ACKURETTA

MATERIAL SAFETY DATA SHEET

Section 1: Identification

Product Name: Ackuretta CURO Ortho Model
Chemical Name/Synonyms: Additive plastic (Acrylate mixture)
Application: Acrylate mixture-based resin 3D printing systems with 385 nm or 405 nm light sources for fabrication of dental models.
Application: Acrylate mixture resin
Company: Ackuretta Technologies Pvt. Ltd.
Supplier: Ackuretta Technologies Pvt. Ltd.
Taiwan (R.O.C.)
Taipei City, 11493 Neihu District,
Section 1, Neihu Road,
No. 322, 6F
T: +886 2 7737 8330
E-mail: info@ackuretta.com
In emergency call: +886 2 7737 8330
MSDS Date of preparation: 23rd of January, 2024

Section 2: Hazard(s) Identification

Hazard Classification: According to Products Regulations
Classification of the product:
Acute Toxicity (Oral) Category 5
Skin corrosion/irritation Category 2
Serious eye damage/eye irritation Category 1
Skin sensitizer Category 1

Label elements: Danger
Symbol:

☐ Flame ☐ Exploding bomb ☒ Exclamation mark

☐ Gas cylinder ☐ Health hazard ☐ Flame over circle

☒ Corrosion ☐ Environment ☐ Skull and crossbones

Signal Word(s): Warning
Hazard substance: Dipropylene Glycol Diacrylate
Hazard statement: H303: May be harmful if swallowed
H315: Causes skin irritation
H317: May cause an allergic skin reaction H318: Causes serious eye irritation
Precautionary statements: Prevention
P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
P264: Wash contact place thoroughly after handling.
P272: Contaminated work clothing should not be allowed out of the workplace.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
Response
P310: Immediately call a POISON CENTER/doctor/
P312: Call a POISON CENTER/doctor/…if you feel unwell.
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321: Specific treatment
P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
P362+P364: Take off contaminated clothing and wash before reuse.

Disposal
P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards: Skin sensitization hazard, heat generation when polymerization, carbon oxide generation when decomposition by heat.

Section 3: Composition/Information on Ingredients

Monomers are based on methacrylic esters with levels of stabilizer, fillers, pigments initiator and accelerator.

Substance Identity	CAS No.	Approx. Weight (%)
Urethane Acrylate	73324-00-2	50%-60%
Dipropylene Glycol Diacrylate	57472-68-1	20%-30%
Triethylene Glycol Dimethacrylate	109-16-0	10%-20%
Photoinitiator	162881-26-7	0%-5%
Remarks:		

Section 4: First Aid Measures

The first-aid measures for different exposure routes:
Inhalation: 1. Remove the victim to fresh air immediately. Give oxygen or artificial respiration as needed.
2. Obtain emergency medical attention. Prompt action is essential.
Skin contact: 1. Immediately remove contaminated clothing.
2. Wash skin thoroughly with mild soap and water.
3. Flush with lukewarm water for 15 minutes. If sticky, use a waterless cleaner first.
4. Seek medical attention if ill effect or irritation develops.

Eye contact: 1. In case of eye contact, immediately rinse with clean water for 20-30 minutes.
2. Obtain emergency medical attention.

Ingestion: 1. If a large quantity is swallowed, give lukewarm water (pint) if the victim is completely conscious/alert.
2. Do not induce vomiting/risk of damage to lungs exceeds poisoning risk.
3. Obtain emergency medical attention.

The most important symptoms and hazardous effects: Slight skin irritation
The protection of first-aiders: Wear C class protective equipment and first aid in the safety area.
Notes to physicians: Slight skin irritation, Symptoms may include localized redness or rash and swelling of the affected area, Symptoms may be delayed.

Section 5: Fire-Fighting Measures

Suitable fire extinguishing media: Water, foam, carbon dioxide or dry chemical
Specific hazards may be encountered during fire-fighting: High temperatures, inhibitor depletion, accidental impurities or exposure to radiation or oxidizers may cause spontaneous polymerizing reactions generating heat / pressure. Closed containers may rupture or explode during runaway polymerization.
Specific fire-fighting methods: Full protective equipment, including self contained breathing apparatus is needed to protect fire fighters from exposure.
Special equipment / instructions for the protection of firefighters: Chemical splash goggles and or face shield, respiratory protection equipment, protective gloves, apron, boot.

Section 6: Accidental Release Measures

Personal precautions: Wear proper protective equipment, avoid raw material contact and vapor inhalation.
Environmental precautions: 1. Extinguish all ignition sources and ventilate the area.
2. Dispose/report per regulatory requirements.
Clean-up procedures: 1. Avoid contact spilled or released material.
2. Reduce spill or release in safety condition.
3. Soak up a small spill with inert solids (such as vermiculite, clay) and sweep/shovel into a vented disposal container.
4. Dike and recover large spill. Obtain emergency help by fire or emergency unit.

Section 7: Safe Handling and Storage Measures

Handling procedures:
This product is inhibited to prevent uncontrolled polymerization. A polymerization can generate heat and pressure and may cause product containers to rupture. Check inhibitor content often and add inhibitor to bulk liquid if needed.
Storage procedures: Maintain head space in storage containers to support oxygen requirements of the inhibitor(s). Do not blanket or mix with oxygen free gas, and prevent material from freezing (inhibitor can separate from product as a solid). Store drums above 10 /50 and below 32 /90. Bulk storage temperature range:15-27 /59-80 . Store drums away from heat sources, strong oxidizers, radiation and other initiators.
Use products within six months of receipt for optimum results. If material freezes, heat and mix to redistribute the inhibitor. Product may also be heated to facilitate handling. Heat product container slowly to 40 /104 for not more than 24 hours. Convection ovens or warm water baths (preferred due to more efficient heat transfer) are recommended for heating. Do not use a drum heater. An air space, preferably an air bubble flow, should be provided for at all times during heating.

Control parameters

Substance name	8 hours time weighted average exposure limits (TWA)	short-term exposure limits (STEL)	maximum exposure limits (CEILING)	biological standards (BEIs)
Urethane Acrylate	-	-	-	-
Dipropylene Glycol Diacrylate	-	-	-	-
Ethoxylated Trimethylolpropane Triacrylate	-	-	-	-
Photoinitiator	-	-	-	-

Personal protective equipment

Respiratory protection: AIf this material is handled at elevated temperature or under mist forming conditions, NIOSH/MSHA approved respiratory protection equipment should be used.

Hand protection: EChemical-resistant gloves should be worn when handing this product.

Eye protection: Chemical splash goggles and /or face shield must be worn when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapor. Contact lenses should not be worn.

Skin and body protection: Depending on the conditions of use, protective gloves, apron, boots, head and face protection should be worn. This equipment should be cleaned thoroughly after each use.

Hygiene measures: 1. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
2. Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using toilet facilities.
3. Promptly remove soiled clothing/wash thoroughly before reuse. Shower after work using plenty of soap and water.

Section 9: Physical and Chemical Properties

Appearance (physical state, colour, etc): Liquid at 25	Odor: Low odor
Odor threshold:—	Melting point/freezing point:—
pH value: —	Boiling point/boiling range:—
Flammability (solid, gas):—	Flash point: ℉ > 110 ℃
Decomposition temperature: —	Test method ○ Open cup ● Closed cup
Autoignition temperature:—	Explosion limits:—

Vapor pressure：—	Vapor density：—
Density：1.12-1.15	Solubility：Negligible
Partition coefficient of n-octanol/water：—	Evaporation rate：—

Section 10: Chemical Stability and Reactivity Information

Chemical Stability：Stable in normal condition.
Possible hazardous reactions occurring under specific conditions：Heat and pressure generation when polymerization and the result in closed containers broken and cracked.
Conditions to be avoided：High temperatures, localized heat sources (i.e., drum or band heaters), oxidizing conditions, freezing conditions, direct sunlight, ultraviolet radiation, inert gas blanketing.
Materials to avoid：Strong oxidizers, strong reducers, free radical initiators, inert gases, oxygen scavengers.
Hazardous decomposition products：Acrid smoke-fumes/carbon monoxide/carbon dioxide and perhaps other toxic vapors may be released during a fire involving this product.

Section 11: Toxicological Information

Routes of exposure：Skin, inhalation, ingestion, eyes.
Symptoms：After inhalation: No significant signs or symptoms indicative of any adverse health hazard are expected to occur at standard conditions due to the low volatility of this material.
However, aerosols, or vapors which may be generated at elevated processing temperatures, may cause respiratory tract irritation.
Symptoms of irritation may include coughing, mucous production and shortness of breath.
After skin contact: Although no appropriate human or animal health effects data are known to exist, this material is expected to be a skin irritant.
Symptoms of irritation may include redness or rash, swelling of the affected area and blistering.
Repeated or prolonged skin contact may cause a more severe skin response such as ulcers and scarring.
Symptoms of skin exposure may be delayed 24-48 hours.
Although no appropriate human or animal health effects data is known to exist, this material may cause an allergic skin reaction (sensitization) in susceptible individuals upon repeated exposure.
After eye contact: Although no appropriate human or animal health effects data are known to exist, this material is expected to cause eye irritation.
May cause moderate irritation with symptoms including burning sensation, tearing, redness or swelling.
After ingestion: Although no appropriate human or animal health effects data are known to exist, this material is expected to be a slight ingestion hazard.
Acute toxicity: —
Chronic toxicity or long term toxicity: —

Section 12: Ecological Information (non-mandatory)

Ecological toxicity: None of the components are listed.
Persistence and degradability: No data is currently available.
Bio-accumulative potential: No data is currently available.
Mobility in soil: No data is currently available.
Other adverse effects: None known.

Section 13: Waste Disposal Measures

Methods of waste disposal: 1. Residues and spilled material may be hazardous waste due to potential for internal heat generators. Disposal must be in accordance with applicable federal, state, or local regulations.

2. The container for this product can present explosion or fire hazards, even when emptied. To avoid risk of injury, do not cut, puncture, or weld on or near this container. Since the emptied containers retain product residue, follow label warnings even after the container is emptied.

Section 14: Transport Information

United nations number (UN No):/
UN Proper shipping name:/
Transport hazard class(es):/
Packing group number:—
Marine pollutant(YES／NO): YES ●NO
Specific transport measures and precautionary conditions:

Section 15: Regulatory Information

Applicable regulations:N/DA

Section 16: Other Information

Reference documents
SDS prepared by
Organization name:Ackuretta Technologies Pvt. Ltd., Company Address:Taipei City, 11493 Neihu District, Section 1, Neihu Road, No. 322, 6F, Taiwan, R.O.C. Telephone:+886 2 7737 8330
Title:Research Chemist Name Yu-Ming Sun
(signature):
Date:2024/01/23
Remark:" – " = not available ; " / " = not applicable

While Believed that data contained herein are accurate and derived from qualified sources the data are not to be taken as a warranty or representation solely for your consideration, investigation and verification. Any use of these data and information must be determined by the user to be in accordance with applicable federal, state and local regulations.