



Revision Number: 006.0

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1. PRODUCT AND COMPANY IDENTIFICATION

| | | | |
|-------------------------------|---------------------------------------------------------|---------------------|---------------|
| Product name: | LOCTITE 384 ADH known as 384 Output(TM) Adhesive | IDH number: | 691333 |
| Product type/use: | Tough acrylic | Item number: | 8200241 |
| Restriction of Use: | None identified | Region: | United States |
| Company address: | Contact information: | | |
| Henkel Corporation | Telephone: +1 (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 IRRITATION.
SUSPECTED OF CAUSING CANCER.
MAY DAMAGE FERTILITY OR THE UNBORN CHILD.
MAY CAUSE DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE.

| HAZARD CLASS | HAZARD CATEGORY |
|----------------------------------------------------|-----------------|
| SKIN IRRITATION | 2 |
| EYE IRRITATION | 2A |
| SKIN SENSITIZATION | 1 |
| CARCINOGENICITY | 2 |
| REPRODUCTIVE TOXICITY | 1B |
| SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE | 2 |

PICTOGRAM(S)



Precautionary Statements

| | |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Prevention: | Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe vapors, mist, or spray. Wash affected area thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, clothing, eye and face protection. |
| Response: | IF ON SKIN: Wash with plenty of water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical attention. If skin irritation or rash occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing. |
| Storage: | Store locked up. |
| 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* |
|----------------------------------------|-------------|-------------|
| Aluminium hydroxide | 21645-51-2 | 60 - 80 |
| Tetrahydrofurfuryl methacrylate | 2455-24-5 | 10 - 30 |
| Ethylene/MethylAcrylate rubber | | 5 - 10 |
| Hydroxyalkyl methacrylate | 27813-02-1 | 5 - 10 |
| Cumene hydroperoxide | 80-15-9 | 1 - 5 |
| Saccharin | 81-07-2 | 0.1 - 1 |
| Silica, amorphous, fumed, crystal-free | 112945-52-5 | 0.1 - 1 |
| 1,3-Butylene glycol dimethacrylate | 1189-08-8 | 0.1 - 1 |
| Cumene | 98-82-8 | 0.1 - 1 |
| Ethylene glycol | 107-21-1 | 0.1 - 1 |
| 2-phenylpropan-2-ol | 617-94-7 | 0.1 - 1 |
| methacrylic acid | 79-41-4 | 0.1 - 1 |

* Exact percentages may vary or are trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

| | |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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. Wash clothing before reuse. Get medical attention. |
| Eye contact: | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention. |
| Ingestion: | DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention. |
| Symptoms: | See Section 11. |

5. FIRE FIGHTING MEASURES

| | |
|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Extinguishing media: | Water spray (fog), 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 occur at high temperatures resulting in explosions or rupture of storage containers. |

Hazardous combustion products:

Oxides of carbon. Oxides of nitrogen. 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:

Remove all sources of ignition. Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment during clean-up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Scrape up as much material as possible. 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. Refer to Section 8.

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.

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 |
|----------------------------------------|-------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-------------------------|
| Aluminium hydroxide | 1 mg/m3 TWA Respirable fraction. 10 mg/m3 TWA (as Al) Total dust. | 15 mg/m3 TWA (as Al) Total dust. 5 mg/m3 TWA (as Al) Respirable fraction. 15 MPPCF TWA Respirable fraction. 15 mg/m3 TWA Total dust. 5 mg/m3 TWA Respirable fraction. 50 MPPCF TWA Total dust. | None | None |
| Tetrahydrofurfuryl methacrylate | None | None | None | None |
| Ethylene/MethylAcrylate rubber | None | None | None | None |
| Hydroxyalkyl methacrylate | None | None | None | 1 ppm TWA 3 ppm STEL |
| Cumene hydroperoxide | None | None | 1 ppm (6 mg/m3) TWA (SKIN) | None |
| Saccharin | None | None | None | None |
| Silica, amorphous, fumed, crystal-free | 10 mg/m3 TWA Inhalable dust. 3 mg/m3 TWA Respirable fraction. | 20 MPPCF TWA 0.8 mg/m3 TWA | None | None |
| 1,3-Butylene glycol dimethacrylate | None | None | None | None |
| Cumene | 50 ppm TWA | 50 ppm (245 mg/m3) PEL (SKIN) | None | None |
| Ethylene glycol | 25 ppm TWA Vapor fraction 50 ppm STEL Vapor fraction 10 mg/m3 STEL Aerosol, inhalable. | None | None | None |
| 2-phenylpropan-2-ol | None | None | None | None |
| methacrylic acid | 20 ppm TWA | None | None | None |

Engineering controls:

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

Respiratory protection:

Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists. If this material is handled at elevated temperatures or under mist forming conditions, without engineering controls, a NIOSH approved respirator must be used.

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. Safety showers and eye wash stations should be available.

Skin protection:

Use chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact. Neoprene gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:

Paste, Liquid

Color:

White

Odor:

Mild

Odor threshold:

Not available.

| | |
|-------------------------------------------------|-------------------------------|
| pH: | Not applicable |
| Vapor pressure: | < 5 mm hg (27 °C (80.6 °F)) |
| Boiling point/range: | Not available. |
| Melting point/ range: | Not available. |
| Specific gravity: | 1.0 |
| Vapor density: | Not available. |
| Flash point: | > 93.3 °C (> 199.94 °F) |
| Flammable/Explosive limits - lower: | Not available. |
| Flammable/Explosive limits - upper: | Not available. |
| Autoignition temperature: | Not available. |
| Flammability: | Not applicable |
| Evaporation rate: | Not available. |
| Solubility in water: | Slight |
| Partition coefficient (n-octanol/water): | Not available. |
| VOC content: | 26.6 %; 266 g/l EPA Method 24 |
| 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. Oxides of sulfur. Irritating organic vapours. |
| Incompatible materials: | Strong oxidizing agents. Free radical initiators. Reducing agents. Strong acids. Oxygen scavengers. Other polymerization initiators. Heavy metals. Amines. Peroxides. Alkalis. |
| Reactivity: | Not available. |
| Conditions to avoid: | Elevated temperatures. Heat, flames, sparks and other sources of ignition. Store away from incompatible materials. Do not freeze. Protect from direct sunlight. UV light. Inert gas blanketing. Avoid moisture. |

11. TOXICOLOGICAL INFORMATION

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

Potential Health Effects/Symptoms

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|----------------------|--------------------------------------------------------------------------------------|
| Inhalation: | May cause respiratory tract irritation. May cause central nervous system depression. |
| Skin contact: | Causes skin irritation. May cause allergic skin reaction. |
| Eye contact: | Causes serious eye irritation. |
| Ingestion: | May cause gastrointestinal tract irritation if swallowed. |

| Hazardous Component(s) | LD50s and LC50s | Immediate and Delayed Health Effects |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| Aluminium hydroxide | Oral LD50 (Rat) = > 5,000 mg/kg | Irritant, Lung, Respiratory |
| Tetrahydrofurfuryl methacrylate | None | Irritant, Allergen |
| Ethylene/MethylAcrylate rubber | None | No Data |
| Hydroxyalkyl methacrylate | None | Irritant, Allergen |
| Cumene hydroperoxide | None | Allergen, Central nervous system, Corrosive, Irritant, Mutagen |
| Saccharin | Oral LD50 (Mouse) = 17 g/kg | No Target Organs |
| Silica, amorphous, fumed, crystal-free | None | Nuisance dust |
| 1,3-Butylene glycol dimethacrylate | None | Irritant, Allergen |
| Cumene | Oral LD50 (Rat) = 2.91 g/kg Oral LD50 (Rat) = 1,400 mg/kg | Central nervous system, Irritant, Lung |
| Ethylene glycol | Oral LD50 (Rat) = 5.89 g/kg Oral LD50 (Mouse) = 14.6 g/kg Dermal LD50 (Rabbit) = 9,530 mg/kg | Blood, Bone Marrow, Central nervous system, Developmental, Eyes, Irritant, Kidney, Liver, Metabolic |
| 2-phenylpropan-2-ol | Oral LD50 (Mouse) = 1.950 g/kg | Blood, Central nervous system, Irritant, Kidney, Liver |
| methacrylic acid | Oral LD50 (Mouse) = 1,332 mg/kg Oral LD50 (Mouse) = 1,600 mg/kg Oral LD50 (Mouse) = 1,250 mg/kg 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 | Corrosive, Irritant, Allergen |

| Hazardous Component(s) | NTP Carcinogen | IARC Carcinogen | OSHA Carcinogen (Specifically Regulated) |
|----------------------------------------|--------------------------------------------------|-----------------|------------------------------------------|
| Aluminium hydroxide | No | No | No |
| Tetrahydrofurfuryl methacrylate | No | No | No |
| Ethylene/MethylAcrylate rubber | No | No | No |
| Hydroxyalkyl methacrylate | No | No | No |
| Cumene hydroperoxide | No | No | No |
| Saccharin | No | No | No |
| Silica, amorphous, fumed, crystal-free | No | No | No |
| 1,3-Butylene glycol dimethacrylate | No | No | No |
| Cumene | Reasonably Anticipated to be a Human Carcinogen. | Group 2B | No |
| Ethylene glycol | No | No | No |
| 2-phenylpropan-2-ol | No | No | No |
| methacrylic acid | No | No | No |

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

Hazardous waste number: D003: Reactive.

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: RQ, Environmentally hazardous substance, liquid, n.o.s.
Hazard class or division: 9
Identification number: UN 3082
Packing group: III
DOT Hazardous Substance(s): alpha,alpha-Dimethylbenzylhydroperoxide

International Air Transportation (ICAO/IATA)

Proper shipping name: RQ, Environmentally hazardous substance, liquid, n.o.s.
Hazard class or division: 9
Identification number: UN 3082
Packing group: III

Water Transportation (IMO/IMDG)

Proper shipping name: RQ, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Hazard class or division: 9
Identification number: UN 3082
Packing group: III

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). Cumene hydroperoxide (CAS# 80-15-9). Cumene (CAS# 98-82-8).
CERCLA Reportable quantity: Cumene hydroperoxide (CAS# 80-15-9) 10 lbs. (4.54 kg)
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: Not available.

Prepared by: Product Safety and Regulatory Affairs

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