



# Material Safety Data Sheet

DATE: 5/15/2013

## 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: PROTAL 7900HT PART A RESIN  
Product Use Description: Epoxy Resin  
Manufacturer / Importer/ Distributor: Denso North America  
9747 Whithorn Drive  
Houston, Texas 77095  
281-821-3355 (Office)  
281-821-0304 (Fax)  
Telephone: 1-281-821-3355 Corporate  
1-888-821-2300 Toll Free Number  
Emergency Telephone Number (24Hour): 1-801-629-0667

## 2. HAZARDS IDENTIFICATION

Emergency Overview  
**WARNING!**  
Irritant  
Causes eye and skin irritation.  
May cause allergic skin reaction  
May cause respiratory tract irritation.  
May cause abdominal pain, nausea, vomiting and diarrhea if swallowed.  
Heated material can cause thermal burns.  
May cause sensitization by skin contact.

Potential Health Effects  
Inhalation: Slightly irritating to the respiratory system.  
Ingestion: Not expected to be harmful under normal conditions of use.  
Eye contact: Irritating to eyes. Heated material can cause thermal burns.  
Skin contact: Irritating to skin. May cause sensitization by skin contact. Heated material can cause thermal burns.  
Chronic Health Hazard: Prolonged or repeated contact may irritate the skin, causing dermatitis. Not listed or regulated by IARC, NTP, OSHA, or ACGIH.

Exposure guidelines  
Target Organs: Skin. Eyes. Respiratory system. Gastrointestinal tract.  
Symptoms: Repeated and/or prolonged exposure may cause respiratory tract irritation and coughing, skin irritation and redness, eye pain or irritation and watering and redness.

Potential environmental effects: No data is available.  
Aggravated Medical Condition: Pre-existing skin disorders may be aggravated by over-exposure to this product.  
See section 11 for more detailed toxicological information.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

Components	CAS Number	Concentration
Epoxy phenol novolac resin	28064-14-4	30-40%
1,4-bis((2,3-epoxypropoxy)methyl)cyclohexane	14228-73-0	10-20%
Trimethylol propane triglycidyl ether polymer	30499-70-8	5-15%

CHEMICAL FAMILY : Epoxy Resin Mixture

Amounts specified are typical and do not represent a specification. Remaining components are proprietary, non-hazardous, and/or present at amounts below reportable limits.

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## 4. FIRST AID MEASURES

General advice	Seek medical advice. If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention.
Skin contact	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse. For contact with hot product, flush contaminated skin with large amounts of cold water to dissipate heat. Cover with clean cotton sheeting or gauze. Get medical attention immediately.
Ingestion	Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Inhalation	Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

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## 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Alcohol-resistant foam. Carbon dioxide (CO <sub>2</sub> ) Dry chemical. Dry sand. Limestone powder.
Chronic Health Hazard	Decomposition products may include the following materials: carbon dioxides. Downwind personnel must be evacuated. Burning produces noxious and toxic fumes.
Special protective equipment for fire-fighters	Avoid contact with the skin. Fire-fighters should wear appropriate personal protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Further information	Do not allow run-off from fire fighting to enter drains or water courses.

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## 6. ACCIDENTAL RELEASE MEASURES

Personal precautions	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled materials. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
Environmental precautions	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Methods for cleaning up	Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Use absorbent with inert material. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.
Additional advice	Stop leak if without risk.

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## 7. HANDLING AND STORAGE

Handling	Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking or smoking. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breath vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Storage	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
Technical Precautions	Do not store in reactive metal containers.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Consult local authorities for accept exposure limits.	
Recommended monitoring procedures	If this product contains ingredients with exposure limits, personal workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
Engineering measures	Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing or discard as necessary. Ensure that eyewash stations and safety showers are close to the workstation location.



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Respiratory Protection	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicated this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Eye Protection	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. This may include, but is not limited to, safety glasses, goggles and face shields.
Skin Protection	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. This equipment may include, but is not limited to, impervious gloves, gauntlets, impervious shoes/boots, and protective clothing. The breakthrough time of the selected protective glove(s), shoes, and clothing must be greater than the intended use period.
Environmental exposure controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. Environmental exposure controls may also include dikes or other liquid containment devices.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Form	Viscous Liquid.	Auto-ignition temperature	N/A
Color	White.	Odor threshold	N/A
Odor	Irritating.	Evaporation rate	N/A
Flammable Limits	N/A	Viscosity	197,000 cP @ 73oF (22oC)
Relative vapor density	N/A	pH	7
Relative Density	1.54	Boiling point/range	N/A
Vapor Pressure	N/A	Flash point	N/A
Density at 70°F (21°C)	12.9 lbs/gal	Water solubility	Slight

## 10. STABILITY AND REACTIVITY

Stability	The product is stable. Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions to avoid	Strong oxidizers
Materials to avoid	Reactive or incompatible with the following materials: Oxidizing materials Strong acids Strong alkalis
Other hazards	Reacts with considerable heat release with some curing agents.
Hazardous decomposition products	Decomposition products may include the following materials: Carbon oxides

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## 11. TOXICOLOGICAL INFORMATION

### Acute Health Hazard

Acute toxicity ingredient name	Epoxy phenol novolac resin	1,4-bis((2,3-epoxypropoxy)methyl)cyclohexane
LD50 Oral	Rat >2,000 mg/kg	>2,000 mg/kg
LD50 Dermal	Rat >2,000 mg/kg	>2,000 mg/kg

### Other toxicological information

Carcinogenicity	Classification
Ingredient Name	
All ingredients	
ACGIH	Not classified
IARC	Not classified
NTP	Not listed
OSHA	Not regulated
EU	Not classified

Eye irritation/corrosion	Irritating to the eye.
Skin irritation/corrosion	Irritating to skin.
Sensitization	May cause sensitization by skin contact.
Inhalation	Slightly irritating to respiratory tract.
Ingestion	Swallowing can cause abdominal irritation, nausea, vomiting & diarrhea.
Chronic Health Hazard	The product or a component may be mutagenic, the data is inconclusive.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity effects

Aquatic toxicity	No data is available on the product itself.
Toxicity to other organisms	No data available.

### Persistence and degradability

Biodegradability	No data is available on the product itself.
Mobility	No data available.
Bioaccumulation	No data is available on the product itself.

## 13. DISPOSAL CONSIDERATIONS

Waste disposal	The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional and local authority requirements. Avoid disposal of spilled material and runoff and contact with soil, waterways, drains and sewers. Dispose of contaminated containers, soils, etc. in compliance with the requirements of environmental protection and waste disposal legislation and any regional and local authority requirements.
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## 14. TRANSPORT INFORMATION

The data provided in this section is for information only and may not be specific to your package size or mode of transport. You will need to apply the appropriate regulations to properly classify your shipment for transportation. For complete transportation information, contact an Denso customer service representative.

Regulatory Information	UN/ID No.	Proper shipping name	Class or Division Packing group	Reportable Quantities
CFR	N/A	Non-regulated	N/A	N/A
TDG	N/A	Non-regulated	N/A	N/A
IMO/IMDG	N/A	Non-regulated	N/A	N/A
IATA	N/A	Non-regulated	N/A	N/A

## 15. REGULATORY INFORMATION

Toxic Substance Control Act (TSCA) 12(b) Components(s).  
None.

OSHA Hazard Communication Standard (29 CFR 1910.1 200) Hazard Class(es)  
Irritant. Sensitizer.

Country	Regulatory List	Notification
USA	TSCA 8b	All components listed or exempted.
Canada	DSL	All components listed or exempted.
EU	EINECS	All components listed or exempted.
Australia	AICS	All components listed or exempted.
Japan	ENCS	All components listed or exempted.
South Korea	KECI	All components listed or exempted.
China	IECSC	All components listed or exempted.
Philippines	PICCS	All components listed or exempted.

HCS Classification      Irritating material, Sensitizing material

EPA SARA Title III Section 312 (40 CFR 370) Hazard Classification  
Immediate Health Hazard

EPA SARA Title III Section 313 (40 CFR 372) Component(s) above 'de minimus' level  
None.

EPA SARA Title III Section 302 Extremely Hazardous Substances  
None.

State regulations      Massachusetts RTK Substances - None required.  
New Jersey RTK Substances - None required.  
Pennsylvania RTK Substances - None required.  
California Proposition 65 - WARNING: This product contains a chemical known to the State of California to cause cancer. Oxirane, (phenoxyethyl)- CAS 122-60-1

WHMIS Hazard  
Classification (Canada)      Class D-2B: Material causing other toxic effects (Toxic).

Canadian lists      Canadian NPRI: None required.

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## 16. OTHER INFORMATION

### HMIS<sup>®</sup>

Health	2
Flammability	1
Physical hazard	0
Chronic	

**Caution:** HMIS<sup>®</sup> ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS<sup>®</sup> ratings are not required on MSDS's under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS<sup>®</sup> ratings are to be used with a fully implemented HMIS<sup>®</sup> program. HMIS<sup>®</sup> is a registered mark of the National Paint & Coatings Association (NPCA). HMIS<sup>®</sup> materials may be purchased exclusively from J.J. Keller (800) 327-6868. The customer is responsible for determining the PPE code for this material.

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### Notice to reader

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