Material Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 09/09/2008 Reviewed on 09/09/2008

* 1 Identification of substance

Product details

Trade name:	**9-20557**
Application of the substance / the preparation	Adhesives
Manufacturer/Supplier:	Dymax Corporation 318 Industrial Lane Torrington, CT 06790 USA Tel: 860-482-1010 Fax: 860-496-0608
Information department:	Corporate Safety Department @ 1-860-482-1010
Emergency information:	North America: Chemtrec @ 1-800-424-9300 (24hrs) International: Chemtrec @ 001-703-527-3887 (24hrs)

2 Composition/Data on components

Chemical characterization

Description: Mixture of the substances listed below with nonhazardous additions.

Hazardous components:

	Urethane (meth)acrylate oligomer	25-50%
5888-33-5	Isobornyl acrylate	25-50%
868-77-9	2-Hydroxyethyl methacrylate	15-25%
7328-17-8	2-(2-ethoxyethoxy)ethyl acrylate	1-5%
79-10-7	Acrylic acid	1-5%
	Photoinitiator	1-5%
614-45-9	t-Butyl Perbenzoate	1-5%

3 Hazards identification

Hazard description: Irritant
Dangerous for the environment

Information pertaining to particular dangers for man and environment: The product has to be labeled due to the calculation procedure of international guidelines.
Irritating to eyes, respiratory system and skin.
May cause sensitisation by skin contact.
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Classification system: The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

NFPA ratings (scale 0 - 4)
Health = 1
Fire = 1
Reactivity = 1

HMIS-ratings (scale 0 - 4)
Health = 1
Fire = 1
Reactivity = 1

* 4 First aid measures

After inhalation: Of mists or aerosol: Remove to fresh air and contact a doctor.
Of vapors: Remove to fresh air. If symptoms develop seek medical attention.

After skin contact: Immediately wash with water and soap and rinse thoroughly.

After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing: Seek medical treatment.

5 Fire fighting measures

Suitable extinguishing agents: Use fire fighting measures that suit the environment.

Protective equipment: Please refer to Section 8 for more information.

* 6 Accidental release measures

Person-related safety precautions: Wear protective clothing.
Wear suitable gloves and eye/face protection.

(Contd. on page 2)

DYMAX®

Material Safety Data Sheet
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Printing date 09/09/2008 Reviewed on 09/09/2008

Trade name: 9-20557

(Contd. of page 1)

Measures for environmental protection: Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.

Measures for cleaning/collecting: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.

7 Handling and storage

Handling:

Information for safe handling: Keep away from heat and direct sunlight.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.

Information about protection against explosions and fires: No special measures required.

Storage:

Requirements to be met by storerooms and receptacles: Store only in unopened original receptacles.

Information about storage in one common storage facility: Not required.

Further information about storage conditions: Keep receptacle tightly sealed.
Protect from exposure to the light.
Avoid loss of dissolved air, loss of inhibitor, and contamination with incompatible materials.

Maximum storage temperature: < 38°C (100°F)

* 8 Exposure controls and personal protection

Additional information about design of technical systems: No further data; see item 7.

Components with limit values that require monitoring at the workplace:

79-10-7 Acrylic acid

REL 6 mg/m³, 2 ppm
Skin
TLV 5.9 mg/m³, 2 ppm
Skin

Additional information: The lists that were valid during the creation were used as basis.

Personal protective equipment:

General protective and hygienic measures: Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

Breathing equipment: Local exhaust ventilation is recommended when general ventilation is not sufficient to keep vapor or mist concentrations below permissible exposure limits (See ACGIH – Industrial Ventilation). Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if permissible exposure limits are exceeded, if irritation occurs or other symptoms are experienced.

Protection of hands: Protective gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves Nitrile rubber, NBR
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection: Eye protection with side shields. When there is a potential for a splash hazard, chemical goggles should be used.

(Contd. on page 3)

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Printing date 09/09/2008 Reviewed on 09/09/2008

Trade name: 9-20557

(Contd. of page 2)

* 9 Physical and chemical properties

General Information

Form: Fluid
Color: According to product specification
Odor: Characteristic

Change in condition
Melting point/Melting range: Undetermined.
Boiling point/Boiling range: 120°C (248°F)

Flash point: > 100°C (> 212°F)

Ignition temperature: 214°C (417°F)

Auto igniting: Product is not selfigniting.

Danger of explosion: Product does not present an explosion hazard.

Density: Not determined.

Solubility in / Miscibility with
Water: Not miscible or difficult to mix.

10 Stability and reactivity

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

Materials to be avoided: Oxidizers, amines, strong Lewis acids, mineral acids, and thiosulfates

Dangerous reactions No dangerous reactions known.

Dangerous products of decomposition: Irritant fumes/vapors

Additional information: Smoke and toxic fumes may be evolved as a result of uncontrolled exothermic chemical reactions caused by large masses of materials interacting with curing agents (peroxides, amines, etc.) and/or exposure to UV light.

* 11 Toxicological information

Acute toxicity:
LD/LC50 values that are relevant for classification:

79-10-7 Acrylic acid
Oral LD50 250 mg/kg (rat)
Dermal LD50 280 mg/kg (rabbit)
Primary irritant effect:
on the skin: Irritant to skin and mucous membranes.
on the eye: Irritating effect.
Sensitization: Sensitization possible through skin contact.

Additional toxicological information: The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

* 12 Ecological information

Ecotoxical effects:
Remark: Toxic for fish
General notes: Water hazard class 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms

(Contd. on page 4)

Material Safety Data Sheet
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Printing date 09/09/2008 Reviewed on 09/09/2008

Trade name: 9-20557

(Contd. of page 3)

13 Disposal considerations

Product:
Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

14 Transport information

DOT regulations:
Hazard class: -

Maritime transport IMDG:
IMDG Class: -
Marine pollutant: No

Air transport ICAO-TI and IATA-DGR:
ICAO/IATA Class: -

*15 Regulations

Sara Section 313:
79-10-7 Acrylic acid

TSCA (Toxic Substances Control Act):
All ingredients are listed.

Cancerogenity categories

EPA (Environmental Protection Agency)
None of the ingredients are listed.

IARC (International Agency for Research on Cancer)
79-10-7 Acrylic acid: 3

TLV (Threshold Limit Value established by ACGIH)
79-10-7 Acrylic acid: A4

Product related hazard informations: The product has been classified and marked in accordance with directives on hazardous materials.

Hazard symbols:
Irritant
Dangerous for the environment

Hazard-determining components of labelling:
Urethane (meth)acrylate oligomer
2-Hydroxyethyl methacrylate
2-(2-ethoxyethoxy)ethyl acrylate

Risk phrases:
Irritating to eyes, respiratory system and skin.
May cause sensitisation by skin contact.
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases:
Do not breathe gas/fumes/vapour/spray.
Avoid contact with skin.
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Wear suitable gloves.
Use appropriate container to avoid environmental contamination.
This material and its container must be disposed of as chemical waste.

*16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing MSDS: Dymax Corporation
Contact: Dr. Stephan Platzer
Laboratory Manager

Creation Date: 07/21/2006
** Data compared to the previous version altered.*