C.I.M. Industries Inc.
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Material Safety Data Sheet

Prepared According to the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Product Names
CIM Bonding Agent

Description
Organosilane adhesion promoter in isopropyl alcohol solution

Emergency Telephone
CHEMTREC (800) 424-9300
C.I.M. Industries Inc. (603) 924-9481

Prepared by:
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CAUTION!

Flammable liquid.
Keep out of reach of children.

May cause severe eye irritation.
Harmful if swallowed.

HAZARDOUS CONSTITUENTS

		ACGIH		OSHA			
Component	**CAS#**	**TWA**	**STEL**	**TWA**	**STEL**	**% Range**	**Primary Hazard**
Isopropyl alcohol	67-63-0	400	500	400	500	>99%	Flammable liquid

NOTES:
OSHA/ACGIH exposure units in ppm.

HEALTH EFFECTS	EMERGENCY & FIRST AID PROCEDURES	SPECIAL PROTECTION
Eyes May cause eye irritation, including stinging, redness, tearing, blurred vision, and swelling.	Flush eyes immediately with fresh water for at least 15 minutes while holding the eyelids open. If irritation persists, see a doctor.	Wear chemical safety goggles.
Skin May cause mild skin irritation and dryness following prolonged or frequent contact. LD_{50} (rabbit)>13 g/kg.	Remove contaminated clothing and wash skin thoroughly with soap and water. Launder clothing before reuse.	Skin contact can be minimized by wearing protective clothing and solvent resistant gloves.
Inhalation Breathing of vapor or mist during normal handling is not likely to cause harmful effects. Symptoms including headache, dizziness, fatigue, nausea or even unconsciousness will occur at air concentrations above the recommended exposure limits. LC_{50}: 12,000 ppm (8 hr.).	Move the person to fresh air and apply oxygen if breathing is difficult. Seek immediate medical attention. If breathing has stopped, apply artificial respiration.	Use in well ventilated areas only. Wear an OSHA approved type C air supplied respirator if ventilation is inadequate to keep solvent inhalation vapors below the TLV.
Ingestion Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. This material is an aspiration hazard. Ingestion can cause central nervous system effects and gastrointestinal irritation (nausea, vomiting and diarrhea). LD_{50} (rat)>5 g/kg.	If swallowed, seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact physician, medical facility or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.	Avoid airborne mists which can be inhaled or swallowed. Use protective mask if necessary.

FIRE PROTECTION

Flammable Liquid: This material presents a fire hazard. Liquid quickly evaporates and forms vapor (fumes) which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources such as cigarettes, pilot lights, welding equipment, static discharge, and electrical motors and switches.

Flash Point: 53°F (TCC)

Autoignition Temp.: 750°F

Flammability Limits: 2% lower, 12% upper limit.

Extinguishing Media: CO_2, Dry Chemical, Alcohol Foam, Water may be ineffective except for cooling.

Special Fire Fighting Procedures: For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus. See Hazardous Decomposition Products. Read the entire MSDS.

NFPA Hazard Rating: Health 1; Flammability 3; Reactivity 0; Special 0, Class IB

DOT Hazard: Isopropanol mixture, Class 3, UN1219, PG II

PHYSICAL PROPERTIES

Solubility: Miscible in all proportions in water, alcohols, ketones, and aromatic hydrocarbons. Insoluble in aliphatic hydrocarbons.

Appearance (Color, Odor, etc.): Clear liquid with rubbing alcohol odor. Odor threshold: 40 to 200 ppm.

Boiling Point: 180°F (82°C)

Melting Point: -128°F (-89°C)

Specific Gravity: 0.78

Vapor Pressure: 44mm Hg @ 77°F (25°C)

Vapor Density (Air=1): 2

Percent Volatile (Volume): greater than 99%

Evaporation Rate: 7.70 (Ethyl Ether=1)

ENVIRONMENTAL PROTECTION

Environmental Impact: This material may be toxic to aquatic organisms and should be kept out of sewage and drainage systems and all bodies of water.

Precautions if Material is Released or Spilled: Eliminate all sources of ignition in vicinity of spill or released vapor. Clean up small spills using appropriate techniques such as absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Follow prescribed procedures for reporting and responding to larger releases.

Waste Disposal Methods: Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations. Contact local environmental or health authorities for approved disposal of this material.

Regulatory Status: This product does not contain constituents known to be a carcinogen, teratogen, mutagen or reproductive toxin. No toxicologically synergistic products are known.

TSCA (United States) – The intentional ingredients of this product are listed by TSCA (U.S.A.), DSL (Canada), and EINECS (Europe).

CERCLA RQ – 40 CFR 302.4(a): None listed

SARA 302 Components – 40 CFR 355 Appendix A: None

Section 311/312 Hazard Class – 40 CFR 370.2:
Immediate (X) Delayed (X) Fire (X) Reactive ( )
Sudden Release of Pressure ( )

SARA 313 Components – 40 CFR 372.65: None

STATE AND LOCAL REGULATIONS

California Proposition 65: None

New Jersey RTK Label Information:
Isopropyl Alcohol – 67-63-0

Pennsylvania RTK Label Information: 2-Propanol – 67-63-0

REACTIVITY DATA

Stability (Thermal, Light, etc.): Stable

Incompatibility (Materials to Avoid): May react with strong oxidizing materials. Do not use with aluminum equipment at temperatures above 120°F.

Hazardous Decomposition Products: Incomplete combustion can produce carbon monoxide. Normal combustion forms carbon dioxide and water vapor.

Hazardous Polymerization: Will not occur.

ADDITIONAL HEALTH DATA

Target Organ Effects

Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals, and may aggravate pre-existing disorders of these organs in humans: mild, reversible liver effects.

Developmental Information

This material (or a component) has been shown to cause harm to the fetus in laboratory animal studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain.

Cancer Information

Based on the available information, this material cannot be classified with regard to carcinogenicity. This material is not listed as a carcinogen by IARC, NTP, or OSHA.

HANDLING & STORAGE

READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL.
DO NOT USE OR STORE near flame, sparks or hot surfaces.
USE ONLY IN WELL VENTILATED AREA. Keep container closed.
DO NOT weld, heat or drill container. Replace cap or bung. Emptied container still contains hazardous or explosive vapor or liquid. Store product in accordance with local regulations. Do not exceed indoor limits for storage of Class IB liquids. Storage temperature: 20°F to 90°F (Do not heat). Keep containers tightly closed until ready to use. Electrically ground pails when transferring liquid.