

Service Reference

TOPIC: Repair Procedure for All TECTRON ME Shell Models

Required Materials

- Kraft Paper or Newspaper
- Scissors
- Graduated Cylinder
- Side Cutters
- Saw Horses

Required Tools

- Membrane Shell Repair Kit
- (UFSc P/N 164023)

It may occasionally become necessary to repair the TECTRON Membrane Electrode (ME) Shell due to parts or other foreign matter puncturing the Membrane. There are currently two designs of ME Shells you may be repairing: Non-Guarded and Guarded. Keep in mind that the repair procedure is intended for smaller punctures, not large tears or a great amount of Membrane damage. If there are any questions about whether your damaged ME Shell can be repaired, please call UFSc at the number below.

Procedure:

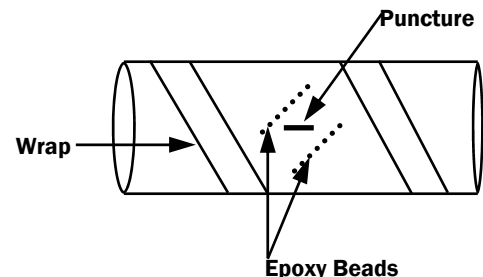
A. Safety First

1. Turn off the system power and lockout the DC rectifier with your own lock.
2. Remove the ME Electrode from the ME Shell. Rinse the ME Electrode and allow it to dry.

B. Repairing Non-Guarded Shells

1. Carefully cut back the Wrap about 12 mm (1/2") from the Membrane puncture. The wrap is the spiral looking material that covers the Membrane.
2. Clean off all the dirt or dried paint solids from the uncovered area. Wind the patch (P/N 100002 - same material as wrap) around the circumference of the ME Shell. Cut the patch so that it overlaps itself by 25-50 mm (1" - 2").
3. Mix the two part epoxy (one part P/N Z07001 Hardener - two parts P/N Z070002 resin) and allow it to sit for 15 minutes.

4. Pour a generous amount of epoxy on the punctured Membrane area and spread around with the wooden sticks (P/N Z121013). Pour a bead of epoxy 100 mm (4") long line with the axis of the ME Shell about 50 mm (2") from either side of the punctured area. See illustration below.



Think and act in a safe manner. Always disconnect power and use a lockout before you work on the E-coat system, or any of the related sub-systems. Observe any confined space conditions. Use the appropriate safety equipment and clothing for the task.

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Please read all the instructions carefully before performing any work to familiarize yourself with the project. If you are unclear with any of the steps listed please contact Technical Support (219) 464-2027 x22 / 24.

5. Place the edge of the patch over one of the beads of epoxy. Allow the epoxy to thoroughly penetrate the patch before proceeding.
6. Wind the patch around the ME Shell. Pour more epoxy on the patch covering the punctured areas.
7. Pour another bead of epoxy on the inside edge of the patch and attach it to the ME Shell. Use your hands to gently work the epoxy through all layers of the patch, making sure the patch is firmly attached to the ME Shell.
8. Begin applying the white PVC tape (P/N Z110005) to the center of the patch. Continue to wrap the tape tightly and remove all air bubbles. Repeat this step with the other side of the patch.
9. Place the ME Shell in a temperature controlled room (75° - 80°F). Place the ME Shell on saw-horses so that the punctured area faces the floor. Allow the epoxy to cure for 24 hours.
10. After 24 hours remove the tape and apply the wire ties (P/N 245002) to the patched areas for added support.
11. Stand the ME Shell up on end in a bucket and fill to the overflow nozzle with D.I. water. Wait for 30 minutes to allow the membrane to absorb the water. Monitor the leak rate. If the ME Shell is leaking less than 200 ml/hour, then the ME Shell is acceptable for use in an e-coat tank.

C. Repairing Guarded ME Shells

1. Carefully cut and remove the guard about 90 mm (3-1/2") above and below the center of the punctured area of Membrane.
2. Complete steps 1 through 10 in Section B.
3. Open the replacement guard (If repairing 1-1/2" model, use P/N 080013 for replacement guard. If repairing 2" model, use P/N 080016 for replacement guard.) and center it over the punctured area. Use the small wire ties (P/N 245002) to secure the guard to the ME Shell.

Complete step 11 in section B.

For more information see the original manual that came with the equipment or call UFS at the phone number shown below.

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Service Reference

MSDS - Abocast



ABATRON, INC.
5501 - 95th Ave., Kenosha, WI 53144 U.S.A.
(414)853-2000 FAX (414)853-2019
24 Hour Emergency No: 1800424-9300

Material Safety Data Sheet

SECTION 1

EFFECTIVE DATE: 5-12-1986

PRODUCT CODE: 50-3 A

PRODUCT NAME: ABOCAST 50-3 *Resin 8Ar or 24HR*

CLASS: EPOXIDE RESIN

TYPE: LIQUID RESIN

SECTION 2: HAZARDOUS INGREDIENTS

PROPRIETARY EPOXY PREPOLYMER

SECTION 3: PHYSICAL DATA

BOILING POINT: >400 F SOL. IN WATER: INSOLUBLE
VAPOR PRESS: CA.1 @ 180 C SP. GRAVITY: 1.15-1.17
VAP DENSITY (AIR=1): NA % VOLATILE BY VOL: <0.1
APPEARANCE & ODOR: CLEAR LIQUID; ALMOST NO ODOR.

SECTION 4: FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 490 APPROX FLAMMABLE LIMITS (STP IN AIR)
METHOD USED: ASTM D92-96, TOC LFL: NOT DETER. UFL: NOT DETER.
EXTINGUISHING MEDIA: FOAM, CO2, DRY CHEMICAL.
SPECIAL FIRE FIGHTING EQUIPMENT AND HAZARDS: NONE

SECTION 5 HEALTH HAZARD DATA

INGESTION: LOW SINGLE ORAL TOXICITY: LD50 (RAT): >2000 MG/KG.
EYE CONTACT: MINOR TRANSIENT IRRITATION. NO CORNEAL INJURY LIKELY.
SKIN CONTACT: ONLY MINOR IRRITATION. MAY BE A SKIN SENSITIZER.
SKIN ABSORPTION: NOT LIKELY TO BE ABSORBED IN TOXIC AMOUNTS.
INHALATION: NOT LIKELY A PROBLEM AT ROOM TEMPERATURE. VAPORS FROM HEATED
MATERIAL MAY BE IRRITATING.
EFFECT OF OVEREXPOSURE: NONE KNOWN.

FIRST AID PROCEDURES:

EYES: IRRIGATE WITH FLOWING WATER IMMEDIATELY FOR AT LEAST 10 MINUTES.
REFER TO MEDICAL PERSONNEL.
SKIN: CONTACT WILL PROBABLY CAUSE NO MORE THAN IRRITATION. FLUSH SKIN
WITH WATER OR SOAP WATER. WASH CLOTHING BEFORE REUSE.
INHALATION: REMOVE TO FRESH AIR IF EFFECTS OCCUR. CONSULT MEDICAL
PERSONNEL.
INGESTION: MAY BE TOXIC. INDUCE VOMITING IF LARGE AMOUNTS ARE INGESTED.

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NOTE TO PHYSICIAN:

EYES: INJURY IS UNLIKELY. STAIN FOR EVIDENCE OF CORNEAL INJURY.
CONSULT OPHTHALMOLOGIST.

SKIN: MAY CAUSE IRRITATION. TREAT AS ANY CONTACT
DERMATITIS. KNOWN OR SUSPECTED SENSITIZER. NOT LIKELY TO BE
ABSORBED IN ACUTELY TOXIC AMOUNTS.

RESPIRATORY: INJURY IS UNLIKELY.

ORAL: LOW IN TOXICITY.

SYSTEMIC: HUMAN EFFECTS NOT ESTABLISHED. NO SPECIFIC ANTIDOTE.
TREATMENT BASED ON THE SOUND JUDGMENT OF THE PHYSICIAN AND
THE INDIVIDUAL REACTION OF THE PATIENT.

SECTION 6: REACTIVITY DATA

STABILITY: STABLE UNDER NORMAL CONDITIONS. PROLONGED EXCESSIVE HEAT MAY
CAUSE PARTIAL DEGRADATION.

INCOMPATIBILITY: ACTIVE ACIDS AND BASES.

HAZARDOUS DECOMPOSITION PRODUCTS: NONE UNDER NORMAL CONDITIONS.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR BY ITSELF, BUT MASSES OF MORE
THAN 1-3 LBS OF PRODUCT PLUS ACIDS OR BASES MAY CAUSE IRREVERSIBLE
REACTION WITH CONSIDERABLE HEAT BUILDUP.

SECTION 7: SPILL, LEAK AND DISPOSAL PROCEDURES

ACTION TO TAKE FOR SPILLS (USE APPROPRIATE SAFETY EQUIPMENT): SOAK IN
ABSORBENT MATERIAL OR SCRAPE UP. RESIDUAL RESIN CAN BE REMOVED BY USE OF
NON-FLAMMABLE SOLVENT SUCH AS METHYLENE CHLORIDE.

DISPOSAL METHOD: BURY IN APPROPRIATE LANDFILL. (OPTIONAL) BURN
COMBUSTIBLE PORTION IN ADEQUATE INCINERATOR.

SECTION 8: SPECIAL HANDLING INFORMATION

VENTILATION: SUFFICIENT TO MINIMIZE VAPOR EXPOSURE IF GENERATED.

RESPIRATORY PROTECTION: NONE LIKELY NEEDED.

PROTECTIVE CLOTHING: CLEAN, BODY-COVERING CLOTHING. DISPOSABLE

PLASTIC OR RUBBER GLOVES. DISPOSABLE CONTAINERS AND PAPER IN WORK AREA.

EYE PROTECTION: SAFETY GLASSES.

SECTION 9: SPECIAL PRECAUTIONS AND ADDITIONAL INFORMATION

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: NONE EXCEPT NORMAL
HANDLING CARE. PRACTICE GOOD CAUTION AND PERSONAL CLEANLINESS TO AVOID
EYE & SKIN CONTACT. AVOID BREATHING VAPORS IF GENERATED.

THE INFORMATION HEREIN IS GIVEN IN GOOD FAITH, BUT NO WARRANTY, EXPRESS
OR IMPLIED, IS MADE.

Service Reference

MSDS - Abocure



SECTION 1:

EFFECTIVE DATE: 13 DECEMBER 1985

PRODUCT CODE: 50-1 B

PRODUCT NAME: ABOCURE 50-1 *8HR or 24HR*

CLASS: EPOXY COREACTANT
D.O.T. CATEGORY: CHEMICALS, NOIBN

TYPE: EPOXY CURING AGENT

SECTION 2:

HAZARDOUS INGREDIENTS: PROPRIETARY ALKYLENAMINE

SECTION 3:

PHYSICAL DATA

BOILING POINT: >350 F

SOL. IN WATER: MODERATE

VAPOR PRESS: NA

SP. GRAVITY: 0.95-1.00

VAP DENSITY (AIR=1): NA

% VOLATILE BY VOL: <0.1

APPEARANCE & ODOR: CLEAR AMBER COLORED LIQUID. LIGHT AMMONIA ODOR.

SECTION 4:

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: >340 F

FLAMMABLE LIMITS (STP IN AIR)

METHOD USED: P.MARTENS CLOSED CUP

LFL: NOT DETER.

UFL: NOT DETER.

EXTINGUISHING MEDIA: FOAM, CO2, DRY CHEMICAL.

SPECIAL FIRE FIGHTING EQUIPMENT AND HAZARDS: NONE

SECTION 5

HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE:

ACUTE: IRRITATING TO SKIN, EYES. VAPORS MAY IRRITATE MUCOUS MEMBRANES OF RESPIRATORY SYSTEM

CHRONIC: PROLONGED OR REPEATED EXPOSURE MAY CAUSE ASTHMA & SKIN SENSITIZATION OR OTHER ALLERGIC RESPONSE.

EMERGENCY AND FIRST AID PROCEDURES:

EYES: IRRIGATE WITH FLOWING WATER IMMEDIATELY FOR AT LEAST 15 MINUTES. REFER TO MEDICAL PERSONNEL.

SKIN: WIPE OFF EXCESS. SCRUB WITH SOAP AND WATER, FOLLOWED BY WATER RINSE. WASH CLOTHING & SHOES BEFORE REUSE. CONSULT PHYSICIAN IF SWELLING, REDDENING OR IRRITATION OCCURS.

INHALATION: REMOVE TO FRESH AIR IF EFFECTS OCCUR. CONSULT MEDICAL PERSONNEL.

INGESTION: LOW IN TOXICITY. DO NOT INDUCE VOMITING UNLESS MEDICAL ATTENTION IS NOT IMMEDIATELY AVAILABLE. ADMINISTER MILK OR WATER TO DRINK IF VICTIM IS CONSCIOUS

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MSDS - Abocure

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SECTION 6 REACTIVITY DATA

STABILITY: STABLE UNDER NORMAL CONDITIONS.
INCOMPATIBILITY: STRONG ACIDS & OXIDIZING MATERIALS, EPOXY RESINS UNDER UNCONTROLLED CONDITIONS.
HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO₂, NITROGEN OXIDES
HAZARDOUS POLYMERIZATION: NONE.

SECTION 7 SPILL, LEAK AND DISPOSAL PROCEDURES

ACTION TO TAKE FOR SPILLS (USE APPROPRIATE SAFETY EQUIPMENT): SOAK IN ABSORBENT MATERIAL OR SCRAPE UP. SCRUB WITH 5% ACETIC ACID TO EMULSIFY; RINSE WITH VERY HOT WATER. AVOID CONTACT WITH MATERIAL.
DISPOSAL METHOD: DISPOSE IN ACCORDANCE WITH FEDERAL, STATE & LOCAL REGULATIONS

SECTION 8 SPECIAL HANDLING INFORMATION

VENTILATION: SUFFICIENT TO MINIMIZE VAPOR EXPOSURE IF GENERATED.
RESPIRATORY PROTECTION: NONE LIKELY WITH PROPER ENVIRONMENTAL CONTROL AND LIGHT OCCASIONAL USE. NIOSH APPROVED PROTECTION REQUIRED IN ABSENCE OF PROPER ENVIRONMENTAL CONTROL. FOR EMERGENCIES A SELF-CONTAINED BREATHING APPARATUS OR FULL FACE RESPIRATOR IS RECOMMENDED.
PROTECTIVE CLOTHING: CLEAN, BODY-COVERING CLOTHING. DISPOSABLE PLASTIC OR RUBBER GLOVES. DISPOSABLE CONTAINERS AND PAPER IN WORK AREA.
EYE PROTECTION: SAFETY GLASSES.

SECTION 9 SPECIAL PRECAUTIONS AND ADDITIONAL INFORMATION

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: NONE EXCEPT NORMAL HANDLING CARE. PRACTICE GOOD CAUTION AND PERSONAL CLEANLINESS TO AVOID EYE & SKIN CONTACT. AVOID BREATHING VAPORS IF GENERATED.

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