

# Dymax Corporation

51 Greenwoods Rd, Torrington, CT 06790 Phone: (860) 482-1010 Fax: (860) 482-1308

## MATERIAL SAFETY DATA SHEET PRODUCT 9-20311-F

### I. PRODUCT IDENTIFICATION

Product Name: 9-20311-F	NFPA Est:	HMIS Est:
Synonyms: Polyurethane Oligomer Mixture	Health: 2	Health 2
	Fire: 1	Flam: 1
	React: 1	React: 1

### II. COMPOSITION

Ingredient	Concentration %	C.A.S. Number	ACGIH TLV
Polyol	30-36	PROPRIETARY	TWA 10 MG/M3
Aliphatic Amide	10-15	2680-03-7	--
N-Vinyl-2-Pyrrolidone**	17-25	88-12-0	--
Poly Amide	34-40	PROPRIETARY	--
Photoinitiator	1-5	7473-98-5	--

### III. CHEMICAL AND PHYSICAL PROPERTIES

Vapor Pressure: 6 mm Hg at 30°C	Vapor Density: Heavier Than Air
Solubility in Water: Insoluble	Specific Gravity: 1.05 est.
Boiling Point: N.A.	Appearance: Pink liquid
Odor: Mild	

### IV. FLAMMABILITY AND EXPLOSIVE PROPERTIES

Flash Point: > 200°F (P.M.C.C.)  
Recommended Extinguishing Agents: Use water spray, foam, dry chemical, or CO<sub>2</sub>.  
Hazardous Products Formed by Fire  
or Thermal decomposition: Oxides of carbon and nitrogen may be evolved upon exposure to heat or open flame.  
Unusual Fire or Explosion Hazards: None  
Compressed Gasses: None Pressure at Room Temp: N.A.

### V. REACTIVITY DATA

Stability: Stable	Hazardous Polymerization: May occur
Hazardous Decomp. Prod.: None	
Incompatibility: Oxidizers, amines, strong Lewis or mineral acids, thiosulfates. Smoke and toxic fumes may be evolved as a result of uncontrolled exothermic reaction of large masses of material reacting with curing agents, such as peroxides, amines, or exposure to light.	

### VI. SPILL OR LEAK PROCEDURES

Dike area to prevent spreading. Absorb on vermiculite, sand or other inert absorbing material. Dispose of as a chemical waste in accordance with current local, state, and federal regulations.

### VII. STORAGE AND HANDLING PROCEDURES

Storage: Avoid storage over 100° F, exposure to light, loss of dissolved air, loss of polymerization inhibitor, contamination with incompatible materials.  
Handling: Avoid prolonged or repeated breathing of vapor.

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### VIII. SHIPPING REGULATIONS

DOT and IATA Hazard Classification: Not Restricted Article  
Proper DOT Shipping Name: Unrestricted  
Identification Number: DOT - None IATA - None

### IX. EMERGENCY TREATMENT PROCEDURES

Eye Irritation: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.  
Skin Contact: In case of skin contact, wash thoroughly with soap and water. Do not use organic solvents for cleanup as they may dry or irritate the skin and act as a carrier for chemical absorption.  
Inhalation: Remove affected person to fresh air.  
Ingestion: Low toxicity; Get medical attention.

### X. PERSONAL PROTECTION

Respiratory: Positive fresh air exhaust should be provided in the work area; respiratory equipment is unnecessary in normal use.  
Skin: Avoid skin contact. Wear gloves and impervious protective clothing if frequent direct contact is likely.  
Eyes: Do not wear contact lenses. Chemical safety goggles are recommended.

### XI. HEALTH HAZARD DATA

Potential Routes of Entry: Skin, eyes, inhalation.  
Symptoms of Overexposure: Possible skin and eye irritation on contact. Inhalation of vapors in an unventilated area may, over time, induce headaches.

Exposure Limits:	ACGIH (TLV)	OSHA (PEL)	OTHER
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#### Ingredients

Polyol	TWA 10 MG/M3	8H TWA 15 MG/M3	--
N-Vinyl-2-Pyrrolidone**	--	--	0.1 ppm

Only Monomers Vapor:

#### TUMORIGENICITY:\*\*

Rat; two years inhalation; benign and malignant tumors observed in nasal mucosa of both sexes at 20 PPM and in males at 10 PPM; only benign were seen at 10 PPM in females and 5 PPM in both sexes: liver and laryngeal tumors at 20 PPM and liver damage at 5 PPM in both sexes.

#### MUTAGENICITY:

Primary rat hepatocyte unscheduled DNA synthesis assay; 0.284-9.09 microliter/ml; negative. In vitro transformation of BALB/3T3 cell assay; 0.5 microliter/ml-0.1 nanoliter/ml; negative mouse lymphoma forward mutation assay; up to 5.0 microliter/ml; negative. Ames assay: negative ( Active & inactive ). ( see also "miscellaneous toxicity" ).

REPRODUCTIVE TOXICITY: No data found

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### MISCELLANEOUS TOXICITY:

In vitro cytogenicity-human lymphocytes, no chromosome-damaging ( clastogenic ) effects with or without activation.

	Target Organs:	Carcinogen:		
		NTP	IARC	OSHA
Polyol	--	NO	NO	NO
Aliphatic Amide	--	NO	NO	NO
N-Vinyl-2-Pyrrolidone**	--	NO	NO	NO
Poly Amide	--	--	--	--
Photoinitiator	--	NO	NO	NO

### Abbreviations:

N/A Not Applicable	ALG Allergen
IRR Irritant	KID Kidney
LIV Liver	REP Reproductive

## XII. REGULATORY INFORMATION

### Sara Listed Ingredients:

\*No ingredients listed in this section\*

TSCA Inventory: All Ingredients

### STATE RIGHT-TO-KNOW

#### CALIFORNIA Proposition 65

This product does not contain materials which the State of California has found to cause cancer, birth defects, or other reproductive harm.

MASSACHUSETTS Right-To-Know, Substance List (MSL) Hazardous Substances and Extraordinary Hazardous Substances on the MSL must be identified when present in products. Components present in this product at a level which could require reporting under the statute are:

\*\* NONE \*\*

PENNSYLVANIA Right-To-Know, Hazardous Substance List Hazardous Substances and Special Hazardous Substances on the List must be identified when present in products. Components present in this product at a level which could require reporting under the statute are:

\*\* NONE \*\*

### OTHER REGULATORY INFORMATION:

\*\* NONE \*\*

### ABBREVIATIONS:

ACGIH	=	American Conference of Governmental Industrial Hygienists
OSHA	=	Occupational Safety and Health Administration
TLV	=	Threshold Limit Value
PEL	=	Permissible Exposure Limit
NTP	=	National Testing Program
IARC	=	International Agency for Research on Cancer
NFPA	=	National Fire Protection Association
HMIS	=	Hazardous Materials Identification System
--	=	No Data / Not Available

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### XIII. PREPARATION INFORMATION

Prepared By: Stephen E. Cantor, Ph.D.  
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REVISION DATE: January 26, 2001

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