

SHELL OIL CO -- EPON CURING AGENT U, 43636 -- 8040-00-181-7188

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Product Identification  
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Product ID:EPON CURING AGENT U, 43636

MSDS Date:06/14/1993

FSC:8040

NIIN:00-181-7188

MSDS Number: BDGJN

=== Responsible Party ===

Company Name:SHELL OIL CO

Address:1 SHELL PLAZA

Box:4320

City:HOUSTON

State:TX

ZIP:77210

Country:US

Info Phone Num:713-241-4819

Emergency Phone Num:713-473-9461;800-424-93

00(CHEMTREC)

Preparer's Name:J.C. WILLETT

CAGE: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

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Composition/Information on Ingredients  
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Ingred Name:BISPHENOL A, EPICHLOROHYDRIN, DIETHYLENE

TRIAMINE ADDUCT;  
(EPOXY RESIN/AMINE 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 #:SJ3325000

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:SUPDAT: & MAY

BE FATAL IF SWALLOWED. BASED ON ING 3, MAY

PRDCE LIVER, KIDNEY & HEART DMG, CNS DEPRESS; MAY PRDCE (ING 5)

RTECS #:9999999ZZ

Ingred Name:ING 4: RESP ARREST. BASED ON ING 2, MAY PRDCE SEV BURNS OF  
MOUTH & THROAT & GI IRRIT. SIGNS & SYMPS: SKIN SENSIT (ING 6)

RTECS #:9999999ZZ

Ingred Name:ING 5: (ALLERGY) MAY BE EVID BY RASH, ESP HIVES, LUNG  
SENSIT (E.G. ALLERGY, ASTHMA) MAY BE EVID BY WHEEZ WITH (ING 7)

RTECS #:9999999ZZ

Ingred Name:ING 6: SHORTNESS OF BRTH & COUGH. KIDNEY DMG MAY  
BE EVID BY

CHGS IN URINE OUTPUT & APPEAR OR EDEMA (SWELL FROM (ING 8)

RTECS #:9999999ZZ

Ingred Name:ING 7: FLUID RETENTION). LIVER DMG MAY BE EVID BY LOSS OF  
APPETITE, JAUNDICE (YELLOWISH SKIN COLOR) & SOMETIMES (ING 9)

RTECS #:9999999ZZ

Ingred Name:ING 8:UPPER ABDOM PAIN ON RIGHT SIDE. EARLY TO MOD CNS  
DEPRESS MAY BE EVID BY GIDD, HDCH, DIZZ & NAUS:IN EXTREME(ING 10)

RTECS #:9999999ZZ

Ingred Name:ING 9:CASES, UNCON, RESP DEPRESS & DEATH MAY OCCUR. OTHER  
EFTS:ING 3 IS TOX & MA

Y BE FATAL BY ALL ROUTES OF (ING 11)  
RTECS #:9999999ZZ

Inged Name:ING 10:EXPOS. BLADDER DMG & CARD ARREST MAY OCCUR BY  
DERMAL, INHAL, INGEST EXPOS. SKIN DEPIGMENTATION MAY OCCUR (ING 12)  
RTECS #:9999999ZZ

Inged Name:ING 11:BY CNTCT. REPRO DATA PROVIDES EVID FOR EMBRYO &  
FETOTOX EFTS IN RATS AT LEVEL OF EXPOS NOT ELICITING (ING 13)  
RTECS #:9999999ZZ

Inged Name:ING 12:SIGNIFICANT SYSTEMIC TOX. SIMILAR MICE STUDY SHOWED  
EFTS W/CONCURRENT MATERNAL TOX & SUGGEST TERATOGENIC (ING 14)  
RTECS #:9999999ZZ

Inged Name:ING 13:EFTS AT HIGH EXPOS. ALTHOUGH SIGNIFICANCE IS  
UNKNOWN, ING 2 HAS BEEN FOUND TO INCR FREQUENCY OF SISTER (ING 15)  
RTECS #:9999999ZZ

Inged Name:ING 14:CHROMATID EXCHANGE:ALSO FOUND POS IN UNSCHEDULED DNA  
SYNTHESIS MUTAGENICITY ASSAY. PHENOL IS NOT FOUND TO(ING 16)  
RTECS #:9999999ZZ

Inged Name:ING 15:BE CO-CARCIN, BUT REPORTED TO BE A TUMOR PROMOTER.  
EVID THAT IT IS IN VITRO MUTAGEN IS EQUIVOCAL & INCONCLUSIVE.  
RTECS #:9999999ZZ

Inged Name:MED  
CNDTNS: LIVER & HEART FUNCTIONS FROM PREEXISTING  
DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT.  
RTECS #:9999999ZZ

Inged Name:FIRST AID PROC:INCL SHOES, CANNOT BE DECONTAMD & SHOULD BE  
DESTROYED TO PVNT REUSE. INHAL:REMOVE TO FRESH AIR & (ING 19)  
RTECS #:9999999ZZ

Inged Name:ING 18:PROVIDE OXYGEN IF BRTHG IS DFCLT. GIVE ARTF RESP IF  
NOT BRTHG. GET MED ATTN. INGEST:DO NOT INDUCE VOMIT. (ING 20)  
RTECS #:9999999ZZ

Inged Name:ING 19: GIVE ONE GLASS OF WATER UNLESS VICTIM

IS DROWSY,  
CONVULSING OR UNCON. SEEK MED ATTN IMMED.  
RTECS #:9999999ZZ

Ingred Name:SPILL PROC: VESSELS. SOAK UP RESIDUE W/ABSORB SUCH AS CLAY,  
SAND OR OTHER SUITABLE MATL; DISPOSE OF PROPERLY. (ING 22)  
RTECS #:9999999ZZ

Ingred Name:ING 21: FLUSH AREA W/WATER TO REMOVE TRACE RESIDUE. SM  
SPILLS:TAKE UP W/ABSORB MATL & DISPOSE OF PROPERLY.  
RTECS #:9999999ZZ

Ingred Name:EYE PROT: AND FULL LENGTH FACESHIELD .  
RTECS #:9999999ZZ

===== Hazards Identification =====  
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LD50 LC50 Mixture:SEE INGREDIENTS

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

Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO

Health Hazards Acute and Chronic:EYES: BASED ON ING 2, PROD MAY BE CORR  
TO EYES & MAY CAUSE SEV DMG INCL BLINDNESS. MAY CAUSE TEMPORARY  
VISION DISTURB & PERM CORNEAL INJURY. SKIN: BASED ON ING 3, PROD  
MAY BE TOX & MAY BE FATAL IF EVE N MOD AMTS ARE ABSORBED THRU SKIN;  
MAY PRDCE LIVER, KIDNEY & HEART DMG. MAY PRDCE CNS DEPRESS.

MAY

(EFTS OF OVEREXP)

Explanation of Carcinogenicity:NOT RELEVANT

Effects of Overexposure:HLTH HAZ:PRDCE RESP ARREST. BASED ON ING 2,  
PRESUMED TO BE CORR TO SKIN & SKIN SENSITIZER. INHAL: BASED ON ING  
3, PROD MAY CAUSE SEV IRRIT TO NOSE, THROAT & RESP TRACT. BASED ON  
ING 2, MAY BE EXTREMEL Y IRRIT TO UPPER RESP TRACT & MAY PRDCESEV  
INFLAMM INCL LUNG; EXTREME CASES MAY BE FATAL. BASED ON ING 3,  
(SUPDAT)

Medical Cond Aggravated by Exposure:PREEXISTING EYE, SKIN & RESP

DISORDERS MAY BE AGGRAVATED BY EXPOS TO PROD. PREEXISTING SKIN/LUNG  
ALLERGIES MAY INCR CHANCE OF DEVELOPING INCR ALLERGY SYMPS FROM  
EXPOS TO PROD. IMPAIRED KIDNEY,(ING 17)

===== First Aid Measures =====

First Aid:EYES:IMMED FLUSH W/PLENTY OF WATER FOR AT LEAST 15 MIN WHILE  
HOLDING LIDS OPEN. RINSE CONTINUOUSLY W/WATER WHILE ON WAY TO GET  
MED ATTN. SKIN:IMMED REMOVE CONTAMD CLTHG/SHOES. WIPE EXCESS FROM  
SKIN & FLUSH W/PLENTY OF WATER FO

R AT LEAST 15MIN. USE SOAP IF  
READILY AVAIL/FOLLOW BY THORO WASHING W/SOAP & WATER. DO NOT REUSE  
CLTHG UNTIL THORO DECONTAMD. GET MED ATTN. CONTAMD LEATHER  
ARTICLES,(ING 18)

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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  
CARBON DIOXIDE.

Fire Fighting Procedures:USE NIOSH/MSHA APPRVD SCBA & FULL PROT EQUIP  
(INCL HELMET W/FSHLD, BUNKER COATS,  
GLOVES & RUB BOOTS). MATL WILL  
NOT BURN UNLESS PREHEATED. COOL (SUPDAT)

Unusual Fire/Explosion Hazard:DETA & PHENOL VAPORS MAY BE RELEASED  
UNDER FIRE CONDITIONS & NITROGEN OXIDES & NITROGEN CONTAINING  
ORGANIC COMPOUNDS MAY BE PRODUCED UPON COMBUSTION.

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Accidental Release Measures  
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Spill Release Procedures:MAY BURN ALTHOUGH NOT READILY IGNIT. USE  
CAUTIOUS JUDGMENT WHEN CLEANING UP LG SPILLS. LG SPILLS:WEAR  
NIOSH/MSHA APPRVD RESP & PROT C  
LTHG AS APPROP. SHUT OFF SOURCE OF  
LEAK IF SAFE. DIKE & CNTN. REMOV E W/VACUUM TRUCKS/PUMP TO  
STORAGE/SALVAGE (ING 21)

Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

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Handling and Storage  
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Handling and Storage Precautions:DANGER! CORROSIVE. STORE IN COOL, DRY  
PLACE WITH ADEQUATE VENTILATION. KEEP AWAY FROM OPEN FLAMES & HIGH  
TEMPERATURES.

Other Precautions:WARNING: SENSITIZER. CONTAINERS, EVEN EMPTIED, CAN  
CONTAIN HAZARDOUS P

RODUCT RESIDUES. MINIMIZE ALL CNTCT W/MATL.

LAUNDRER CONTAMD CLOTHING BEFORE REUSE. CONTAMD LEATHER ARTICLES,  
INCLUDING SHOES, CANN OT BE DECONTAMD & SHOULD BE DESTROYED.

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Exposure Controls/Personal Protection  
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Respiratory Protection:AVOID BRTHG VAPOR/MISTS. IF EXPOS MAY OR DOES  
EXCEED OCCUP EXPOS LIMITS USE NIOSH/MSHA APPROVED RESP TO PREVENT  
OVEREXP. IN ACCORD W/29 CFR 1910.134, USE EITHER FULL-FACE,  
ATMOSPHERE-SUPPLYING RESP OR AIR-PURIFYING R

ESP FOR ORGANIC  
VAPORS.

Ventilation:USE VENTILATION AS REQUIRED TO CONTROL VAPOR  
CONCENTRATIONS.

Protective Gloves:CHEMICAL RESISTANT GLOVES.

Eye Protection:ANSI APPRVD CHEM WORKERS GOGGS (ING 23)

Other Protective Equipment:EYE WASH FOUNTAINS & SAFETY SHOWERS AVAIL  
FOR EMER USE. AVOID CONTACT W/SKIN & CLTHG. WEAR CHEM-RESISTANT  
PROT CLTHG.

Work Hygienic Practices:WASH WITH SOAP & WATER BEFORE EATING, DRINKING,  
SMOKING, APPLYING COSMETICS OR USING TOILET FACILITIES.

Supplement  
al Safety and Health

FIRE FIGHT PROC: FIRE EXPOSED CNTNRS W/WATER. EFTS OF OVEREXP:PRESUMED  
TO BE HIGHLY TOX & MAY BE FATAL. MAY PRDCE LIVER, KIDNEY & HEART  
DMG; MAY PRDCE CNS DEPRESS; MAY PRDCE RESP ARREST. BASED ON ING 2,  
PROD MAY PRDCE TEMP BLURRING OF VISION; MAY BE LUNG SENSITIZER.  
INGEST: BASED ON ING 3, PROD MAY BE MOD TOX (ING 4)

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Physical/Chemical Properties  
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HCC:N1

Vapor Pres:1

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

Solubility in Water:MISCIB

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Appearance and Odor:LIGHT YELLOW LIQUID; AMMONIACAL ODOR.

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Stability and Reactivity Data  
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Stability Indicator/Materials to Avoid:YES

CAN REACT WITH STRONG OXIDIZING AGENTS AND STRONG LEWIS OR MINERAL  
ACIDS.

Stability Condition to Avoid:NONE SPECIFIED BY MANUFACTURER.

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

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Disposal Considerations =  
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Waste Disposal Methods:DISPOSAL MUST BE IN ACCORDANCE WITH FEDERAL,  
STATE AND LOCAL REGULATIONS .

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