



<b>Health</b>	<b>3</b>
<b>Fire</b>	<b>0</b>
<b>Reactivity</b>	<b>0</b>
<b>Personal Protection</b>	

## SECTION 1 – MATERIAL IDENTIFICATION

- A) **Trade / Material Name** Two-Pack Polyurethane Hardener  
 B) **Description** Polyurethane Hardener (Aliphatic Isocyanate Solution)  
 C) **Product Code(s)** RTB-848-B  
 D) **Manufacturer Name** Ronass Chemical Producing Co.  
 E) **Manufacturer Information** #95 Ghaem Magham Avenue, Tehran, Iran  
 Tel: (+98-21) 88307248-9  
 Fax: (+98-21) 88305965  
[www.ronass.com](http://www.ronass.com) | [info@ronass.com](mailto:info@ronass.com)  
 F) **MSDS Preparation Date** July 17, 2018

## SECTION 2 – HAZARDOUS INGREDIENTS

Name	Percentage	Max. Legal Limit
Organic Solvents	Max. 50% (By Weight)	Max. 50% (By Weight)
Active Materials	Max. 50% (By Weight)	N.A.

## SECTION 3 – PHYSICAL DATA

- A) **Appearance and Odor** Clear Liquid | Light Odor  
 B) **V.O.C.** Max. 40%  
 C) **Viscosity** Max. 13 Seconds (ASTM CUP 4)  
 D) **pH Range** 5.5 – 7  
 E) **Water Solubility** No  
 F) **Specific Gravity** 0.94 ± 0.03 gr/cm<sup>3</sup>  
 G) **Flash Point** 5°C  
 H) **Boiling Point** 110°C  
 I) **Melting / Freezing Point** N.A.

## SECTION 4 – STABILITY AND REACTIVITY DATA

**MATERIAL IS STABLE | HAZARDOUS POLYMERIZATION CANNOT OCCUR**

- |   |   |
|---|---|
| <b>A) Chemical Incompatibilities</b>          | Water, oil and inorganic compounds  |
| <b>B) Conditions to Avoid</b>                 | Excessive heat, sparks, open flame, high voltage power lines / switchboards |
| <b>C) Hazardous Decomposition Product(s)</b>  | Carbon Monoxide, Carbon Dioxide, Organic Solvent Vapor                      |
| <b>D) Hazardous Polymerization Product(s)</b> | None  |

## SECTION 5 – LEAK AND DISPOSAL PROCEDURES

- |  |   |
|--|---|
| <b>A) Spill and / or Leak Procedures</b> | Contain and collect with absorbent material   |
| <b>B) Waste Management / Disposal</b>    | In accordance with state and provincial regulations   |
| <b>C) Large Spills</b>                   | Remove all sources of ignition; ventilate area; Contain spill with inert absorbent, or mop up |

## SECTION 6 – FIRST AID MEASURES

**THIS PRODUCT IS NOT CONSIDERED A CARCINOGEN BY OSHA, NTP, IARC**

- |  |   |
|--|---|
| <b>A) Summary of Risks</b>                                     | Contact may cause eye irritation; prolonged contact with skin can cause irritation; excessive inhalation can cause dizziness and headache |
| <b>B) Medical Conditions That May Be Aggravated by Contact</b> | Pre-existing disorders of the liver or kidneys, eyes, skin, or respiratory system may be aggravated by exposure to this product           |
| <b>C) Primary Entry Route(s)</b>                               | Eye contact; skin contact; respiratory and ingestion systems  |
| <b>D) Acute Effect(s)</b>                                      | Eye / skin irritation; dizziness; headache and nausea from excessive inhalation   |
| <b>E) Chronic Effect(s)</b>                                    | Aspiration of product into lungs (due to vomiting) can cause chemical pneumonitis, which can be fatal                                     |
| <b>F) Signs and Symptoms of Overexposure</b>                   |   |
| ❖ <b>Eye Contact</b>   | Redness; tearing; blurred vision  |
| ❖ <b>Skin Contact</b>  | Redness; blistering   |
| ❖ <b>Inhalation</b>  | Dizziness; headache   |
| ❖ <b>Ingestion</b>   | Nausea; cramps; diarrhea  |
| <b>G) First Aid</b>  |   |
| ❖ <b>Eye Contact</b>   | Flush with plenty water for 10 minutes; get medical advice  |
| ❖ <b>Skin Contact</b>  | Wash with soap and cool water; seek medical attention if irritation persists  |
| ❖ <b>Inhalation</b>  | Move to an area with fresh air  |
| ❖ <b>Ingestion</b>   | Do not induce vomiting; call a physician immediately for instructions   |

## SECTION 7 – FIRE EXTINGUISHING MEASURES

A) Flash Point and Method	5°C
B) Autoignition Temperature	N.A.
C) Flammable Limits in Air	12% (LEL) <span style="float: right;">25% (UEL)</span>
D) Extinguishing Media	Water fog; dry chemical; CO2 foam; sand
E) Special Firefighting Procedures	Protective equipment and clothing; respirator
F) Unusual Fire and Explosion	Do not spray near open flame, hot engines or devices which may spark

*Lingering vapors given off by the product's aerosol spray may support combustion; adequate ventilation is essential when using this product around potential sources of ignition*

## SECTION 8 – SPECIAL PROTECTION INFORMATION

<b>A) Personal Protective Equipment</b>	
❖ Goggles	Safety glasses; eye wash station available
❖ Gloves	Rubber Gloves
❖ Respirator	Respirator mask in confined areas or emergency situations
<b>B) Workplace Considerations</b>	
❖ Fire Extinguisher	Always keep a number of ABC fire extinguishers and sand buckets within the vicinity of the workplace or the storage area
❖ Ventilation	Provide sufficient mechanical (general and/or local) ventilation to maintain exposure below TLV
<b>C) Safety Stations</b>	
❖ Eye Contact	Eye wash stations
❖ Contaminated Equipment and Clothing	Wash before reusing

## SECTION 9 – STORAGE AND HANDLING

A) Storage Conditions	Keep away from sources capable of igniting product container or packaging; store in well ventilated, cool and dry conditions
B) Special Handling / Storage	Handle with care; store indoors
C) Shelf Life	At Least 12 Months

## SECTION 10 – TRANSPORTATION INFORMATION

A) Shipping Classification	3.3
B) WHMIS Classification	C
C) UN Number	1866
D) Packaging	10 L (Metal Container)

***THIS PRODUCT MSDS PROVIDES HEALTH AND SAFETY INFORMATION. THE PRODUCT IS TO BE USED IN APPLICATIONS CONSISTENT WITH COMPANY LITERATURE AND PRODUCT DIRECTIONS. INDIVIDUALS HANDLING THIS PRODUCT SHOULD HAVE ACCESS TO THIS INFORMATION. FOR ANY OTHER USES, EXPOSURES SHOULD BE EVALUATED SO THAT APPROPRIATE HANDLING PRACTICES AND TRAINING PROGRAMS CAN BE ESTABLISHED TO ENSURE SAFE WORKPLACE OPERATIONS. PLEASE CONTACT RONASS CHEMICAL PRODUCING CO. FOR FURTHER INFORMATION.***