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 Activator including:
CIM 1061 Activator
CIM 1000 Activator
CIM 800 Activator
CIM 2000 Activator

Description
Activator for CIM Premix which is based upon modified Diphenylmethane-4,4' -diisocyanate

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

Prepared by:
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CAUTION!

Harmful if Inhaled. Respiratory Sensitizer. Toxic Fumes Released During Fires.

May cause eye and skin irritation. May cause allergic skin and respiratory reactions.

HAZARDOUS CONSTITUENTS

Component	CAS#	ACGIH TWA	ACGIH STEL	OSHA TWA	OSHA STEL	% Range	Primary Hazard
Diphenylmethane-4,4'-diisocyanate (MDI)	26447-40-5	0.005 ppm		0.02 ppm		up to 80%	Sensitizer
Modified MDI	39310-05-9	n/a		n/a		up to 30%	n/a
Triethyl phosphate	00078-40-0	n/a		n/a		<2%	Eye irritant

HEALTH EFFECTS	EMERGENCY & FIRST AID PROCEDURES	SPECIAL PROTECTION
Eyes May cause eye irritation. May cause slight transient corneal injury.	Flush eyes immediately with fresh water for at least 15 minutes continuously while holding the eyelids open. If irritation persists, see a doctor.	Wear chemical safety goggles. If a respirator is required, use full face mask to protect eyes from vapor or mist.
Skin Prolonged or repeated exposure may cause skin irritation or allergic skin and respiratory reactions. LD_{50} (rabbit)>2 g/kg	Wash thoroughly with soap and water.	Skin contact may be minimized by wearing protective clothing and impervious gloves. Launder clothes before re-use.
Inhalation Vapors and aerosols can irritate respiratory passages. Severe overexposure may lead to pulmonary edema. MDI can induce respiratory sensitization with asthma-like symptoms include chronic cough, tightness of chest with difficulty in breathing. Symptoms may be immediate or delayed several hours after exposure. Chronic overexposures may result in permanent decreases in lung function.	Move the person to fresh air and apply oxygen if breathing is difficult. If breathing has stopped, apply artificial respiration. Call a physician or transport to a medical facility. Note to physician: No specific antidote. Respiratory symptoms may be delayed including pulmonary edema. May cause respiratory sensitization.	Use in well ventilated areas only. Wear an OSHA approved type C air supplied respirator if ventilation is inadequate to keep vapors and mist below the exposure limits listed above
Ingestion Single dose toxicity is extremely low and not likely to cause injury. LD_{50} (rats) > 5 g/kg.	No adverse effects anticipated by this route of exposure incidental to proper industrial handling.	Avoid airborne mists which can be inhaled or swallowed. Use protective mask if necessary. Provide general ventilation or exhaust to control airborne levels below exposure guidelines.

All information is based on data of which we are aware and is believed to be correct as of the date hereof. Since the information contained herein may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

FIRE PROTECTION

Flash Point: 425°F (218°C)

Autoignition Temp.: No data available

Flammability Limits: No data available

Extinguishing Media: CO_2, Dry Chemical, Foam. Water should be used in very large quantities.

Special Fire Fighting Procedures: Use self contained breathing apparatus with full face piece and protective clothing to protect against nitrogen oxide fumes and isocyanate vapors. Evacuate down-wind personnel. Contain run-off.

Fire and Explosion Hazard: Water contamination will produce carbon dioxide. Do not reseal contaminated containers as pressure buildup may rupture them.

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

DOT Hazard: Not regulated

PHYSICAL PROPERTIES

Solubility: Miscible in all proportions with many hydrocarbon solvents; reacts with water liberating CO_2.

Appearance (Color, Odor, etc.): Pale amber liquid

Boiling Point: 597°F (decomposes)

Melting Point: Approximately 160°F

Specific Gravity: 1.2

Vapor Pressure: 0.0003 mm Hg @ 77°F (25°C)

Vapor Density (Air=1): Approximately 11.4

Percent Volatile (Volume): n/a

ENVIRONMENTAL PROTECTION

Precautions if Material is Released or Spilled: For major spills, avoid contact. Barricade area. Call CHEMTREC at (800) 424-9300. For minor spills, wear skin, eye, and respiratory protection during cleanup. Absorb spilled liquid with sawdust or other absorbent and shovel into open top containers. DO NOT SEAL. Remove containers to well ventilated outside area and neutralize using dilute household ammonia or sodium carbonate solution. Let stand for 48 hours, allowing carbon dioxide to evolve, leaving insoluble and non-hazardous polyurea.

Environmental Impact: Based on information for MDI and polymeric MDI, material is practically non-toxic to aquatic organisms on an acute basis (LC50 greater than 100 mg/L in most sensitive species). Material reacts with water, forming insoluble polyurea which is stable.

Cleanup Procedure: Decontaminate spill areas using dilute household ammonia and detergent. Allow cleaning solution to contact spill area for at least 10 minutes. Empty containers can be neutralized by adding a small amount of water and allowing to stand for 48 hours. The liquid or solid residuals of the above cleanup procedure are non hazardous in accordance with RCRA, 40CFR261 and may be disposed of in accordance with local regulations.

Regulatory Status: MDI is subject to the reporting requirement of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (40CFR372). Spills having the potential to affect people offsite must be reported to the appropriate federal, state and local authorities.

SARA 313: Subject to reporting requirements

CERCLA: RQ - 5000 lbs.

SARA 311 & 312: MDI is an immediate health hazard, a delayed health hazard, and a reactive hazard.

TSCA: All ingredients are on the TSCA inventory or are not required to be listed.

WHMIS: D2A respiratory tract sensitizer; D2B eye or skin irritant; D2B skin sensitizer

CPR: MDI CAS #000101-68-8 63-76%

REACTIVITY DATA

Stability (Thermal, Light, etc.): Stable when properly stored.

Incompatibility (Materials to Avoid): May react with strong oxidizing materials. Avoid contamination with water, acid or strongly alkaline materials, alcohols, metals, soaps and detergents.

Hazardous Decomposition Products: Incomplete combustion can produce isocyanate vapors and mist, and carbon monoxide. Normal combustion may produce oxides of nitrogen and hydrogen cyanide.

Hazardous Polymerization: May occur with strong bases or at temperatures over 320°F (160°C). Temperatures over 99°C (120°F) accelerate the reaction with water.

ADDITIONAL HEALTH DATA

CIM Activator is an isocyanate intended for use with CIM Premix. Consult the MSDS for CIM Premix. Avoid inhalation of airborne activated CIM mixture which contains isocyanate and may result in sensitization and allergic response in some individuals.

Because of the low vapor pressure of this product, ventilation is usually sufficient to keep vapors below the TLV for isocyanates at ambient temperatures. If the material is heated or sprayed, airborne concentrations of vapor and mist may be excessive and use of an approved MSHA/NIOSH positive pressure supplied air respirator is strongly advised.

Over exposure to CIM Activator may cause an allergic respiratory sensitization. Sensitized individuals should not be further exposed to this product. Individuals with existing respiratory disease such as chronic bronchitis or emphysema or asthma should not be exposed to isocyanate vapors.

MUTAGENICITY: Mutagenicity data on MDI are inconclusive. MDI was weakly positive in some cases in vitro (test tube) studies; other in vitro studies were negative. A mutagenicity study in animals was negative. For the minor component (s) triethyl phosphate: in vitro mutagenicity studies were negative in some cases and positive in other cases. Animal mutagenicity studies were negative in some cases and positive in other cases.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: Tissue injury in the upper respiratory tract and lungs has been observed in laboratory animals after repeated excessive exposures to MDI/polymeric MDI aerosols. **CANCER INFORMATION:** Lung tumors have been observed in laboratory animals exposed to aerosol droplets of MDI/polymeric MDI (6 mg/m^3) for their lifetime. Tumors occurred concurrently with respiratory irritation and lung injury. Current exposure guidelines are expected to protect against these effects reported for MDI. **TERATOLOGY (BIRTH DEFECTS):** In laboratory animals, MDI/polymeric MDI did not produce birth defects; other fetal effects occurred only at high doses which were toxic to the mother.

HANDLING & STORAGE

READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL.

USE ONLY IN WELL VENTILATED AREA. DO NOT EAT, DRINK, OR SMOKE IN WORKING AREA.

CAUTION! Water contamination will cause dangerous pressure. Keep container closed. Do not reseal contaminated containers.

Store indoors at 70° - 95°F in original, unopened containers. Protect from contamination with moisture.

This product is a Class IIIB liquid and is not subject to indoor storage limitations per the Uniform Fire Code. Consult your local officials for exceptions.