MATERIAL SAFETY DATA SHEET

Date Revised: Nov. 2013

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 PRODUCT NAME: GYSI GS331 2-Component Reactive Adhesive

1.2 MANUFACTURER: Linhai G-Good Adhesives Co., Ltd.
Shiniu, Yanjiang Town, Linhai City, Zhejiang Province, P.R. China
Tel. +86-576-85696851

1.3 EMERGENCY: CHEMTREC Tel. +1-703-527-3887 (International)

2. COMPOSITION / INFORMATION ON INGREDIENTS

	CAS#	Concentration	Symbol	R Phase	S Phase	Exposure Limit Value
Component A						
Methyl Methacrylate Monomer	80-62-6	40-60%	F Xi	11-36-37-38-43	9-16-24-37	100ppm
Component B						
MEK	78-93-3	40-60%	F Xi	11-36-66-67	7-16-29-33	200ppm
Benzoyl Peroxide (BPO)	94-36-0	5-15%		N/A	N/A	5mg/M^3

All of the constituents of this adhesive product are listed on the TSCA inventory of chemical substances maintained by the US EPA.

3. HAZARDS IDENTIFICATION

3.1 Health:

- Flammable, Keep out of the reach of children. Do not take internally. Keep away from heat / sparks / open flames / hot surfaces
- No smoking
- Avoid breathing dust / fume / gas / mist / vapors / spray

Environmental：

- Emission of volatile organic compound (VOC)
- Spills or leaks can result in ground water contamination。

4. FIRST AID MEASURES

4.1 Contact with eyes: Flush eyes immediately with plenty of water for 15 minutes and seek medical advice immediately.
Skin contact: Wash skin with soap and water. If irritation develops, get medical attention
Inhalation: Remove to fresh air. If breathing is stopped, give artificial respiration. If breathing is difficult, give oxygen. Seek medical advice
Ingestion: Do not induce vomiting. Seek medical advice immediately.

5. FIREFIGHTING MEASURES

5.1 Suitable Extinguishing Media: Water fog or fine spray, carbon dioxide, dry chemical or foam. HMISNFPA0-Minimal

5.2 Unsuitable Extinguishing Media: Dry chemical powder. Health221-Slight

5.3 Exposure Hazards: Inhalation and dermal contact. Flammability002-Moderate

5.4 Combustion Products: Hydrogen chloride, trace amounts of chlorine, phosgene. Reactivity003-Serious

5.5 Protection for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing. 4-Severe

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Clear all personnel from area. Do not breathe vapors. Ventilate area of leak or spill. Wear protective equipment.

6.2 Environmental Precautions: Prevent product or liquids contaminated with product from entering sewers, drains, soil or open water course.

6.3 Methods for Cleaning up: Mop or soak up immediately. Place in properly labeled metal containers.

6.4 Materials not to be used for clean up: Zinc, Aluminum or plastic containers

7. HANDLING AND STORAGE

7.1 Handling: Avoid breathing of vapor, avoid contact with eyes, skin and clothing. Do not swallow. Use with adequate ventilation.

- Do not cut, drill, grind, weld or perform similar operations on or near empty containers. Vapors of this product are heavier than air and will collect in low areas.
- Do not eat, drink or smoke while handling.

7.2 Storage: Store in a dry place. Keep container tightly closed when not in use. Store below 80°F (27°C).

- Follow all precautionary information on container label, product bulletins and solvent bonding literature.

8. PRECAUTIONS TO CONTROL EXPOSURE / PERSONAL PROTECTION

8.1 Engineering Controls: Provide general and/or local exhaust ventilation to control airborne levels below he exposure guidelines.

8.2 Monitoring: Maintain breathing zone airborne concentrations below exposure limits.

Skin Protection: Prevent contact with the skin as much as possible. Use protective clothing chemically resistant to this material. Remove contaminated clothing

Eye Protection: Use chemical goggles. If exposure causes eye discomfort, use a full-face respirator.

Respiratory Protection: Prevent inhalation of the solvents. Use in a well-ventilated room. Open doors and/or windows to ensure airflow and air changes. Use local exhaust ventilation to remove airborne contaminants from employee breathing zone and to keep contaminants below levels listed above.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Appearance:	A. Grey/White Viscous liquid, B. Clear syrup liquid
9.2 Odor:	A. Acrid odor, B. Ketone
9.3 PH:	Not Applicable
9.4 Boiling Point:	A. 100.5°C (212.9°F) Based on first boiling component: MMA
9.5 Flash Point:	A. 11.5°C (52.7°F) T.C.C. based on MMA, B. -9°C (15.8°F) for MEK
9.6 Auto-ignition Temperature:	A. 421°C (789.8°F): MMA, B. 404°C (759°F): MEK
9.7 Vapor Pressure:	29mmHg @ 20°C (68°F): MMA
9.8 Solubility:	A. Slight in Water: MMA, B. 27.5%/MEK @ 20°C (68°F)
9.9 Others:	Vapor Density: >2.0 (Air = 1), Density @ 23°C±2° (73°F±3.6°): 1.1±0.040
	Evaporation Rate: > 1.0 (BUAC = 1)
9.10 VOC Content:	<50g/L, Flammability Limit: UEL: 12.9% / LEL: 1.5%

10. STABILITY AND REACTIVITY

10.1 Stability: Stable under recommended storage conditions. (See Section 7)

10.2 Hazardous decomposition products: Depending on temperature and air supply, may include hydrogen chloride, trace amounts of chlorine, phosgene.

10.3 Conditions to avoid: Avoid open flames, welding arcs, or other high temperature sources. Avoid direct sunlight.

10.4 Incompatible Materials: Oxidizers, strong bases, amines, metals such as zinc powders, aluminum or magnesium powders, potassium sodium.

11. TOXICOLOGICAL INFORMATION

11.1 Acute symptoms and effects:

Inhalation: Excessive overexposure may cause irritation to nose and throat. In confined areas, vapor can accumulate and can cause unconsciousness.

Eye Contact: May cause moderate eye irritation which may be slow to heal. May cause slight corneal injury. Vapor may cause mild discomfort and redness.

Skin Contact: Prolonged contact may cause skin burns. May cause more severe response on covered skin (under clothing and gloves).

Ingestion: Low toxicity if small amount swallowed, however larger amounts may cause injury. Aspiration into the lungs may occur during ingestion or vomiting.

Chronic (long-term) effects: IARC Classification 2B (Methylene Chloride)

12. ECOLOGICAL INFORMATION

12.1 Mobility: In normal use, emission of volatile organic compounds (VOC's) to the air takes place, typically at a rate of <50 g/l. Mobility in soil is high.

12.2 Degradability: Not readily biodegradable

12.3 Bioaccumulation: Low

13. WASTE DISPOSAL CONSIDERATIONS

Follow local and national regulations. Consult disposal expert.

14. TRANSPORT INFORMATION

14.1 Proper Shipping Name: Adhesive Hazard Class: 3

14.2 Secondary Risk; None DOT Limited Quantity: Up to 5L per inner packaging, 30 kg gross weight per package.

14.3 Identification Number: UN 1133Consumer Commodity: Depending on packaging, these quantities may qualify under DOT as "ORM-D".

14.4 Packing Group: PG II

14.5 Label Required: Class 3 Flammable Liquid

14.6 Marine Pollutant: NOTDG CLASS: Flammable Liquid

15. REGULATORY INFORMATION

15.1 Precautionary Label Information: Highly Flammable, irritant Listings: USA TSCA, Europe EINECS, Canada DSL, Australia,

15.2 Symbols: F, Xi

15.3 Risk Phrases: R-11: Highly Flammable R66, Irritating to eyes and skin.

15.4 Safety Phrases: S-2: Keep out of the reach of children, S-24/25 Avoid contact with skin and eyes. S-3: Keep in a cool place, S-36/37/39: Wear suitable protective clothing, gloves and eye/face protection. S-45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible), S-46: If swallowed, seek medical advice immediately and show this container or Label. S-7: Keep container tightly closed.

16. OTHER INFORMATION

16.1 Specification Information:

Department issuing data sheet: G-Good Safety Health & Environmental

Contact person: Friedrich **E-mail address:** sales@g-good.com.cn

16.4 Training necessary: Yes, training in practices and procedures contained in product literature.

16.3 Reissue date / reason for reissue: 10/06/2012 / Updated GHS Standard Format.

16.4 Intended Use of Product: Two component reactive adhesive

16.5 This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of