

# Thermoform

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Product name : Thermoform  
Product code : TF

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

Polymeric Imaging  
117 East 14th Avenue  
North Kansas City, MO 64116 - United States  
T 816-221-5567

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC: 800-424-9300

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### Classification (GHS-US)

Not classified

#### 2.2. Label elements

##### GHS-US labeling

Hazard pictograms (GHS-US) :



GHS08



GHS07



GHS09

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) :  
H319 - Causes serious eye irritation  
H302+H312 - Harmful if swallowed or in contact with skin  
H317 - May cause an allergic skin reaction  
H372 - Causes damage to organs through prolonged or repeated exposure  
H335 - May cause respiratory irritation  
H402 - Harmful to aquatic life

Precautionary statements (GHS-US) :  
P260 - Do not breathe dust/fume/gas/mist/vapors/spray  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P314 - Get medical advice/attention if you feel unwell  
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention  
P337+P313 - If eye irritation persists: Get medical advice/attention

#### 2.3. Other hazards

No additional information available

#### 2.4. Unknown acute toxicity (GHS US)

Not applicable

### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Not applicable

#### 3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
vinylcaprolactam	(CAS No) 2235-00-9	18 - 26	Acute Tox. 4 (Oral), H302

Full text of H-phrases: see section 16

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

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First-aid measures general	: Get medical advice/attention if you feel unwell. If you feel unwell, seek medical advice. Never give anything by mouth to an unconscious person.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. When symptoms occur: go into open air and ventilate suspected area. Immediately call a poison center or doctor/physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. Get medical advice/attention. Move the affected person away from the contaminated area and into the fresh air.
First-aid measures after skin contact	: Gently wash with plenty of soap and water. When symptoms occur: rinse immediately with plenty of water. Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist. Get medical advice/attention. If eye irritation persists: Immediately rinse with water for a prolonged period while holding the eyelids wide open. Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Do NOT induce vomiting. Get medical advice/attention.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries	: No data available.
Symptoms/injuries after inhalation	: Central nervous system depression. Nausea. Shortness of breath. Respiratory difficulties.
Symptoms/injuries after skin contact	: Burns. Causes skin irritation. Dry skin. Cracking of the skin. Irritation. May cause an allergic skin reaction. Repeated exposure may cause skin dryness or cracking. Repeated exposure to this material can result in absorption through skin causing significant health hazard.
Symptoms/injuries after eye contact	: Causes eye irritation. May cause severe irritation. Redness of the eye tissue.
Symptoms/injuries after ingestion	: Central nervous system depression.

### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	: ABC powder. Dry powder. Foam. Water spray. Carbon dioxide.
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### 5.2. Special hazards arising from the substance or mixture

Reactivity	: Reacts violently with (some) acids. Reacts violently with (strong) oxidizers. Reacts violently with (some) bases.
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### 5.3. Advice for firefighters

Firefighting instructions	: Avoid (reject) fire-fighting water to enter environment. Evacuate area. Exercise caution when fighting any chemical fire.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. Wear respiratory protection.
Special protective equipment for fire fighters	: EN 13911 - protective clothing for firefighters.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Absorb spillage to prevent material damage. Evacuate area.
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#### 6.1.1. For non-emergency personnel

Emergency procedures	: Ventilate spillage area.
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#### 6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8 Exposure controls/personal protection " ".
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### 6.2. Environmental precautions

Avoid release to the environment. Notify authorities if liquid enters sewers or public waters. Prevent entry to sewers and public waters. Prevent soil and water pollution. Prevent spreading in sewers.

### 6.3. Methods and material for containment and cleaning up

For containment	: Collect spillage. Plug the leak, cut off the supply.
Methods for cleaning up	: Take up liquid spill into absorbent material. Absorb spillage to prevent material damage. Carefully collect the spill/leftovers.
Other information	: Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

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For further information refer to section 8 : Exposure-controls/personal protection"".

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling	: Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

#### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Comply with applicable regulations. Provide local exhaust or general room ventilation.
Storage conditions	: Store in a well-ventilated place. Keep cool.
Incompatible products	: Strong bases, strong acids, Oxidizing agent.
Incompatible materials	: Direct sunlight, Heat sources, Metals.
Maximum storage period	: 1 year
Storage temperature	: 25 °C

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

#### 8.2. Exposure controls

Appropriate engineering controls	: Ensure good ventilation of the work station.
Hand protection	: Protective gloves.
Eye protection	: Safety glasses.
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: In case of insufficient ventilation, wear suitable respiratory equipment.
Environmental exposure controls	: Avoid release to the environment.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Varies
Odor	: Acrylate odor
Odor threshold	: No data available
pH	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Vapor pressure	: No data available
Relative density	: No data available
Relative vapor density at 20 °C	: No data available
Solubility	: insoluble
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: Varies

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### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reacts violently with (some) acids. Reacts violently with (strong) oxidizers. Reacts violently with (some) bases.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

Avoid contact with hot surfaces. Direct sunlight. Extremely high or low temperatures. Heat. No flames, No sparks. Eliminate all sources of ignition.

### 10.5. Incompatible materials

acids. Oxidizing agent. strong acids. Strong bases.

### 10.6. Hazardous decomposition products

Carbon dioxide.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

vinylcaprolactam (2235-00-9)	
LD50 oral rat	1400 mg/kg (Rat)
LD50 dermal rabbit	> 400 mg/kg (Rabbit)
ATE US (oral)	1400.000 mg/kg body weight

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Symptoms/injuries after inhalation : Central nervous system depression. Nausea. Shortness of breath. Respiratory difficulties.

Symptoms/injuries after skin contact : Burns. Causes skin irritation. Dry skin. Cracking of the skin. Irritation. May cause an allergic skin reaction. Repeated exposure may cause skin dryness or cracking. Repeated exposure to this material can result in absorption through skin causing significant health hazard.

Symptoms/injuries after eye contact : Causes eye irritation. May cause severe irritation. Redness of the eye tissue.

Symptoms/injuries after ingestion : Central nervous system depression.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

### 12.2. Persistence and degradability

vinylcaprolactam (2235-00-9)	
Persistence and degradability	Biodegradable in water. Biodegradability in soil: no data available.

### 12.3. Bioaccumulative potential

vinylcaprolactam (2235-00-9)	
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Bioaccumulative potential

No bioaccumulation data available.

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Additional information : Clean up even minor leaks or spills if possible without unnecessary risk.  
Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN3082 Environmentally hazardous substances, liquid, n.o.s., 9, III

UN-No.(DOT) : UN3082

Proper Shipping Name (DOT) : Environmentally hazardous substances, liquid, n.o.s.

Hazard Classes (DOT) : 9 - Class 9 - Miscellaneous hazardous material 49 CFR 173.140

Hazard labels (DOT) : 9 - Class 9 (Miscellaneous dangerous materials)



Packing group (DOT) : III - Minor Danger

DOT Packaging Non Bulk (49 CFR 173.xxx) : 203

DOT Packaging Bulk (49 CFR 173.xxx) : 241

DOT Symbols : G - Identifies PSN requiring a technical name

DOT Special Provisions (49 CFR 172.102) : 8 - A hazardous substance that is not a hazardous waste may be shipped under the shipping description "Other regulated substances, liquid or solid, n.o.s.", as appropriate. In addition, for solid materials, special provision B54 applies.

146 - This description may be used for a material that poses a hazard to the environment but does not meet the definition for a hazardous waste or a hazardous substance, as defined in 171.8 of this subchapter, or any hazard class as defined in Part 173 of this subchapter, if it is designated as environmentally hazardous by the Competent Authority of the country of origin, transit or destination.

173 - An appropriate generic entry may be used for this material.

335 - Mixtures of solids that are not subject to this subchapter and environmentally hazardous liquids or solids may be classified as "Environmentally hazardous substances, solid, n.o.s.,"

UN3077 and may be transported under this entry, provided there is no free liquid visible at the time the material is loaded or at the time the packaging or transport unit is closed. Each transport unit must be leak-proof when used as bulk packaging.

IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).

T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)

TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling =  $97 / 1 + a (tr - tf)$  Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.

TP29 - A portable tank having a minimum test pressure of 1.5 bar (150.0 kPa) may be used provided the calculated test pressure is 1.5 bar or less based on the MAWP of the hazardous materials, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.

DOT Packaging Exceptions (49 CFR 173.xxx) : 155

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : No limit

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DOT Quantity Limitations Cargo aircraft only (49 : No limit  
CFR 175.75)

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

Other information : No supplementary information available.

### TDG

No additional information available

### Transport by sea

UN-No. (IMDG) : 3082  
Proper Shipping Name (IMDG) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
Class (IMDG) : 9 - Miscellaneous dangerous compounds  
Packing group (IMDG) : III - substances presenting low danger

### Air transport

UN-No.(IATA) : 3082  
Proper Shipping Name (IATA) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
Class (IATA) : 9 - Miscellaneous Dangerous Goods  
Packing group (IATA) : III - Minor Danger

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except for:

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372 unless listed below:

<b>2-phenoxy ethyl acrylate (48145-04-6)</b>	
SARA Section 313 - Emission Reporting	15-25%
<b>2-Propenoic acid, 2-phenoxyethyl ester (48145-04-6)</b>	
SARA Section 313 - Emission Reporting	<1%
<b>diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (75980-60-8)</b>	
EPA TSCA Regulatory Flag	P - P - indicates a commenced PMN substance.

### 15.2. International regulations

#### CANADA

No additional information available

#### EU-Regulations

No additional information available

#### National regulations

No additional information available

### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm unless listed below:

<b>Benzene, methyl- (108-88-3) used as a processing aid in the manufacture of certain monomers</b>
<400 ppm

<b>caprolactam (105-60-2)</b>
U.S. - New Jersey - Right to Know Hazardous Substance List

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### SECTION 16: Other information

#### Other information

: Polymeric makes no warranty, express or implied, as to the accuracy or reliability of information contained herein, except that such information is, to the best of Polymeric's knowledge and belief, accurate as of the date indicated on this document. Final determination of suitability of material is the sole responsibility of the user. All the materials may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Polymeric urges the customer receiving this safety data sheet to study it carefully to become aware of the hazards, if any, in the product. In the interest of safety, the customer should (1) notify your employees, agents and contractors of the information included in this SDS and (2) furnish a copy to each of your employees, customers and agents.

#### Full text of H-phrases:

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
H302	Harmful if swallowed

#### HMIS III Rating

- Health : 2 Moderate Hazard - Temporary or minor injury may occur
- Flammability : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)
- Physical : 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.
- Personal Protection : B  
B - Safety glasses, Gloves

SDS US (GHS HazCom 2012)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*