Protective Gloves:CHEMICAL-RESISTANT GLOVES.

Eye Protection:ANSI APPRVD CHEM WORKERS GOGGS &(SUPDAT)

Other Protective Equipment:ANSI APPRVD EYE WASH FOUNTAIN & DELUGE SHOWER . WEAR CHEM-RESIST PROT CLTHG SUCH AS OUTER CLTHG/APRON; OVERSHOES.

Work Hygienic Practices:WASH W/SOAP & WATER BEFORE EATING, DRINKING, SMOKING, APPLYING COSMETICS/USING TOILET FACILITIES. LAUNDRER CONTAM(ING 18)

Supplemental Safety and Health

FIRE FIGHT PROC:CAN BE VIOLENT, ESP IF SPRAYED INT

O CNTNRS OF

HOT/BURNING LIQ. EXPLO HAZ:& NITROGEN CNTNG ORG CMPDS MAY BE RELS UPON COMBUST. MED CNDTNS:CHANCE OF DEVEL INCR ALLERGY SYMPS FROM EXPOS T O PROD. EYE PROT:FULL LGTH FSHLD . FIRST AID PROC:OXYG IF BRTHG IS DFCLT. GIVE ARTF RESP IF NOT BRTHG. GET(ING 25)

===== Physical/Chemical Properties =====

Vapor Pres:1

Spec Gravity:1.1 (H\*2O=1)

Solubility in Water:MISCIBLE

Appearance and Odor:LIGHT YELLOW LIQUID; AMMONIA ODOR.

===== Stab

ility and Reactivity Data =====

Stability Indicator/Materials to Avoid:YES

CAN REACT VIGOROUSLY W/STRONG OXIDIZING AGENTS, STRONG LEWIS/MINERAL ACIDS & STRONG MINERAL & ORG BASES, ESP (ING 4)

Stability Condition to Avoid:AVOID HEAT, SPARKS & FLAME.

Hazardous Decomposition Products:NITROGEN OXIDES, CARBON MONOXIDE & UNIDENTIFIED ORGANIC COMPOUNDS MAY BE FORMED DURING COMBUSTION.

===== Disposal Considerations =====

Waste Disposal Methods:DISP

OSAL MUST BE I/A/W FEDERAL, STATE & LOCAL  
REGULATIONS . PLACE IN AN APPROPRIATE DISPOSAL FACILITY IN  
COMPLIANCE W/LOCAL REGULATIONS.

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