

GC/Waldom Electronics

1801 Morgan Street
 Rockford, IL 61102
 Product Information: (815) 968-9661

Product Name: GC Bond

MSDS Number: 114
 Revision Date: 07/21/00
 Supersedes Date: 01/26/98

MATERIAL SAFETY DATA SHEET

Complies with OSHA Hazard Communication Standard 29 CFR 1910.1200

Product Type: Solvent Release Adhesive
 Product Name: **GC Bond**
 Part Number(s): **10-4302**
10-4308
10-4316

Emergency Contact: **Chemtrec**
 Phone: **(800) 424-9300**

Section 1 – Identification of Product

NFPA Rating:	Least	0
Health: 1	Slight	1
Flammability: 3	Moderate	2
Reactivity: 0	High	3
	Extreme	4
	Gloves, Safety Glasses B	

Section 2 – Hazardous Ingredients

Ingredient(s)	CAS Number	% (by Weight)
Methyl Ethyl Ketone	78-93-3	79.0 – 79.0
Nitrile Rubber	Trade Secret	9.0 – 13.0
Alkylphenolic Resin	Trade Secret	4.0 – 8.0
Calcium Carbonate	471-34-1	1.0 – 5.0
Formaldehyde	50-00-0	0.1 – 0.1

Section 3 – Physical Data

Boiling Point (for product): 176.0°F (80.0°C) @ 760 mmHg
 Vapor Pressure (for product): 71.000 mmHg @ 68.00 F
 Specific Vapor Density: 2.500 @ AIR = 1
 Specific Gravity: .862 @ 77.00 F
 Liquid Density: 7.180 lbs/gal @ 77.00 F
 .862 kg/1 @ 25.00 C
 Percent Volatiles: 78.0% – 82.0%
 Evaporation Rate: SLOWER THAN ETHYL ETHER
 Appearance: No data
 State: LIQUID
 Physical Form: No data
 Color: TAN COLORED LIQUID
 Odor: No data
 pH: Not applicable

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Section 4 – Fire and Explosion Hazard Data

Flash Point:	23.0°F (-5.0 C) TOC
Explosive Limit (for product):	Lower 2.0% Upper 12.0%
Autoignition Temperature:	No data
Hazardous Products of Combustion:	May form: carbon dioxide and carbon monoxide, hydrogen cyanide, nitrogen compounds, phenols, various hydrocarbons.
Fire and Explosion Hazards:	Vapors are heavier than air and may travel along the ground or may be removed by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electric motors, static discharge, or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.
Extinguishing Media:	Regular foam, water fog, carbon dioxide, dry chemical.
Fire Fighting Instruction:	No data

Section 5 – Health Hazard Data

Potential Health Effects	
Eye:	May cause mild eye irritation. Symptoms include stinging, tearing, and redness.
Skin:	Can cause skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, and drying and cracking of skin, burns and other skin damage. Additional symptoms of skin contact may include: allergic skin reaction (delayed skin rash which may be followed by blistering, scaling and other skin effects)
Swallowing:	Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful. This material can get into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury.
Inhalation:	Breathing of vapor or mist is possible. Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms usually occur at air concentrations higher than the recommended exposure limits (see section 8).
Symptoms of Exposure:	Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: irritation (nose, throat, airways), central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness).
Target Organ Effects:	Based on animal studies, exposure to methyl ethyl ketone (MEK) increases the onset of peripheral neuropathy caused by exposure to methyl butyl ketone (MBK), and/or n-hexane, and/or ethyl butyl ketone. MEK alone has not been shown to cause peripheral neuropathy. Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals: mild, reversible liver effects, mild, reversible kidney effects.
Developmental Information:	This material (or a component) has been shown to cause harm to the fetus in laboratory animal studies. The relevance of these findings to humans is uncertain.
Cancer Information:	Inhalation exposure of formaldehyde has been shown to cause nasal tumors in rats, and ingestion of formaldehyde in drinking water has been shown to cause leukemia and gastrointestinal tract tumors in rats. Epidemiology studies have not clearly associated exposure to formaldehyde with cancer in man. Formaldehyde is listed as a carcinogen by

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IARC, NTP, and OSHA.
 Other Health Effects: No data.
 Primary Routes of Entry: Inhalation, skin contact, and eye contact.

First Aid Measures:

Eyes: If symptoms develop, move individual away from exposure and into fresh air. Flush eyes gently with water while holding eyelids apart. If symptoms persist or there is any visual difficulty, seek medical attention.

Skin: Remove contaminated clothing. Flush exposed area with large amounts of water. If skin is damaged, seek immediate medical attention. If skin is not damaged and symptoms persist, seek medical attention. Launder clothing before reuse.

Swallowing: 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 a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Inhalation: If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

Note to Physicians: This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity (see section 3 – Swallowing) when deciding whether to induce vomiting. Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: skin, lung (for example, asthma-like conditions).

Section 6 – Reactivity Data

Hazardous Polymerization:	Product will not undergo hazardous polymerization.
Hazardous Decomposition:	May form: carbon dioxide and carbon monoxide, hydrogen cyanide, nitrogen compounds, phenols, various hydrocarbons.
Chemical Stability:	Stable
Incompatibility:	Avoid contact with: strong oxidizing agents.

Section 7 – Spill or Leak Procedure
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Small Spill:	Eliminate all sources of ignition such as flares, flames (including pilot lights), and electrical sparks. Absorb liquid on vermiculite, floor absorbent or other absorbent material.
Large Spill:	Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source. Prevent from entering drains, sewers, streams or other bodies of water. Prevent from spreading. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal.

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Section 8 – Special Protection Information

Eye Protection:	Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Consult your safety representative.												
Skin Protection:	Wear resistant gloves such as: natural rubber, to prevent repeated or prolonged skin contact, wear impervious clothing and boots.												
Respiratory Protection:	If workplace exposure limit(s) of product or any component is exceeded (see exposure guidelines), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.												
Engineering Controls:	Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).												
Exposure Guidelines:	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Component</td> <td></td> </tr> <tr> <td>Methyl Ethyl Ketone (78-93-3)</td> <td></td> </tr> <tr> <td>OSHA VPEL 200.000 ppm – TWA</td> <td></td> </tr> <tr> <td>OSHA VPEL 300.000 ppm – STEL</td> <td></td> </tr> <tr> <td>ACGIH TLV 200.000 ppm – TWA</td> <td></td> </tr> <tr> <td>ACGIH TLV 300.000 ppm – STEL</td> <td></td> </tr> </table>	Component		Methyl Ethyl Ketone (78-93-3)		OSHA VPEL 200.000 ppm – TWA		OSHA VPEL 300.000 ppm – STEL		ACGIH TLV 200.000 ppm – TWA		ACGIH TLV 300.000 ppm – STEL	
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Nitrile Rubber:	No exposure limits established.												
Alkylphenolic Resin:	No exposure limits established.												
Calcium Carbonate (471-34-1):	No exposure limits established.												
Formaldehyde (50-00-0):	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">OSHA VPEL 0.750 ppm – TWA</td> <td></td> </tr> <tr> <td>OSHA VPEL 2.000 ppm – STEL</td> <td></td> </tr> <tr> <td>ACGIH TLV 0.300 ppm - Ceiling</td> <td></td> </tr> </table>	OSHA VPEL 0.750 ppm – TWA		OSHA VPEL 2.000 ppm – STEL		ACGIH TLV 0.300 ppm - Ceiling							
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Section 9 – Special Precautions
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Handling:	Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. All five-gallon pails and larger metal containers, including tank cars and tank trucks, should be grounded and/or bonded when material is transferred.
Waste Management Information:	Destroy by liquid incineration in accordance with applicable regulations.

Section 10 – Stability and Reactivity
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US Federal Regulations		
TSCA (Toxic Substances Control Act) Status:	TSCA (United States) The intentional ingredients of this product are listed.	
CERCLA RQ – 40 CFR 302.4(a):	Component	RQ (lbs)
	METHYL ETHYL KETONE	5000
	FORMALDEHYDE	100
CERCLA RQ – 40 CFR 302.4(b):	Materials without a “listed” RQ may be reportable as an “unlisted hazardous substance”. See 40 CFR 302.5 (b)	

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SARA 302 Components – 40 CFR 355 Appendix A:	Section 302 Component(s)	TPQ (lbs)	RQ (lbs)
	FORMALDEHYDE	500	100
Section 311/312 Hazard Class – 40 CFR 370.2:	<input checked="" type="checkbox"/> Immediate <input checked="" type="checkbox"/> Delayed	<input checked="" type="checkbox"/> Fire	
	<input type="checkbox"/> Reactive <input type="checkbox"/> Sudden	<input type="checkbox"/> Release of Pressure	
SARA 313 Components – 40 CFR 372.65:	Section 313 Component(s)	CAS Number	%
	METHYL ETHYL KETONE	78-93-3	79.42
	FORMALDEHYDE	50-00-0	.10
OSHA Process Safety Management – 29 CFR 1910:	PSM Component(s)	Condition	TQ (lbs)
	FORMALDEHYDE		1000
EPA Accidental Release Prevention – 40 CFR 68:	RMP Component(s)	Condition	TQ (lbs)
	FORMALDEHYDE (SOLUTION)		15000
International Regulations:	Inventory Status		
	DSL (Canada) The intentional ingredients of this product are listed.		
State and Local Regulations:	California Proposition 65		
	The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986: This product contains the following substance(s) known to the state of California to cause cancer.		
	FORMALDEHYDE (GAS)		
	1, 3-BUTADIENE		
	ACRYLONITRILE		
New Jersey RTK Label Information:	METHYL ETHYL KETONE	78-93-3	
Pennsylvania RTK Label Information:	2-BUTANONE	78-93-3	

Section 11-Other Information

DOT Information:	49 CFR 172.101
DOT Description:	Adhesives, 3, UN1133, II
Container/Mode:	55 gal drum / truck package
NOS Component:	None

RQ (Reportable Quantity): 49 CFR 172.101

Product Quantity (lbs)	Component
6295	METHYL ETHYL KETONE

Disclaimer

GC/Waldom Electronics, Inc. believes that the information contained herein is accurate and reliable as of the date of this material safety data sheet, but no representation guarantee or warranty, express or implied, is made as to the accuracy, reliability, or completeness of the information. Persons receiving this information are encouraged to make their own determination as to the information's suitability and completeness for their particular application. NO INFORMATION CONTAINED HEREIN CONSTITUTES A PRODUCT WARRANTY OF ANY KIND, WHETHER EXPRESS OR IMPLIED; AND ALL IMPLIED WARRANTIES OF MERCHANT ABILITY AND OF FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED BY GC/WALDOM ELECTRONICS, INC.