# PREMIUM RESIN TECH.

RDH-9234 RDH-9234

## Section 1 - Chemical Product and Company Identification

**Product/Chemical Name:** **RDH-9234 Hardener**

**Manufacturer:** **PREMIUM RESIN TECH.**

3605 – 32nd Street , Port Huron , Michigan 48060 (586) 530-3633

**Chemical /Formula / Family:** *MODIFIED AMINE*

## Section 2 - Hazards Identification

### ☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

### Potential Health Effects

**Signal Word :** **"DANGER"**

**GHS LABEL :**

| HMIS | | |
|---|---|---|
| **H** | 3 | **PPE†** |
| **F** | 1 | |
| **R** | 0 | |

**Primary Entry Route:** SKIN, INHALATION

**Inhalation:** VAPORS / MISTS MAY BE CORROSIVE TO UPPER RESPIRATORY TRACT. REPEATED OR PROLONGED EXPOSURE CAN RESULT IN LUNG DAMAGE. MAY CAUSE RESPIRATORY TRACT SENSITIZATION. MAY BE TOXIC IF INHALED.

**Eye:** CORROSIVE TO THE EYES. MAY CAUSE SEVERE DAMAGE, INCLUDING BLINDNESS. VAPORS MAY BE IRRITATING.

**Skin:** CORROSIVE TO THE SKIN; MAY CAUSE SKIN SENSITIZATION. MAY BE TOXIC IF ABSORBED THROUGH THE SKIN.

**Ingestion:** NOT EXPECTED TO BE A RELEVANT ROUTE OF EXPOSURE, HOWEVER, THIS PRODUCT IS CORROSIVE AND MAY CAUSE SEVERE AND PERMANENT DAMAGE TO MOUTH, THROAT AND STOMACH.

**Carcinogenicity:** IARC, NTP, AND OSHA DO NOT LIST PCH-9234 AS A CARCINOGEN. **SEE CHRONIC EFFECTS BELOW**

**Medical conditions aggravated by long-term exposure:** PREEXISTING EYE, SKIN AND RESPIRATORY DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT. PREEXISTING SKIN OR LUNG ALLERGIES MAY INCREASE THE CHANCE OF DEVELOPING INCREASED ALLERGY SYMPTOMS FROM EXPOSURE TO THIS PRODUCT.

**Chronic Effects:** DIETHYLTOLUENEDIAMINE (DETDA) CAUSED CANCER AND PANCREATIC TOXICITY IN AN ORAL STUDY. DETDA HAS CAUSED INCREASED INCIDENCE OF LIVER, THYROID AND PITUITARY TUMORS IN A TWO YEAR STUDY IN RATS DOSED UP TO 70 PPM DAILY. THE NOWL WAS 35 PPM. PANCREATIC TOXICITY WAS ALSO OBSERVED IN THIS STUDY. IN A 90 DAY ORAL STUDY IN WHICH RATS WERE DOSED UP TO 320 PPM, EFFECTS TO THE SPLEEN, KIDNEY, PANCREAS, LIVER, BONE MARROW, LYMPH SYSTEM AND THYROID OCCURED. PRIMARILY AT THE HIGHER DOSE, DECREASED BODY WEIGHT, EARLY DEATHS, INCREASED BLOOD GLUCOSE AND CATARACTS WERE ALSO OBSERVED.

## Section 3 - Composition / Information on Ingredients

| Ingredient Name | CAS Number | % wt *or* % vol |
|---|---|---|
| DIETHYLTOLUENEDIAMINE | 68479-98-1 | 45-50 |
| I P D | 2855-13-2 | 30-40 |
| TRIETHYLENETETRAMINE | 000112-24-3 | 15-20 |

## Section 4 - First Aid Measures

**Inhalation:** REMOVE VICTIM TO FRESH AIR AND PROVIDE OXYGEN IF BREATHING IS DIFFICULT, GIVE ARTIFICIAL RESPIRATION. IF NOT BREATHING. GET MEDICAL ATTENTION.

**Eye Contact:** FLUSH EYES WITH PLENTY OF WATER FOR 15 MINUTES WHILE HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION.

**Skin Contact:** REMOVE CONTAMINATED CLOTHING/SHOES AND WIPE EXCESS FROM SKIN. FLUSH SKIN WITH WATER. FOLLOW BY WASHING WITH SOAP AND WATER. IF IRRITATION OCCURS, GET MEDICAL ATTENTION. DO NOT REUSE CLOTHING UNTIL CLEANED. CONTAMINATED LEATHER ARTICLES, INCLUDING SHOES, CANNOT BE DECONTAMINATED AND SHOULD BE DESTROYED TO PREVENT REUSE.

**Ingestion:** DO NOT INDUCE VOMITING. GIVE ONE GLASS OF WATER UNLESS VICTIM IS DROWSY, CONVULSING, OR UNCONSCIOUS. CALL A PHYSICIAN.

***After first aid, get appropriate in-plant, paramedic, or community medical support.***

**Note to Physicians:** IF THE AMOUNT INGESTED IS ESTIMATED TO APPROACH THE TOXIC RANGE, THEN EMPTYING THE STOMACH SHOULD BE CONSIDERED DESPITE THE PRESENCE OF CORROSIVE MATERIAL. ENDOSCOPY DIRECTED LAVAGE WITH A CUFFED ENDOTRACHEAL TUBE IN PLACE MAY BE NECESSARY, IF AVAILABLE. ORDINARY INCUBATION MAY PERFORATE REVITALIZED TISSUE. CONSULT A POISON CONTROL CENTER.

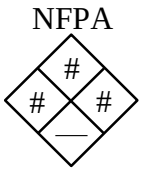
**Special Precautions / Procedures:** STORE IN COOL, DRY PLACE WITH ADEQUATE ENTILATION. KEEP AWAY FROM OPEN FLAMES AND HIGH TEMPERATURES. HEATING THIS RESIN ABOVE 300$^{O}$F IN THE PRESENCE OF AIR MAY CAUSE SLOW OXIDANT DECOMPOSITION ABOVE 500$^{O}$F, POLYMERIZATION MAY OCCUR. SOME CURING AGENTS, POLYAMINES, CAN PRODUCE EXOTHERMIC REACTIONS WHICH IN LARGE MASSES CAN CAUSE RUNAWAY POLYMERIZATION AND CHARRING OF THE REACTIONS. FUMES AND VAPORS FROM THESE THERMAL AND CHEMICAL DECOMPOSITION VARY WIDELY IN COMPOSITION AND TOXICITY. DO NOT BREATH FUMES. DO NOT PRESSURIZE DRUM CONTAINERS TO EMPTY THEM. CONTAINERS, EVEN THOSE THAT HAVE BEEN EMPTIED CAN CONTAIN PRODUCT RESIDUES. WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING, APPLYING COSMETICS, OR USING TOILET FACILITIES. LAUNDER CONTAMINATED CLOTHING BEFORE REUSE. CONTAMINATED LEATHER ARTICLES, INCLUDING SHOES CANNOT BE DECONTAMINATED AND SHOULD BE DESTROYED TO PREVENT REUSE.

## Section 5 - Fire-Fighting Measures

**Flash Point:** 200°F (93$^{o}$C)

**Flash Point Method:** SETAFLASH

**LEL:** N/AV **UEL:** N/AV




**Flammability Classification:** MATERIAL WILL NOT BURN UNLESS PREHEATED.

**Extinguishing Media:** USE WATER FOG, "ALCOHOL" FOAM, DRY CHEMICAL OR $C0_2$. WATER OR FOG MAY CAUSE FROTHING WHICH CAN BE VIOLENT ESPECIALLY IF SPRAYED INTO CONTAINERS OF HOT OR BURNING LIQUID.

**Unusual Fire or Explosion Hazards:** DELAYED LUNG DAMAGE (PULMONARY EDEMA) CAN BE EXPERIENCED AFTER EXPOSURE TO COMBUSTION PRODUCTS, SOMETIMES HOURS AFTER THE EXPOSURE.

**Hazardous Combustion Products:** NITROGEN OXIDES AND NITROGEN CONTAINING ORGANIC COMPOUNDS MAY BE RELEASED UPON COMBUSTION.

**Fire-Fighting Instructions:** DO NOT RELEASE RUNOFF FROM FIRE CONTROL METHODS TO SEWERS OR WATERWAYS.

**Fire-Fighting Equipment:** WEAR FULL BUNKER GEAR INCLUDING HELMET WITH FACE SHIELD, BUNKER COATS, GLOVES AND RUBBER BOOTS. BECAUSE FIRE MAY PRODUCE TOXIC THERMAL DECOMPOSITION PRODUCTS, WEAR A SELF-CONTAINED BREATHING APPARATUS (SCBA) WITH A FULL FACEPIECE OPERATED IN PRESSURE-DEMAND OR POSITIVE-PRESSURE MODE.

## Section 6 - Accidental Release Measures

**Spill /Leak Procedures:** MAY BURN ALTHOUGH NOT READILY IGNITABLE.

**Small Spills:** TAKE UP WITH AN ABSORBENT MATERIAL AND DISPOSE OF PROPERLY.

**Large Spills:** DIKE AND CONTAIN. REMOVE WITH VACUUM TRUCKS OR PUMP TO STORAGE / SALVAGE MATERIAL; DISPOSE OF PROPERLY.

**Containment:** FOR LARGE SPILLS, DIKE FAR AHEAD OF LIQUID SPILL FOR LATER DISPOSAL. DO NOT RELEASE INTO SEWERS OR WATERWAYS.

**Cleanup:** FLUSH AREA WITH WATER TO REMOVE TRACE RESIDUE.

**Regulatory Requirements:** FOLLOW APPLICABLE OSHA REGULATIONS (29 CFR 1910.120).

## Section 7 - Handling and Storage

**Handling Precautions:** MINIMIZE ALL CONTACT WITH MATERIAL. WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING, APPLYING COSMETICS OR USING TOILET FACILITIES.

**Storage Requirements:** STORE IN COOL, DRY PLACE WITH ADEQUATE VENTILATION.

**Regulatory Requirements:** NONE

## Section 8 - Exposure Controls / Personal Protection

**Engineering Controls:**
**Ventilation:** PROVIDE GENERAL OR LOCAL EXHAUST VENTILATION SYSTEMS TO MAINTAIN AIRBORNE CONCENTRATIONS BELOW OSHA PELS (SEC. 2). LOCAL EXHAUST VENTILATION IS PREFERRED BECAUSE IT PREVENTS CONTAMINANT DISPERSION INTO THE WORK AREA BY CONTROLLING IT AT ITS SOURCE.
**Administrative Controls:**
**Respiratory Protection:** SEEK PROFESSIONAL ADVICE PRIOR TO RESPIRATOR SELECTION AND USE. FOLLOW OSHA RESPIRATOR REGULATIONS (29 CFR 1910.134) AND, IF NECESSARY, WEAR A MSHA/NIOSH-APPROVED RESPIRATOR. SELECT RESPIRATOR BASED ON ITS SUITABILITY TO PROVIDE ADEQUATE WORKER PROTECTION FOR GIVEN WORKING CONDITIONS, LEVEL OF AIRBORNE CONTAMINATION, AND PRESENCE OF SUFFICIENT OXYGEN. FOR EMERGENCY OR NONROUTINE OPERATIONS (CLEANING SPILLS, REACTOR VESSELS, OR STORAGE TANKS), WEAR AN SCBA. ***WARNING!*** AIR-PURIFYING RESPIRATORS DO NOT PROTECT WORKERS IN OXYGEN-DEFICIENT ATMOSPHERES. IF RESPIRATORS ARE USED, OSHA REQUIRES A WRITTEN RESPIRATORY PROTECTION PROGRAM THAT INCLUDES AT LEAST: MEDICAL CERTIFICATION, TRAINING, FIT-TESTING, PERIODIC ENVIRONMENTAL MONITORING, MAINTENANCE, INSPECTION, CLEANING, AND CONVENIENT, SANITARY STORAGE AREAS.
**Protective Clothing/Equipment:** WEAR CHEMICALLY PROTECTIVE GLOVES, BOOTS, APRONS, AND GAUNTLETS TO PREVENT PROLONGED OR REPEATED SKIN CONTACT. WEAR PROTECTIVE EYEGLASSES OR CHEMICAL SAFETY GOGGLES, PER OSHA EYE AND FACE PROTECTION REGULATIONS (29 CFR 1910.133). CONTACT LENSES ARE NOT EYE PROTECTIVE DEVICES. APPROPRIATE EYE PROTECTION MUST BE WORN INSTEAD OF, OR IN CONJUNCTION WITH CONTACT LENSES.
**Safety Stations:** MAKE EMERGENCY EYEWASH STATIONS, SAFETY/QUICK-DRENCH SHOWERS, AND WASHING FACILITIES AVAILABLE IN WORK AREA.
**Contaminated Equipment:** SEPARATE CONTAMINATED WORK CLOTHES FROM STREET CLOTHES. LAUNDER BEFORE REUSE. REMOVE THIS MATERIAL FROM YOUR SHOES AND CLEAN PERSONAL PROTECTIVE EQUIPMENT.
**Comments:** NEVER EAT, DRINK, OR SMOKE IN WORK AREAS. PRACTICE GOOD PERSONAL HYGIENE AFTER USING THIS MATERIAL, ESPECIALLY BEFORE EATING, DRINKING, SMOKING, USING THE TOILET, OR APPLYING COSMETICS.

## Section 9 - Physical and Chemical Properties

**Physical State:** LIQUID
**Vapor Pressure:** <1 MM HG @ $20^0$C
**Vapor Density (Air=1):** NOT VOLITILE
**Water Solubility:** PARTIAL

**Appearance and Odor:** CLEAR DARK LIQUID W/ AMINE OROR
**Formula Weight:** 8.35 lb. per gallon
**Density:** 8.35
**Specific Gravity ($H_2O$=1, at 24 °C):** 1.01

**Boiling Point:** N/AV
**% Volatile:** NOT
**Evaporation Rate**: <1 (N-BUTYL ACETATE = 1)

## Section 10 - Stability and Reactivity

**Stability:** RDH-9234 IS STABLE AT ROOM TEMPERATURE IN CLOSED CONTAINERS UNDER NORMAL STORAGE AND HANDLING CONDITIONS.
**Polymerization:** HAZARDOUS POLYMERIZATION CANNOT OCCUR.
**Chemical Incompatibilities:** STRONG OXIDANTS AND ACIDS
**Conditions to Avoid:** HEAT AND FLAME
**Hazardous Decomposition Products:** THERMAL OXIDATIVE DECOMPOSITION OF RDH-9234 CAN PRODUCE AMMONIA, BURNING WILL PRODUCE TOXIC FUMES; CO, NITRIC OXIDES, UNIDENTIFIED ORGANIC COMPOUNDS.

## Section 11- Toxicological Information

Toxicity Data:*

**Skin Effects**: 705 MG/KG (RAT) LD50 **Acute Oral Effects:** Rat, $LD_{50}$ : 485 mg/kg
**Acute Inhalation Effects:** > 2.45mg/l (Rat) LD50

- See NIOSH, *RTECS* (????0000), for additional toxicity data.

## Section 13 - Disposal Considerations

**Disposal:** CONTACT YOUR SUPPLIER OR A LICENSED CONTRACTOR FOR DETAILED RECOMMENDATIONS. FOLLOW APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.
**Disposal Regulatory Requirements:**
**Container Cleaning and Disposal:**

## Section 14 - Transport Information

### DOT Transportation Data (49 CFR 172.101):

**Shipping Name:**
**Shipping Symbols:**
**Hazard Class:** 8
**ID No.:** UN 2289
**Packing Group:** III
**Label:**
**Special Provisions (172.102):**

**Packaging Authorizations**
**a) Exceptions:** 173
**b) Non-bulk Packaging:** 173
**c) Bulk Packaging:** 173

**Quantity Limitations**
**a) Passenger, Aircraft, or Railcar:**
**b) Cargo Aircraft Only:**

**Vessel Stowage Requirements**
**a) Vessel Stowage:**
**b) Other:**

## Section 15 - Regulatory Information

**EPA Regulations:**
RCRA Hazardous Waste Number: Not listed (40 CFR 261.33)
RCRA Hazardous Waste Classification (40 CFR 261.??): Not classified
CERCLA Hazardous Substance (40 CFR 302.4) listed/unlisted specific per RCRA, Sec. 3001; CWA, Sec. 311 (b)(4); CWA, Sec. 307(a), CAA, Sec. 112
CERCLA Reportable Quantity (RQ), ?? LB (?? kg)
SARA 311/312 Codes:
SARA Toxic Chemical (40 CFR 372.65): Not listed
SARA EHS (Extremely Hazardous Substance) (40 CFR 355): Not listed, Threshold Planning Quantity (TPQ)
**OSHA Regulations:**
Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-1-A): Not listed
OSHA Specifically Regulated Substance (29CFR 1910.????)
**State Regulations:**

## Section 16 - Other Information

**Prepared By:** Premium Resin Tech
**Revision Notes:** update 2-2019
**Additional Hazard Rating Systems:**

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