

SAFETY DATA SHEET

Revision: 1.0 Date: 21.10.2015



ACCORDING TO OSHA HCS (29 CFR 1910.1200)

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SECTION 1: IDENTIFICATION

1.1 Product identifier	
Product Name	GC Adhesive
Chemical Name	Mixture
CAS No.	Mixture
EINECS No.	Mixture
1.2 Relevant identified uses of the substance or mixture and uses advised against	
Identified Use(s)	Adhesives.
Uses Advised Against	None known.
1.3 Details of the supplier of the safety data sheet	
Company Identification	VISHAY MEASUREMENTS GROUP, INC. Post Office Box 27777 Raleigh, NC 27611 USA
Telephone	919-365-3800
Fax	919-365-3945
E-Mail (competent person)	mm.us@vishaypg.com
1.4 Emergency telephone number	1-800-424-9300 CHEMTREC

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture	
2.1.1 GHS Classification	Flam. Liq. 3; H226 Met. Corr. 1; H290
2.2 Label elements	
Product Name	GHS Classification GC Adhesive
Hazard Pictogram(s)	 
Signal Word(s)	Warning
Hazard Statement(s)	H226: Flammable liquid and vapour. H290: May be corrosive to metals.
Precautionary Statement(s)	P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233: Keep container tightly closed. P234: Keep only in original container. P242: Use only non-sparking tools. P390: Absorb spillage to prevent material damage.
OSHA Defined Hazards	None.
2.3 Other hazards	None.

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 **Substances** Not applicable.

3.2 **Mixtures** Substances in preparations / mixtures

GHS Classification

Chemical identity of the substance	%W/W	CAS No.	EC No.	Hazard classification
Silicone carbide	50 - 55	409-21-2	206-991-8	Not classified
Water	25 - 35	7732-18-5	231-791-2	Not classified
Aluminium phosphate	10 - 15	7784-30-7	232-056-9	Not classified
Phosphoric acid	< 7	7664-38-2	231-633-2 / 616-646-7	Met. Corr. 1; H290 Skin Corr. 1B; H314 (SCL: $C \geq 25\%$) Skin Irrit. 2; H315 (SCL: $10 \leq C < 25\%$) Eye Irrit. 2; H319 (SCL: $10 \leq C < 25\%$)
Silicon dioxide	2 - 7	7631-86-9	231-545-4	Not classified
Boric acid	2 - 3	10043-35-3	233-139-2	Repr. 1B; H360FD (SCL: $C \geq 5.5\%$)
Ethanol	2 - 3	64-17-5	200-578-6	Flam. Liq. 2; H225 Eye Irrit. 2; H319 (SCL: $C \geq 50\%$)

For full text of H/P Statements see section 16.

SECTION 4: FIRST AID MEASURES



4.1 Description of first aid measures

Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin Contact

IF ON SKIN: Wash with plenty of water. Remove contaminated clothing and wash clothing before reuse. If symptoms develop, obtain medical attention.

Eye Contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if eye irritation develops or persists.

Ingestion

IF SWALLOWED: Rinse mouth. Do not give anything by mouth to an unconscious person. Do not induce vomiting. If symptoms develop, obtain medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Repeated and/or prolonged contact may cause: Skin and Eye Irritation. Mist from the paint when air-sprayed is irritating to the upper respiratory system.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing media

As appropriate for surrounding fire. Extinguish preferably with foam, carbon dioxide or dry chemical. Keep container(s) exposed to fire cool, by spraying with water.

Unsuitable extinguishing media

Do not use water jet. Direct water jet may spread the fire.

5.2 Special hazards arising from the substance or mixture

Flammable liquid and vapour. Thermal decomposition of the aluminum phosphate component of this material in combination with trimethylol propane, trimethylol propane derived products or their corresponding trimethylol alkane homologs may cause formation of bicyclic phosphates or phosphites. Upon initial heating to 1112°F (600°C), the ethanol will decompose to form either or

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- 5.3 **Advice for fire-fighters**
- both carbon monoxide or carbon dioxide depending upon amount of oxygen present.
Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Do not breathe fumes. Keep containers cool by spraying with water if exposed to fire. Avoid run off to waterways and sewers.

SECTION 6: ACCIDENTAL RELEASE MEASURES

- 6.1 **Personal precautions, protective equipment and emergency procedures** Ensure adequate ventilation. Stop leak if safe to do so. Eliminate all ignition sources if safe to do so. Avoid breathing vapours. Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. See Section: 8.
- 6.2 **Environmental precautions** Avoid release to the environment. Do not allow to enter drains, sewers or watercourses.
- 6.3 **Methods and material for containment and cleaning up** Ensure suitable personal protection during removal of spillages. Use non-sparking equipment when picking up flammable spill. Adsorb spillages onto sand, earth or any suitable adsorbent material. Do NOT absorb in saw-dust or other combustible absorbents. Neutralize with: Lime or sodium carbonate. Transfer to a lidded container for disposal or recovery. Ventilate the area and wash spill site after material pick-up is complete. Dispose of this material and its container as hazardous waste.
- 6.4 **Reference to other sections** See Section: 8, 13

SECTION 7: HANDLING AND STORAGE

- 7.1 **Precautions for safe handling** Avoid breathing vapours. Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. See Section: 8. Spraying: Ensure adequate ventilation is provided to control mists created when spraying the product. Avoid breathing mist. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Avoid contact with metals.
- 7.2 **Conditions for safe storage, including any incompatibilities**
Storage temperature: Keep in a cool, dry, well ventilated place. Keep away from heat and sources of ignition. Keep only in original container.
Storage life: Ambient.
Unsuitable containers: Stable under normal conditions.
Incompatible materials: Do not use or store in metal containers.
Avoid contact with metals. Avoid contact with alkalis (strong bases).
- 7.3 **Specific end use(s)** See Section: 1.2

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1 **Control parameters**
8.1.1 **Occupational Exposure Limits**

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SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m³)	STEL (ppm)	STEL (mg/m³)	Note
Silicone carbide (non-fibrous)	409-21-2	-	10	-	-	NIOSH, total dust
		-	5	-	-	NIOSH, respirable fraction
		-	15	-	-	OSHA, total dust
		-	5	-	-	OSHA, respirable dust
		-	10	-	-	ACGIH, inhalable fraction, no asbestos and < 1% crystalline silica.
Phosphoric acid	7664-38-2	-	1	-	3	NIOSH, 15 minute average value
		-	1	-	-	OSHA
		-	1	-	3	ACGIH
Silica (amorphous)	7631-86-9	-	80% total silica dust	-	-	OSHA
Ethanol	64-17-5	1000	1900	-	-	NIOSH
		1000	1900	-	-	OSHA
		-	-	1000	-	ACGIH

Note: OSHA PELs 1910.1000 TABLE Z-1/ NIOSH RELs/ ACGIH TLVs

Occupational exposure limits have not been established for the other components listed in Section 3.

8.1.2 Biological limit value

Not established.

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Ensure adequate ventilation or use appropriate containment. Atmospheric levels should be controlled in compliance with the occupational exposure limit. Ensure adequate ventilation is provided to control mists created when spraying the product.

8.2.2 Individual protection measures, such as personal protective equipment (PPE)

General hygiene measures for the handling of chemicals are applicable. Avoid contact with skin, eyes or clothing. Avoid breathing vapours. Wash hands before breaks and after work. Keep work clothes separately. Contaminated clothing should be thoroughly cleaned. Do not eat, drink or smoke at the work place.

Eye/ face protection



Wear protective eye glasses for protection against liquid splashes. Wear eye protection with side protection.

Skin protection



Hand protection: Wear suitable gloves if prolonged skin contact is likely. Breakthrough time of the glove material: refer to the information provided by the gloves' producer.

Body protection: Wear work clothes with long sleeves.

Respiratory protection



Use only in well-ventilated areas. Avoid inhalation of high concentrations of vapours. Wear suitable respiratory protective equipment if exposure to levels above the occupational exposure limit is likely.

Thermal hazards

Not applicable.

8.2.3 Environmental Exposure Controls

Avoid release to the environment.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Grey/black paint slurry
Odour	Slightly fruity odor
Odour threshold	Not established.
pH	Not established.
Melting point/freezing point	Not established.
Initial boiling point and boiling range	93.3 °C (200 °F)
Flash point	43 °C (109 °F). Note: When the liquid component separates from the solids, the liquid has a closed-cup flash point of 32 °C (90 °F)
Evaporation rate	Slightly > Water
Flammability (solid, gas)	Not applicable - liquid
Upper/lower flammability or explosive limits	Not established.
Vapour pressure	10 – 20 mm Hg
Vapour density	Not established.
Relative density	1.8
Solubility(ies)	Dilutable
Partition coefficient: n-octanol/water	Not established.
Auto-ignition temperature	Not established.
Decomposition Temperature	Not established.
Viscosity	Not established.
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.

9.2 Other information

Volatile Organic Compound Content: 100 g/l

SECTION 10: STABILITY AND REACTIVITY

10.1	Stability and reactivity	Stable under normal conditions.
10.2	Chemical stability	Stable under normal conditions.
10.3	Possibility of hazardous reactions	Flammable liquid and vapour. May be corrosive to metals. Hazardous polymerisation will not occur.
10.4	Conditions to avoid	Do not use or store in metal containers. Keep away from heat and sources of ignition.
10.5	Incompatible materials	Avoid contact with metals. Avoid contact with alkalis (strong bases).
10.6	Hazardous decomposition product(s)	Thermal decomposition of the aluminum phosphate component of this material in combination with trimethylol propane, trimethylol propane derived products or their corresponding trimethylol alkane homologs may cause formation of bicyclic phosphates or phosphites. Upon initial heating to 1112 °F (600 °C), the ethanol will decompose to form either or both carbon monoxide or carbon dioxide depending upon amount of oxygen present.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects (Substances in preparations / mixtures)

11.1 Acute toxicity

Ingestion	Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: Estimated LC50 > 2000 mg/kg bw/day.
Inhalation	Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: Estimated LC50 > 20 mg/l.
Skin Contact	Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: Estimated LC50 > 2000 mg/kg bw/day.
Skin corrosion/irritation	Based upon the available data, the classification criteria are not met.
Serious eye damage/irritation	Based upon the available data, the classification criteria are not met.
Respiratory or skin sensitization	Based upon the available data, the classification criteria are not met.
Germ cell mutagenicity	Based upon the available data, the classification criteria are not met.

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Carcinogenicity	Based upon the available data, the classification criteria are not met.
Reproductive toxicity	Based upon the available data, the classification criteria are not met.
STOT - single exposure	Based upon the available data, the classification criteria are not met.
STOT - repeated exposure	Based upon the available data, the classification criteria are not met.
Aspiration hazard	Based upon the available data, the classification criteria are not met.

11.2 Other information

Likely routes of exposure

Inhalation	Yes
Ingestion	Accidental
Skin Contact	Yes

Further Carcinogenicity Information

NTP Report on Carcinogens	None of the components are listed.
IARC Monographs	Ethanol (CAS# 64-17-5): Group 1: Carcinogenic to humans.
Regulated as a Carcinogen by OSHA	None of the components are listed.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Ecotoxicity	Based upon the available data, the classification criteria are not met. Estimated Mixture LC50 >100 mg/l (Fish)
12.2 Persistence and degradability	Part of the components are biodegradable.
12.3 Bioaccumulative potential	The product has low potential for bioaccumulation.
12.4 Mobility in soil	The product is predicted to have moderate mobility in soil.
12.5 Other adverse effects	Not classified as PBT or vPvB. None of the substances in this product fulfil the criteria for being regarded as a PBT or vPvB substance.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods	This material and its container must be disposed of as hazardous waste. Dispose of contents in accordance with local, state or national legislation. Containers of this material may be hazardous when empty since they retain product residue. Dispose of wastes in an approved waste disposal facility. Do not reuse empty containers.
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SECTION 14: TRANSPORT INFORMATION

	ADR/RID / IMDG / IATA/ICAO
14.1 UN number	UN 1263
14.2 UN proper shipping name	PAINT
14.3 Transport hazard class(es)	3
14.4 Packing group	III
14.5 Environmental hazards	Not classified as a Marine Pollutant. / Environmentally hazardous substance
14.6 Special precautions for user	See Section: 2
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.
14.8 Additional Information	None.

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture	
15.1.1 U.S. Federal Regulations	
TSCA Inventory Status	All components of this product are listed in the Toxic Substance Control Act Chemical Substance Inventory (TSCA).
15.1.2 US State Regulations	None known.
15.1.3 European regulations	

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Substance(s) of Very High Concern (SVHCs)
Authorisations and/or Restrictions On Use

Boric acid (CAS# 10043-35-3): Toxic for Reproduction.
Boric acid (CAS# 10043-35-3):
Proposed for authorisation - recommended for Annex XIV inclusion.
REACH: ANNEX XVII restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles. Entry number: 30 (Restriction on supply of substances and mixtures to the general public, if classified as Repr. 1A or 1B).
Water hazard class: 1
Not available.

15.2 Wassergefährdungsklasse (Germany)
Chemical Safety Assessment

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1-16.

Version 1.0
Date of Preparation 21.10.15

References: Existing Safety Data Sheet (SDS) and Harmonised Classification(s) for Phosphoric acid (CAS# 7664-38-2), Boric acid (CAS# 10043-35-3) and Ethanol (CAS# 64-17-5). Existing ECHA registration(s) for Silicone carbide (CAS# 409-21-2), Aluminium phosphate (CAS# 7784-30-7), Phosphoric acid (CAS# 7664-38-2), Silicon dioxide (CAS# 7631-86-9) and Ethanol (CAS# 64-17-5), and the Classification and Labelling Inventory for Water (CAS# 7732-18-5).

GHS Classification of the substance or mixture	Classification Procedure
Flam. Liq. 3; H226	Flash Point Test Result [Closed cup]
Met. Corr. 1; H290	Existing Safety Data Sheet (SDS)

LEGEND

ACGIH: American Conference of Governmental Industrial Hygienists
IARC: International Agency for Research on Cancer
LTEL: Long Term Exposure Limit
NTP: National Toxicology Program
OSHA: The Occupational Safety & Health Administration
PBT: Persistent, Bioaccumulative and Toxic

PELs: Permissible Exposure Limits
RELs: Recommended Exposure Limits
STEL: Short Term Exposure Limit
TLVs: Threshold limit values
vPvB: very Persistent and very Bioaccumulative

Hazard Statement(s)

H225: Highly flammable liquid and vapour.
H290: May be corrosive to metals.
H314: Causes severe skin burns and eye damage.
H315: Causes skin irritation.

H319: Causes serious eye irritation.
H360FD: May damage fertility. May damage the unborn child.
SCL: Specific Concentration Limit.

Training advice: Consideration should be given to the work procedures involved and the potential extent of exposure as they may determine whether a higher level of protection is required.

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Annex to the extended Safety Data Sheet (eSDS)

No information available.

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