



## Technical Data Sheet

### **DELTA-THERM™ AR 8515** Polyol

### **DELTA-THERM™ AE 7105** Isocyanate

#### **Description**

DELTA-THERM™ AR 8515 polyol and DELTA-THERM™ AE 7105 Isocyanate is a two component Polyurethane system producing Rigid Foam designed for pour-in-place applications.

DELTA-THERM™ AR 8515 Polyol is a fully formulated polyol. DELTA-THERM™ AE 7105 Isocyanate is a formulated isocyanate system containing HFO 1234ze, as a physical blowing agent.

The reaction of both components produces foams with good flowability, density distribution and dimensional stability. Suggested application is marine flotation. The reaction of both components produces foams with good flowability, density distribution and dimensional stability.

#### **Typical Component Properties**

	Units	DELTA-THERM™ AR 8515 polyol	DELTA-THERM™ AE 7105 Isocyanate	Test Method
Viscosity @ 25°C	cPs	455	200	ASTM D4878
Specific Gravity @ 25°C		1.08	1.22	ASTM D1475
Vapor Pressure	mm Hg	N/A		

These are typical values and should not be construed as specifications.

#### **Surface Preparation**

All surfaces should be prepared using standard industry practices. If there are any doubts about suitability, a small trial area should be applied.

#### **Mixing Instructions**

DELTA-THERM™ AR 8515 polyol / DELTA-THERM™ AE 7105 Isocyanate is designed for processing through low pressure mixing equipment. Our Technical Service Department can advise on choice of equipment and optimum processing conditions.

	Units	Limits
DELTA-THERM™ AR 8515 polyol	pbw	95
DELTA-THERM™ AE 7105 Isocyanate	pbw	100
Mixing Pressure	psi	270
Chemical Temperatures (Day Tank)	°F	70-90
Demold Time	minutes	Dependent on fixture temperature and foam thickness
Preheat Temperatures on Parts	°F	115 (to achieve optimum performance)

## Typical Reaction Characteristics <sup>(1)</sup>

	Units	Result	Test Method
Cream Time	sec	0-7	DOWM 101641
Gel Time	sec	85-105	DOWM 101641
Tack-Free Time	sec	140-180	DOWM 101641

These are typical values and should not be construed as specifications.

- Data referred to laboratory tests made with Isocyanate component at 20°C and Polyol component at 20°C, hand-mixed with mechanical stirrer at 3000 rpm. Reported values vary depending on processing condition.

## Handling and Storage

	Units	DELTA-THERM™ AR 8515 polyol	DELTA-THERM™ AE 7105 Isocyanate
Storage temperature	°F	65-85	65-85
Storage stability/Shelf life <sup>(2)</sup>	Months	3	6

These are typical values and should not be construed as specifications.

- Stored in the original sealed drums in a dry place at the recommended temperature

## Typical Polymer Properties

	Units	Result	Test Method
Density, Free Rise (machine)	pcf	1.65-85 pcf	ASTM D1622
Density, Applied	pcf	>2.4	ASTM D1622
Density, Core	pcf	>2.2 pcf	ASTM D1622
K-factor, Initial	Btu*in/ft <sup>2</sup> h °F	0.169 ± 0.002 @ 75 °F	ASTM C518
Closed Cell Content	%	>97	ASTM D6626
Water Absorption	% absorbed	3%	ASTM D2842
Compressive Strength (parallel)	psi	>23	ASTM D1621
Dimensional Stability, 14 days	% Δ Vol.		ASTM D2126
Cold Age, -20°F		<1	
Dry Heat Age, 158°F		<3	
Humid Age, 158°F / 95%RH		<5	

These are typical values and should not be construed as specifications. Information obtained from samples prepared by High Pressure Foam Equipment using lab molds

## Product Stewardship

The Dow Chemical Company and its subsidiaries ("Dow") has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our Product Stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our Product Stewardship program rests with each and every individual involved with Dow products—from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

## Safety Considerations

Safety Data Sheets (SDS) are available from The Dow Chemical Company. SDS are provided to help customers satisfy their own handling, safety and disposal needs and those that may be required by locally applicable health and safety regulations. SDS are updated regularly, therefore, please request and review the most current SDS before handling or using any product. These are available from the nearest Dow sales office.

## Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested, Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.



Quality Management System certified  
by DQS against DIN EN ISO 9001  
Reg. No. 055759 QM

**Contact information:**

For more information about this product  
please call The Dow Chemical Company.

North America: +1 (800) 447-4369  
Latin America: +55 (115) 184-8722  
Europe: +3 (111) 567-2626  
Asia/Pacific: +6 (037) 965-5392  
<http://www.dow.com/pusystems/index.htm>

NOTICE: No freedom from infringement of any patent owned by Dow or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other government enactments. The product shown in this literature may not be available for sale and/or available in all geographies where Dow is represented. The claims made may not have been approved for use in all countries. Dow assumes no obligation or liability for the information in this document. References to "Dow" or the "Company" mean the Dow legal entity selling the products to Customer unless otherwise expressly noted. NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED

