

SAFETY DATA SHEET

Version: 1.0
Date of Issue: 19 April 2018
Date of First Issue: 19 April 2018

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In accordance with Schedule 1 of Hazardous Products Regulations (HPR (WHMIS 2015))

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name Gagekote 5 Part B
Other Means of Identification None

Recommended use and restrictions

Recommended use Epoxy / Urethane Resin
Restrictions on use Anything other than the above.

Initial Supplier Identifier

Company Identification VISHAY MEASUREMENTS GROUP, INC.
Telephone Post Office Box 27777
Raleigh, NC 27611
USA
E-Mail (competent person) mm.us@vishaypg.com

Emergency telephone number

Emergency Phone No. 1-800-424-9300 CHEMTREC (24 hours)
Languages spoken English

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

In accordance with Schedule 1 of Hazardous Products Regulations (HPR) (WHMIS 2015) Skin Corrosion/Irritation, Category 2
Skin Sensitisation, Category 1
Eye Irritation, Category 2
Aquatic toxicity, Chronic - Category 2

Label elements

Hazard Pictogram(s)



Signal Word(s)

WARNING

Hazard Statement(s)

Causes skin irritation.
Causes serious eye irritation.
May cause an allergic skin reaction.

Precautionary Statement(s)

Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN: Wash with plenty of water.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists, get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
Dispose of contents in accordance with local, state or national legislation.

Other hazards

None known

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substances Not applicable

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Mixtures

GHS Classification

Chemical Name	CAS No.	Concentration (%W/W)	Common name(s), synonym(s) of the substance	Hazard classification
Phenol, polymer with formaldehyde, glycidyl ether	28064-14-4	45 - 70	2-(chloromethyl)oxirane; Formaldehyde; Phenol	Skin Corrosion/Irritation, Category 2 Skin Sensitisation, Category 1 Eye Irritation, Category 2 Aquatic toxicity, Chronic - Category 2
Poly[oxy(methyl-1,2-ethanediyl)], α -(2-oxiranylmethyl)- ω -(2-oxiranylmethoxy)-	26142-30-3	15 - 40	Polypropylene glycol diglycidyl ether; DIGLYCIDYL ETHER OF POLY PROPYLENE GLYCOL	Skin Corrosion/Irritation, Category 2 Skin Sensitisation, Category 1 Eye Irritation, Category 2
Talc*	14807-96-6	10 - 30	Talc; trimagnesium	Not classified as hazardous for supply.
Quartz*	14808-60-7	<0.1	Silica crystalline quartz; Silicon Dioxide	Specific target organ toxicity — single exposure - Category 3 (Respiratory tract) Specific target organ toxicity — repeated exposure - Category 1 (Lungs) Carcinogenicity - Category 1A

Prescribed Concentration Ranges used for trade secret purposes (Canada Gazette, Part II, Vol. 152, No. 8)

* See Section: 8, 11 and 15

SECTION 4: FIRST AID MEASURES



Description of first aid measures

Self-protection of the first aider

Inhalation

Skin Contact

Eye Contact

Ingestion

Most important symptoms and effects, both acute and delayed

Indication of any immediate medical attention and special treatment needed

Use personal protective equipment as required. Wear appropriate personal protective equipment, avoid direct contact. Ensure adequate ventilation. Avoid breathing vapours. Avoid contact with skin, eyes or clothing.

If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Apply artificial respiration if breathing has ceased or shows signs of failing. Get medical advice/attention if you feel unwell.

IF ON SKIN (or hair): After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of soap and water. If irritation (redness, rash, blistering) develops, get medical attention.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 15 minutes. Immediately call a POISON CENTER/doctor.

Rinse mouth with water (do not swallow). Do NOT induce vomiting. If vomiting occurs turn patient on side. Never give anything by mouth to an unconscious person. IF exposed or concerned: Call a POISON CENTER/doctor.

Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction.

Treat symptomatically.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing media

Suitable Extinguishing Media

Unsuitable extinguishing Media

As appropriate for surrounding fire. Extinguish preferably with foam, carbon dioxide or dry chemical.

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

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Special hazards arising from the substance or mixture
Special protective equipment and precautions for fire fighters

Not flammable. May decompose in a fire giving off toxic fumes. Combustion products: Carbon monoxide, Carbon dioxide
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

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required. Wear appropriate personal protective equipment, avoid direct contact. Ensure operatives are trained to minimise exposures. Contaminated clothing should be laundered before reuse. Ensure adequate ventilation. Avoid breathing vapours. Avoid contact with skin, eyes or clothing.

Environmental precautions

Large spillages: Evacuate the area and keep personnel upwind. Only trained and properly protected personnel must be involved in clean-up operations.
Avoid release to the environment. Do not allow to enter drains, sewers or watercourses.

Methods and material for containment and cleaning up

Contain spillages with sand, earth or any suitable adsorbent material. Sweep or shovel-up spillage and remove to a safe place. Transfer to a container for disposal or recovery.

Small spillages: Allow small spillages to evaporate provided there is adequate ventilation.

Reference to other sections

Large spillages: Only trained and properly protected personnel must be involved in clean-up operations.
See Section: 8, 13

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Ensure operatives are trained to minimise exposures. Ensure adequate ventilation. Wear appropriate personal protective equipment, avoid direct contact. Avoid breathing vapours. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Keep good industrial hygiene. Wash hands thoroughly after handling. Contaminated clothing should be thoroughly cleaned. Do not eat, drink or smoke at the work place. Keep from direct sunlight.

Conditions for safe storage, including any incompatibilities

Storage temperature
Incompatible materials
Specific end use(s)

Keep only in original container. Store in a cool/low-temperature, well-ventilated (dry) place away from heat and ignition sources.
Store at ambient temperature.
Strong oxidising agents, Acids and Bases.
See Section: 1.2

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Occupational Exposure Limits

Not established.

SUBSTANCE	CAS No.	ACGIH® TLV® (ppm)		OSHA PEL (ppm)		Note
		TWA	STEL	TWA	STEL	
Talc	14807-96-6	2 mg/m ^{3A}	-	20 mppcf	-	A4
Quartz	14808-60-7	0.025 mg/m ³	-	-	-	A2
		-	-	30	-	Total Dust
		-	-	10	-	Respirable Dust

Source: ACGIH: American Conference of Governmental Industrial Hygiene. TLV: Threshold Limit Value (ACGIH) PEL (OSHA)

A2: Suspected Human Carcinogen: Human data are accepted as adequate in quality but are conflicting or insufficient to classify the agent as a confirmed human carcinogen; OR, the agent is carcinogenic in experimental animals at dose(s) , by route(s) of exposure, at site(s), of histological

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type(s), or by mechanism(s) considered relevant to worker exposure. The A2 is primarily when there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals with relevance to humans.

A4: Not Classifiable as a Human Carcinogen: Agents which cause concern that they could be carcinogenic for humans but which cannot be assessed conclusively because of the lack of data. In vitro or animal studies do not provide indications of carcinogenicity which are sufficient to classify the agent into one of the other categories.

^ Value is for particulate matter containing 0% Asbestos

mmppcf: Millions of particles per cubic foot of air

Alberta: Occupational Health And Safety Code, 2009; Quebec: Health and Safety Work Act, 2016

SUBSTANCE	CAS No.	8-hour Occupational Exposure Limits			15-minute or ceiling (c) Occupational Exposure Limits		Note
		ppm	mg/m ³	f/cc	STEL (ppm)	STEL (mg/m ³)	
Talc	14807-96-6	-	0.025	-	-	-	Alberta
		-	3	-	-	-	OEL, Respirable Mass Fraction
Quartz	14808-60-7	-	0.025	-	-	-	Alberta
		-	0.1*	-	-	-	OEL, Respirable Mass Fraction

Source: Alberta: Occupational Health And Safety Code, 2009

OEL: Quebec Work Health and Safety Regulations, Health and Safety Work Act, (Chapter S – 2.1, a. 223)

* Exposure by all routes should be carefully controlled to levels as low as possible

British Columbia: Occupational Health and Safety Guidelines, 2015; Northwest Territories: Occupational Health and Safety Regulations, 2012; Yukon Territory: Occupational Health and Safety Act, 1986

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m ³)	STEL (ppm)	STEL (mg/m ³)	Note
Talc	14807-96-6	-	2*	-	-	WEL
		-	0.1 f/cc^	-	-	
Quartz	14808-60-7	-	2	-	-	NW
		-	0.025	-	-	WEL
		-	0.05	-	-	NW, Schedule R

Source: WEL: Occupational Health and Safety Guidelines Part 5: Chemical Agents and Biological Agents (British Columbia)

NW: WSCC, Occupational Health and Safety Regulations, Northwest Territories Volume 3

Schedule R: Advice on Additional Personal Protection (APP)

* Value is for particulate matter containing 0% Asbestos and <1% Crystalline Silica

^ Value is for particulate matter containing Asbestos

Ontario: Occupational Health and Safety Act, 1990; Saskatchewan: Occupational Health and Safety Regulations, 1996.

SUBSTANCE	CAS No.	Time Weighted Average (TWA) (mg/m ³)	STEL (ppm)	Note
Talc	14807-96-6	2*	-	WEL, Respirable Mass Fraction
		2	-	SK
Quartz	14808-60-7	0.10	-	WEL, Respirable Mass Fraction
		0.05	-	SK, T20

Source: WEL: Occupational Health and Safety Act, R.R.O. 1990, Regulation 833, CONTROL OF EXPOSURE TO BIOLOGICAL OR CHEMICAL AGENTS (Ontario)

Saskatchewan (SK): Occupational Health and Safety Act, 1993. O-1.1 REG 1 Occupational Health and Safety Regulations, 1996.

T20: Applicable Laws: Section 306 and 311.

* Value is for particulate matter containing 0% Asbestos and <1% Crystalline Silica

Biological limit value

Not established.

Exposure controls

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Appropriate engineering controls

Ensure adequate ventilation. Store in a cool/low-temperature, well-ventilated (dry) place away from heat and ignition sources. Atmospheric levels should be controlled in compliance with the occupational exposure limit.

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

Keep good industrial hygiene. Wear appropriate personal protective equipment, avoid direct contact. Avoid breathing vapours. Avoid contact with skin, eyes or clothing. IF exposed: Wash immediately with water. Wash contaminated clothing before reuse. 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 impervious gloves. Protective index 6, corresponding > 480 minutes of permeation time. Gloves should be changed regularly to avoid permeation problems. Breakthrough time of the glove material: refer to the information provided by the gloves' producer. Recommended: Butyl rubber, Nitrile rubber, Neoprene.

Body protection:

Wear impervious protective clothing, including boots, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection



In case of inadequate ventilation wear respiratory protection. A suitable mask with filter type A may be appropriate.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Green, thixotropic paste
Odour	Slight
Odour threshold	Not established
pH	Not established
Melting point/freezing point	Not established
Initial boiling point and boiling range	Not established
Flash point	>150 °C [Closed cup]
Evaporation rate (Water = 1)	Not established
Flammability (solid, gas)	Not established
Upper/lower flammability or explosive limits	Not established
Vapour pressure	LT 1mm Hg
Vapour density	Not applicable
Relative density	Not established
Solubility(ies)	Partly soluble in water.
Partition coefficient: n-octanol/water	Not established
Auto-ignition temperature	Not established
Decomposition Temperature	Not established
Viscosity	Green, thixotropic paste
Explosive properties	Not established
Oxidising properties	Not established

Other information

None

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Stable under normal conditions.

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Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	Stable under normal conditions. Hazardous polymerisation will not occur.
Conditions to avoid	Heat
Incompatible materials	Strong oxidising agents, Acids and Bases.
Hazardous decomposition product(s)	Combustion products: Carbon monoxide, Carbon dioxide

SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects	
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.
Acute toxicity - Inhalation	Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: Estimated LC50 >20.0 mg/l.
Acute toxicity - 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	Skin Corrosion/Irritation, Category 2; Causes skin irritation.
Phenol, polymer with formaldehyde, glycidyl ether	Skin Corrosion/Irritation - Category 2 No data
Poly[oxy(methyl-1,2-ethanediyl)], α-(2-oxiranylmethyl)-ω-(2-oxiranylmethoxy)-	Skin Corrosion/Irritation - Category 2 No data
Serious eye damage/irritation	Eye Irritation - Category 2 Causes serious eye irritation.
Phenol, polymer with formaldehyde, glycidyl ether	Eye Irritation - Category 2 No data
Poly[oxy(methyl-1,2-ethanediyl)], α-(2-oxiranylmethyl)-ω-(2-oxiranylmethoxy)-	Skin Corrosion/Irritation - Category 2 No data
Respiratory or skin sensitization	Skin sensitization - Category 1: May cause an allergic skin reaction.
Phenol, polymer with formaldehyde, glycidyl ether	Skin sensitization - Category 1 Allergic contact dermatitis (Pontén, A et al, 1999)
Poly[oxy(methyl-1,2-ethanediyl)], α-(2-oxiranylmethyl)-ω-(2-oxiranylmethoxy)-	Skin Corrosion/Irritation - Category 2 No data
Germ cell mutagenicity	Based upon the available data, the classification criteria are not met.
Carcinogenicity	Based upon the available data, the classification criteria are not met.
Quartz	Carcinogenicity, Category 1A IARC Classification: Group 1. Carcinogenic to humans.
Talc	IARC Classification: Group 1. Carcinogenic to humans. (Contains: Asbestos fibres). Group 3. Not classifiable as to its carcinogenicity to humans. (Not containing: Asbestos fibres).
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.
Quartz	Prolonged and/or massive exposure to fine fraction crystalline silica-containing dust may cause silicosis, a nodular pulmonary fibrosis caused by deposition in the lungs of fine respirable particles of crystalline silica. (Ziskind et al., 1976; IARC, 1987)
Aspiration hazard	Based upon the available data, the classification criteria are not met.
Other information	None known.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity	Aquatic toxicity, Chronic - Category 2; Toxic to aquatic life with long lasting effects. Estimated Mixture LC50 > 1 to ≤ 10 mg/l. (Fish)
Phenol, polymer with formaldehyde, glycidyl ether	Aquatic toxicity, Chronic - Category 2 Acute: EC50 1.6 mg/l (48 hour) (Daphnia magna) (Wyness LE et al, 1993) Chronic: No data
Persistence and degradability	No data for the mixture as a whole.
Bioaccumulative potential	No data for the mixture as a whole.
Mobility in soil	The product is predicted to have low mobility in soil. Partly soluble in water.

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Other adverse effects

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Dispose of this material and its container as hazardous waste. Send after pre-treatment to a appropriate hazardous waste incinerator facility according to legislation. Dispose of contents in accordance with local, state or national legislation.

SECTION 14: TRANSPORT INFORMATION

	ADR/RID	IMDG	IATA/CAO
14.1 UN number	UN 3082	UN 3082	UN 3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID (CONTAINS, Phenol, polymer with formaldehyde, glycidyl ether)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID (CONTAINS, Phenol, polymer with formaldehyde, glycidyl ether)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID (CONTAINS, Phenol, polymer with formaldehyde, glycidyl ether)
14.3 Transport hazard class(es)	9	9	9
14.4 Packing group	III	III	III
14.5 Environmental hazards	Environmentally hazardous substance.	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 MARPOL73/78 and the IBC Code	Not applicable		

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations

CEPA, Domestic Substances List

CEPA, Priority Substances List

CEPA, List of Toxic Substances (Schedule 1)

CEPA, National Pollutant Release Inventory

CEPA, Environmental Emergency Regulations

Non-Regional

IARC Monographs, List of Classifications

Phenol, polymer with formaldehyde, glycidyl ether: Yes

Poly[oxy(methyl-1,2-ethanediy)], α -(2-oxiranylmethyl)- ω -(2-oxiranylmethoxy)-: Yes

Talc: Yes

Quartz: Yes

All chemicals are not listed

All chemicals are not listed

All chemicals are not listed

All chemicals are not listed

Talc: Group 1 (Containing: Asbestos fibres), Group 3 (Not containing: Asbestos fibres).

Quartz: Group 1

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: Not applicable – V1.0

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References:

Existing Safety Data Sheet (SDS).

EU: Existing ECHA registration(s) for Talc (CAS No. 14807-96-6), and the Classification and Labelling Inventory for Phenol, polymer with formaldehyde, glycidyl ether (CAS No. 28064-14-4), Poly[oxy(methyl-1,2-ethanediy)], α -(2-oxiranylmethyl)- ω -(2-oxiranylmethoxy)- (CAS No. 26142-30-3), Quartz (CAS No. 14808-60-7).

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Literature References:

1. Pontén, A. and Bruze, M. (1999), Occupational allergic contact dermatitis from epoxy resins based on bisphenol F. Contact Dermatitis, 41: 235. doi:10.1111/j.1600-0536.1999.tb06149.x
2. Ziskind M, Jones RN, Weill H, 1976, Silicosis. American review of respiratory disease, 113:643–665.
3. Wyness LE, Cheeman H, Lad DD and Baldwin MK (1993), EPIKOTE 862: Acute toxicity to *Oncorhynchus mykiss*, *Daphnia magna* and *Selenastrum capricornutum*; SBGR.92.237

LEGEND

LTEL: Long Term Exposure Limit	STEL: Short Term Exposure Limit
DNEL: Derived No Effect Level	PNEC: Predicted No Effect Concentration
PBT: PBT: Persistent, Bioaccumulative and Toxic	vPvB: very Persistent and very Bioaccumulative
IARC: International Agency for Research on Cancer	NTP: National Toxicology Program
OSHA = Occupational Safety and Health Administration	NIOSH/TIC: National Institute for Occupational Safety and Health Technical Information Center
ACGIH: American conference of Governmental Industrial Hygiene	BEI: Biological Exposure Indices (ACGIH)
TLV: Threshold Limit Value (ACGIH)	TWA: Time Weighted Average
VOC: Volatile Organic Compound	EU: European Union
CEPA (Canadian Environmental Protection Act)	

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