

**CIBACRON C2/C6 – LIQUID
TEMPORARY CROWN & BRIDGE ACRYLIC
MATERIAL SAFETY DATA SHEET**

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

I- MANUFACTURER:

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III- PRODUCT:

CIBACRON – LIQUID

IV- CHEMICAL NAME:

ISO BUTYL METHACRYLATE

2. COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENT (S):	CAS NO.	%	HAZARD SYMBOL:
Iso Butyl Methacrylate	97-86-9	> 95	FXi
Accelerator	99-97-8	< 2	T
Cross linker	97-90-5	< 5	Xi

3. HAZARDS IDENTIFICATION

- Highly flammable.
- Irritating to eyes, respiratory system and skin. May cause sensitization by skin contact High atmospheric concentrations may lead to irritation of the respiratory tract and anesthetic effects. Repeated and/ or prolonged contact may cause dermatitis

4. FIRST - AID MEASURES

- **INHALATION:** Remove patient from exposure, keep warm and at rest. Obtain immediate medical attention.
- **SKIN:** Remove contaminated clothing, Wash skin immediately with water. Of symptoms (irritation or blistering) occur obtain medical attention.
- **EYE:** Irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 15 minutes. Obtain immediate medical attention.
- **INGESTION:** Do not induce vomiting. Wash out mouth with water and give 200-300 ml (half a pint) of water to drink. Obtain medical attention. Never give anything by mouth to an unconscious person. Call a physician.

NOTES TO PHYSICIAN: Activated charcoal slurry may be administered. To prepare activated charcoal slurry, suspend 50 grams activated charcoal in 400 ml water and mix thoroughly. Administer 5 ml/kg, or 350 ml, for an average adult.

5. FIRE FIGHTING MEASURES

- **FLASH POINT:
TEMPERATURE:** 46°C (114°F)
- **AUTOIGNITION:** 514°C(957.2°F) Highly flammable. May polymerize on heating. Sealed containers may rupture explosively if hot.
- **EXTINGUISHING MEDIA:** Water spray, foam, dry powder or CO₂. Keep fire exposed containers cool by spraying with water.
- **FIRE FIGHTING PROTECTIVE** A self-contained breathing apparatus and suitable protective clothing should be worn

EQUIPMENT: in fire conditions.

6. ACCIDENTAL RELEASE MEASURES

Eliminate sources of ignition. Ensure suitable personal protection (including respiratory protection during removal of spillages. Prevent entry into drains. Adsorb spillages onto sand, earth or any suitable adsorbent material. Do not adsorb onto sawdust or other combustible materials. Transfer to a container for disposal or recovery. Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body.

7. HANDLING AND STORAGE

- **PRECAUTIONS FOR HANDLING:** Observe precautions found on the label. Close container after each use. Ground all metal containers when transferring. Use explosion-proof equipment.
- **HANDLING:** Avoid contact with skin and eyes.
Avoid inhalation of high concentration of vapors. Use only in well ventilated areas.
The vapor is heavier than air; beware of pits and confined spaces. Take precautionary measures against static discharges.
- **STORAGE:** Keep only in original container. Store in cool, dry place away from heat, sparks, flame and direct sunlight. Keep container closed to prevent water absorption and contamination. Keep away from sources of ignition – No Smoking.
- **IMPORTANT:** Methacrylate stored in bulk must be kept in contact with air (oxygen). Monomer vapors are uninhibited and may form polymers in vent or flame arresters, resulting in blockage of vents
- **STORAGE TEMPERATURE:** Preferably not exceeding 25 °C.
- **INDUSTRIAL HYGIENE PRACTICES:** Wash face and hands thoroughly with the soap and water after use and before eating, drinking, smoking or applying cosmetics

8. EXPOSURE CONTROLS / PPE

- **ENGINEERING CONTROLS**
Safety shower and eye bath. Use nonsparking tools. Mechanical exhaust required.
- **PERSONAL PROTECTIVE EQUIPMENT**
- **RESPIRATORY:** Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.
- **HAND:** Compatible chemical- resistant gloves.
- **EYE:** Chemical safety goggles.
- **GENERAL HYGIENE MEASURES**
Wash thoroughly after handling. Wash contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

- **VAPOR DENSITY (AIR=1):** NE
- **VAPOR PRESSURE:** 4 MBA at 20°C (68°F)
- **WATER SOLUBILITY:** 2 GL at 20° C (68°F)
- **PERCENT VOLATILE (WW%):** NE
- **BOIL POINT:** 155° C
- **SPECIFIC GRAVITY:** 0.88 at 20°

- **ODOR:** Characteristic
- **FORM:** Liquid
- **COLOR:** Colorless
- **VISCOSITY:** Like water
- **EVAPORATION RATE (BuAc=1):** NE

10. STABILITY AND REACTIVITY

- **HAZARDOUS REACTIONS:** Stable in the presence of inhibitor.
Susceptible to polymerization initiated by prolonged heating or the presence of catalyst.
Incompatible materials: Polymerisation catalysts, such as peroxy or azo compounds, strong acids, Alkalis and oxidizing agents.
- **HAZARDOUS DECOMPOSITION PRODUCT (S):** Does not decompose up to auto-ignition temperature.

11. TOXICOLOGICAL INFORMATION

- **INHALATION:** Irritating to respiratory system. High atmospheric concentrations may lead to irritation of the respiratory tract, dizziness, headache and anesthetic effects.
- **SKIN:** May cause sensitization by skin contact. Irritating to skin. Repeated and / of prolonged contact may cause dermatitis.
- **EYE:** Irritating to eyes. High vapor concentration will cause irritation.
- **INGESTION:** Low oral toxicity, but ingestion may cause irritation of the gastrointestinal tract.
- **LONG TERM EXPOSURE:** Repeated exposure to high levels produces adverse effects on the heart, lungs, liver, and kidneys.

Repeated exposure of animals by inhalation to levels at or above the occupational exposure level produces adverse effects on the nasal epithelium (levels of 100 and 400 ppm).

Recent studies in animals have shown that high exposures do not produce embryo or foetotoxic nor teratogenic effects in the presence of maternal toxicity.

None of these effects are likely to occur in humans, provided exposure is maintained at or below the occupational exposure limit.

- **TOXICITY DATA:**
For Methacrylate:
 - Acute Oral Rat LD₅₀: 7990 mg/kg
 - Acute Dermal Rabbit LD₅₀: 35.500 mg/kg
 - Acute Inhalation Rat: LD₅₀ >12,500 to 16,500 ppm for 0.5 hours
 - Inhalation Human TC_{Lo}: 125 ppm
 - Inhalation Human TC_{Lo}: 60 mg/m³
 - Human Patch Test: Approximate on-third of subjects developed mild redness at the site of application. Twenty percent showed sensitivity when tested 10 days later.

12. ECOLOGICAL INFORMATION

- **ENVIRONMENTAL FATE AND DISTRIBUTION:** High tonnage material produced in wholly contained systems. Liquid with moderate volatility. The product is sparingly soluble in water. The product has low potential for bioaccumulation. The product is predicted to have high mobility in soil.
- **PERSISTENCE AND DEGRADATION:** Not readily biodegradable.
Chemical Oxygen Demand (COD) 88% (28 days).
Inherent Biodegradation:
Dissolved Organic Carbon Removal (DOC removal) . 95% (28 days)/
- **TOXICITY:** Low toxicity to fish.
LC₅₀ (fish) Typically: -.100 mg/l.
LC₅₀ (fathead minnow) (96 hour) (static) 130 mg/l
Harmful to aquatic invertebrates.

EC50 (Daphnia magna) (48 hour) 69 mg/l
Low toxicity to algas.
EC50 (selenastrum capricomutum) (96 hour) 170 mg/l

• **EFFECT ON EFFLUENT TREATMENT:**

The product is substantially removed in biological treatment processes.

13. DISPOSAL CONSIDERATIONS

Disposal should be in accordance with local, State or national legislation. Incinerate under approved controlled conditions, using incinerators suitable for the disposal of methyl methacrylate. Decontaminate empty drums before recycling.

14. TRANSPORT INFORMATION

• **TRANSPORT BY LAND:**

Proper Shipping Name: Isobutyl methacrylate, inhibited
UN #: 2283
Class: 3
Packing Group: III
Hazard Label: Flammable Liquid
PIH: Not PIH

• **TRANSPORT BY SEA:**

UN no. sea: 2283
IMDG/GGVSee code: Class 3.2
EmS: 3-07
MFAG: 330
Technical name: Isobutyl methacrylate, inhibited.
Packing group sea: II

• **TRANSPORT BY INLAND WATERWAYS:**

ADNR: Class 3 (IIIa), item 1a
ADNR category: K 1 n
Note inland Waterways: Isobutyl methacrylate.

15. REGULATORY INFORMATION

• **EC REGULATIONS:**

• **EINECS:** All chemical listed

• **EEC Classification:** HIGHLY FLAMMABLE AND HARMFUL
Symbol: Indication of Danger
F Highly Flammable
Xn Harmful

• **Risk Phrases:** R11 Highly flammable.
R20/21/22 Harmful by inhalation. And in contact with skin.
R36/37/38. Irritation to the eyes, respiratory system and skin.
R43 May cause sensitization by skin contact.

• **Safety Phrases:** S9 Keep container in well ventilated place.
S 16 Keep away from sources of ignition. No smoking.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S33 Take precautionary measures against static discharges.
S36/37 Wear suitable protective clothing and gloves.
S60 This material and its container must be disposed of as hazardous waste.

• **CANADIAN REGULATIONS:**

• **DSL:** included
• **WHMIS Classification:** B2 Flammable Liquid
D2B Toxic
• **TSCA:** FOR USE IN FDA REGULATED PRODUCTS ONLY

16. OTHER INFORMATION

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM (HMIS) RATING:
HEALTH = 2

FLAMMABILITY = 3
REACTIVITY = 2
PERSONAL PROTECTIVE EQUIPMENT – Gloves and safety glasses or chemical splash goggles.
NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) HAZARD IDENTIFICATION RATING:
HEALTH = 2
FLAMMABILITY = 3
REACTIVITY = 2
This data sheet was prepared in accordance with Directive 91/155/EEC.

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