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1. PRODUCT AND COMPANY IDENTIFICATION

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|-------------------------------|--|---------------------|---------------|
| Product name: | Impruv® Optically Clear UV Adhesive 349 | IDH number: | 88489 |
| Product type: | Ultraviolet adhesive | Item number: | 34931 |
| Restriction of Use: | None identified | Region: | United States |
| Company address: | Contact information: | | |
| Henkel Corporation | Telephone: (860) 571-5100 | | |
| One Henkel Way | MEDICAL EMERGENCY Phone: Poison Control Center | | |
| Rocky Hill, Connecticut 06067 | 1-877-671-4608 (toll free) or 1-303-592-1711 | | |
| | TRANSPORT EMERGENCY Phone: CHEMTREC | | |
| | 1-800-424-9300 (toll free) or 1-703-527-3887 | | |
| | Internet: www.henkelna.com | | |

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER: CAUSES SKIN IRRITATION.
MAY CAUSE AN ALLERGIC SKIN REACTION.
CAUSES SERIOUS EYE DAMAGE.

HAZARD CLASS

None

HAZARD CATEGORY

None

PICTOGRAM(S)



Precautionary Statements

| | |
|--------------------|---|
| Prevention: | Avoid breathing vapors, mist, or spray. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear eye and face protection. Wear protective gloves. |
| Response: | IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. Immediately call a poison control center or physician. If skin irritation or rash occurs: Get medical attention. Take off contaminated clothing. |
| Storage: | Not prescribed |
| Disposal: | Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations. |

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

| Hazardous Component(s) | CAS Number | Percentage* |
|---------------------------------|------------|-------------|
| Polyurethane Methacrylate Resin | Unknown | 30 - 60 |

| | | |
|---------------------------|-------------|---------|
| High boiling methacrylate | Proprietary | 10 - 30 |
| Hydroxyalkyl methacrylate | 27813-02-1 | 10 - 30 |
| Lauryl methacrylate | 142-90-5 | 5 - 10 |
| Acrylic acid | 79-10-7 | 1 - 5 |
| Substituted silane | Proprietary | 1 - 5 |
| Alkyl Methacrylate | Proprietary | 1 - 5 |
| Tetradecyl methacrylate | 2549-53-3 | 1 - 5 |
| Adhesion Promoter | Proprietary | 0.1 - 1 |

* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

| | |
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| Inhalation: | Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. |
| Skin contact: | Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. If symptoms develop and persist, get medical attention. Wash clothing before reuse. |
| Eye contact: | Flush with copious amounts of water, preferably, lukewarm water for at least 15 minutes, holding eyelids open all the time. Get medical attention. |
| Ingestion: | Do not induce vomiting. Never give anything by mouth to an unconscious person. Keep individual calm. Get medical attention. |
| Symptoms: | See Section 11. |

5. FIRE FIGHTING MEASURES

| | |
|---|--|
| Extinguishing media: | Foam, dry chemical or carbon dioxide. |
| Special firefighting procedures: | Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. In case of fire, keep containers cool with water spray. |
| Unusual fire or explosion hazards: | Uncontrolled polymerization may cause rapid evolution of heat and increase in pressure that could result in violent rupture of sealed storage vessels or containers. |
| Hazardous combustion products: | Oxides of carbon. Oxides of nitrogen. Formaldehyde. Irritating organic vapours. |

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

| | |
|-----------------------------------|--|
| Environmental precautions: | Do not allow product to enter sewer or waterways. |
| Clean-up methods: | Ensure adequate ventilation. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Store in a partly filled, closed container until disposal. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up. |

7. HANDLING AND STORAGE

Handling: Use only with adequate ventilation. Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Do not taste or swallow. For operations where eye or face contact could occur, provide safety shower and eyewash fountain.

Storage: For safe storage, store at or below 38 °C (100.4 °F)
Keep in a cool, well ventilated area away from heat, sparks and open flame.
Keep container tightly closed until ready for use.

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

| Hazardous Component(s) | ACGIH TLV | OSHA PEL | AIHA WEEL | OTHER |
|---------------------------------|---------------------|----------|-----------|-----------------------------------|
| Polyurethane Methacrylate Resin | None | None | None | None |
| High boiling methacrylate | None | None | None | None |
| Hydroxyalkyl methacrylate | None | None | None | 1 ppm TWA 3 ppm STEL |
| Lauryl methacrylate | None | None | None | 50 ppm |
| Acrylic acid | 2 ppm TWA (SKIN) | None | None | 1 ppm TWA 3 ppm STEL (SKIN) |
| Substituted silane | None | None | None | None |
| Alkyl Methacrylate | None | None | None | None |
| Tetradecyl methacrylate | None | None | None | 50 ppm TWA 75 ppm STEL |
| Adhesion Promoter | 20 ppm TWA | None | None | None |

Engineering controls: Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Eye/face protection: Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists.

Skin protection: Use impermeable gloves and protective clothing as necessary to prevent skin contact. Neoprene gloves. Butyl rubber gloves. Natural rubber gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid
Color: Clear
Odor: Sharp, Irritating
Odor threshold: Not available.
pH: Not applicable
Vapor pressure: < 10 mm hg (27 °C (80.6 °F))
Boiling point/range: > 149 °C (> 300.2 °F)
Melting point/ range: Not available.
Specific gravity: 1.02
Vapor density: Not available.
Flash point: > 93.3 °C (> 199.94 °F) Tagliabue closed cup
Flammable/Explosive limits - lower: Not available.
Flammable/Explosive limits - upper: Not available.
Autoignition temperature: Not available.
Evaporation rate: Not available.
Solubility in water: Slight
Partition coefficient (n-octanol/water): Not available.

VOC content: 1.82 %; 17.37 g/l (ASTM D5403)
Viscosity: Not available.
Decomposition temperature: Not available.

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use.

Hazardous reactions: None under normal processing. Polymerization may occur at elevated temperature or in the presence of incompatible materials.

Hazardous decomposition products: Oxides of carbon. Oxides of nitrogen. Silicon dioxide. Formaldehyde. Irritating organic vapours.

Incompatible materials: Strong oxidizing agents. Reducing agents. Acids. Bases. Heavy metals. Free radical initiators. Copper alloys. Inert gases. Oxygen scavengers. Alkalis.

Reactivity: Not available.

Conditions to avoid: Heat, flames, sparks and other sources of ignition. Store away from incompatible materials. Protect from direct sunlight. Freezing conditions. UV light. Inert gas blanketing. Avoid moisture.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure: Skin, Inhalation, Eyes, Ingestion

Potential Health Effects/Symptoms

Inhalation: Irritates the nose, throat and respiratory system.
Skin contact: Causes skin irritation. May cause allergic skin reaction.
Eye contact: Causes serious eye damage.
Ingestion: May cause gastrointestinal tract irritation if swallowed.

| Hazardous Component(s) | LD50s and LC50s | Immediate and Delayed Health Effects |
|---------------------------------|---|--|
| Polyurethane Methacrylate Resin | None | Irritant, Allergen |
| High boiling methacrylate | None | Irritant, Allergen |
| Hydroxyalkyl methacrylate | None | Irritant, Allergen |
| Lauryl methacrylate | Oral LD50 (RAT) = > 5.0 g/kg | Irritant, Allergen |
| Acrylic acid | Oral LD50 (RAT) = 33.5 mg/kg Oral LD50 (RAT) = 2.5 g/kg Oral LD50 (RAT) = 193 mg/kg Oral LD50 (RAT) = 1,250 mg/kg Inhalation LC50 (RAT, 4 h) = 1,200 mg/l | Allergen, Corrosive, Irritant, Kidney, Liver |
| Substituted silane | None | Allergen, Irritant |
| Alkyl Methacrylate | None | Irritant, Allergen |
| Tetradecyl methacrylate | None | Irritant, Allergen |
| Adhesion Promoter | Oral LD50 (RABBIT) = 1,200 mg/kg Oral LD50 (RAT) = 1,060 mg/kg Oral LD50 (RAT) = 2,224 mg/kg Dermal LD50 (RABBIT) = 500 mg/kg Inhalation LC50 (RAT, 4 h) = 7.1 mg/l | Corrosive, Irritant, Allergen |

| Hazardous Component(s) | NTP Carcinogen | IARC Carcinogen | OSHA Carcinogen (Specifically Regulated) |
|---------------------------------|----------------|-----------------|---|
| Polyurethane Methacrylate Resin | No | No | No |
| High boiling methacrylate | No | No | No |
| Hydroxyalkyl methacrylate | No | No | No |
| Lauryl methacrylate | No | No | No |
| Acrylic acid | No | No | No |
| Substituted silane | No | No | No |
| Alkyl Methacrylate | No | No | No |
| Tetradecyl methacrylate | No | No | No |
| Adhesion Promoter | No | No | No |

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

Water Transportation (IMO/IMDG)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

15. REGULATORY INFORMATION**United States Regulatory Information**

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

TSCA 12 (b) Export Notification: None above reporting de minimis

CERCLA/SARA Section 302 EHS: None above reporting de minimis
CERCLA/SARA Section 311/312: Immediate Health, Delayed Health
CERCLA/SARA Section 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Acrylic acid (CAS# 79-10-7).

California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

Prepared by: Catherine Bimler, Regulatory Affairs Specialist

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