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

1.1 Product identifier

Product Name	Gagekote #5 Part A

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified Use(s)	Epoxy / Urethane Curative
Uses Advised Against	Anything other than the above.

1.3 Details of the supplier of the safety data sheet

Company Identification	VISHAY MEASUREMENTS GROUP UK LTD Stroudley Road Basingstoke Hampshire RG24 8FW United Kingdom
Telephone	+44 (0) 1256 462131
Fax	+44 (0) 1256 471441
E-Mail (competent person)	mm.uk@vishaypg.com

1.4 Emergency telephone number

Emergency Phone No.	(00-1) 703-527-3887	CHEMTREC (24 hours)
Languages spoken	All official European languages.	

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

2.1.1 Regulation (EC) No. 1272/2008 (CLP)

Skin Corr. 1C; H314
Eye Dam. 1; H318
Skin Sens. 1B; H317
STOT SE. 3; H335
Carc. 1A; H350
Aquatic Chronic 3; H412

2.2 Label elements

Product Name: Gagekote #5 Part A

Contains: 2,4,6-tris(dimethylaminomethyl)phenol, Polysulfid, polymer /1,2,3-trichloro-, polymer with 1,1'-[methylenebis(oxy)]bis[2-chloroethane] and sodium sulfide (Na2(Sx)), reduced Propane and Quartz

Hazard Pictogram(s)

Signal Word(s): DANGER

Hazard Statement(s):
H314: Causes severe skin burns and eye damage.
H317: May cause an allergic skin reaction.
H335: May cause respiratory irritation.
H350: May cause cancer.
H412: Harmful to aquatic life with long lasting effects.

Precautionary Statement(s)	P280: Wear protective gloves/protective clothing/eye protection/face protection. P260: Do not breathe vapour. P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing. P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310: Immediately call a POISON CENTER/doctor.

2.3 Other hazards None known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances Not applicable

3.2 Mixtures

EC Classification Regulation (EC) No. 1272/2008 (CLP)

Chemical identity of the substance	%W/W	CAS No.	EC No.	REACH Registration No.	Hazard classification
Polysulfid, polymer /1,2,3-trichloro-, polymer with 1,1'-[methylenebis(oxy)]bis[2-chloroethane] and sodium sulfide (Na2(Sx)), reduced Propane	70 - 75	68611-50-7	691-651-5	Not yet assigned in the supply chain	Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE. 3; H335 Aquatic Chronic 3; H412
Talc*	20 - 25	14807-96-6	238-887-9	Not yet assigned in the supply chain	Not classified
2,4,6-tris(dimethylaminomethyl)phenol	3 - 5	90-72-2	202-013-9	Not yet assigned in the supply chain	Acute Tox. 4; H302 Skin Corr. 1C; H314 Eye Dam. 1; H318 Skin Sens. 1B; H317
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica*	1 - 3	68909-20-6	272-697-1	Not yet assigned in the supply chain	Not classified
Quartz (Silica, respirable Crystalline)*	<0.2	14808-60-7	238-878-4	Not yet assigned in the supply chain	Carc. 1A; H350 STOT RE 1; H372 STOT SE 3; H335

For full text of H/P Statements see section 16. *Substance with a national exposure limit

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

Self-protection of the first aider	Use personal protective equipment as required. Wear appropriate personal protective equipment, avoid direct contact. Ensure adequate ventilation. Avoid breathing vapours. Avoid all contact. Apply artificial respiration if necessary (do not employ mouth-to-mouth method). It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
Inhalation	IF INHALED: 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.
Skin Contact	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.

	Eye Contact	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. Treatment by an ophthalmologist due to possible caustic burn of the eyes may be required.
	Ingestion	Rinse mouth with water (do not swallow). Do NOT induce vomiting. If vomiting occurs turn patient on side. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. IF exposed or concerned: Call a POISON CENTER/doctor.
4.2	**Most important symptoms and effects, both acute and delayed**	Causes severe skin burns and eye damage. May cause an allergic skin reaction. May cause respiratory irritation. May cause cancer.
4.3	**Indication of any immediate medical attention and special treatment needed**	Treat symptomatically.The onset of toxic effects may be delayed for hours, keep affected person under medical observation.
	Notes to a physician:	IF INHALED: Breathing difficulties may appear with several hours delay. IF IN EYES: Treatment by an ophthalmologist due to possible caustic burn of the eyes may be required.

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.
	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**	Not flammable. May decompose in a fire giving off toxic fumes. Combustion products: Carbon monoxide, Carbon dioxide, Nitrogen oxides and Ammonia may be formed. May give off noxious and toxic fumes in a fire.
5.3	**Advice for fire-fighters**	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**	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 all contact.
	Large spillages:	Evacuate the area and keep personnel upwind. Only trained and properly protected personnel must be involved in clean-up operations.
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**	Contain spillages with sand, earth or any suitable adsorbent material. Transfer to a container for disposal or recovery.
	Small spillages:	Allow small spillages to evaporate provided there is adequate ventilation.
	Large spillages:	Only trained and properly protected personnel must be involved in clean-up operations.
6.4	**Reference to other sections**	See Section: 8, 13

SECTION 7: HANDLING AND STORAGE

7.1	**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 all contact. 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.
7.2	**Conditions for safe storage, including any incompatibilities**	Keep only in original container. Store in a cool/low-temperature, well-ventilated (dry) place away from heat and ignition sources.

Storage temperature	Store at ambient temperature.
Incompatible materials	Strong oxidising agents, Acids and Bases. Organic acids (e.g. acetic acid, citric acid), Mineral acids. Sodium hypochlorite

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

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m³)	STEL (ppm)	STEL (mg/m³)	Note
Talc	14807-96-6	-	1	-	-	WEL, Respirable Aerosol
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	68909-20-6	- -	6 2.4	- -	- -	WEL, Inhalable Dust Respirable Dust
Quartz (Silica, respirable Crystalline)	14808-60-7	-	0.1	-	-	WEL

Source: WEL: Workplace Exposure Limit (UK HSE EH40)

8.1.2 Biological limit value Not established.

8.1.3 PNECs and DNELs Not established.

8.2 Exposure controls

8.2.1 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.

8.2.2 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 all contact. 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 (EN166).

Skin protection

Hand protection:
Wear impervious gloves (EN374). Protective index 6, corresponding > 480 minutes of permeation time according to EN 374 Gloves should be changed regularly to avoid permeation problems. Breakthrough time of the glove material: refer to the information provided by the gloves' producer. Suitable materials: 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 (EN141 or EN405) may be appropriate. A suitable mask with filter type A (EN141 or EN405) may be appropriate.

	Thermal hazards	Not applicable
8.2.3	**Environmental Exposure Controls**	Avoid release to the environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Red Liquid
Odour	Mercaptan odor
Odour threshold	Not established
pH	Not established
Melting point/freezing point	Not established
Initial boiling point and boiling range	Not established
Flash point	200 °C [Closed cup]
Evaporation rate (Water = 1)	Not established
Flammability (solid, gas)	Not applicable
Upper/lower flammability or explosive limits	Not applicable
Vapour pressure	Not applicable
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	Moderate viscosity
Explosive properties	Not established
Oxidising properties	Not established

9.2 Other information None known

SECTION 10: STABILITY AND REACTIVITY

10.1	**Reactivity**	Stable under normal conditions.
10.2	**Chemical stability**	Stable under normal conditions.
10.3	**Possibility of hazardous reactions**	Stable under normal conditions. Hazardous polymerisation will not occur.
10.4	**Conditions to avoid**	Heat
10.5	**Incompatible materials**	Strong oxidising agents, Acids and Bases. Organic acids (e.g. acetic acid, citric acid), Mineral acids. Sodium hypochlorite
10.6	**Hazardous decomposition product(s)**	Combustion products: Carbon monoxide, Carbon dioxide, Nitrogen oxides and Ammonia may be formed. May give off noxious and toxic fumes in a fire.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects	All test data taken from existing ECHA registrations for the substances mentioned.
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.
2,4,6-tris(dimethylaminomethyl)phenol:	LD50 (oral) mg/kg: 1916 – 2455 (OECD 401)
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 Corr. 1C; Causes severe skin burns and eye damage.
2,4,6-tris(dimethylaminomethyl)phenol:	Test Result: Corrosive (OECD 404)
Serious eye damage/irritation	Eye Dam. 1; Causes serious eye damage.
2,4,6-tris(dimethylaminomethyl)phenol:	Test Result: Corrosive (CPSC guidelines in CFR 16)
Respiratory or skin sensitization	Skin Sens. 1B; May cause an allergic skin reaction.
2,4,6-tris(dimethylaminomethyl)phenol:	Test Result: Skin Sensitisation (guinea pig) - Positive (OECD 406)

	Germ cell mutagenicity	Based upon the available data, the classification criteria are not met.
	Carcinogenicity	Carc. 1A; May cause cancer.
	Quartz (Silica, respirable Crystalline):	IARC Classification: Group 1. NTP Report on Carcinogens Suspected of causing cancer by inhalation. (Checkoway et al., 1993)(Rice et al., 2001)(Rafnsson V et al, 1997) Route of Exposure: Inhalation into Lungs Causes irritation. Inflammation. Leading to Silicosis and eventually tumour formation. (SIAM 32, 19-21 April 2011)
	Reproductive toxicity	Based upon the available data, the classification criteria are not met.
	STOT - single exposure	STOT SE 3; May cause respiratory irritation.
	Quartz (Silica, respirable Crystalline):	Irritating to respiratory system. (IARC (1997) and SITTIG (4th, 2002))
	STOT - repeated exposure	Based upon the available data, the classification criteria are not met.
	Quartz (Silica, respirable Crystalline):	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.
11.2	**Other information**	None known.

SECTION 12: ECOLOGICAL INFORMATION

12.1	**Toxicity**	Aquatic Chronic 3; Harmful to aquatic life with long lasting effects. Estimated Mixture LC50 > 10 to ≤ 100 mg/l. (Fish)
	Polysulfid, polymer /1,2,3-trichloro-, polymer with 1,1'-[methylenebis(oxy)]bis[2-chloroethane] and sodium sulfide (Na2(Sx)), reduced Propane:	EC50 10 mg/l (48hr (Daphnia magna)) (Rohm and Haas, 1994)
12.2	**Persistence and degradability**	No data for the mixture as a whole.
12.3	**Bioaccumulative potential**	No data for the mixture as a whole.
12.4	**Mobility in soil**	The product is predicted to have low mobility in soil. Partly soluble in water.
12.5	**Results of PBT and vPvB assessment**	Not classified as PBT or vPvB.
12.6	**Other adverse effects**	None known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1	**Waste treatment methods**	Dispose of this material and its container as hazardous wasteSend after pre-treatment to a appropriate hazardous waste incinerator facility according to legislation.
13.2	**Additional Information**	Dispose of contents in accordance with local, state or national legislation.

SECTION 14: TRANSPORT INFORMATION

		ADR/RID	**IMDG**	**IATA/ICAO**
14.1	**UN number**	UN 1760	UN 1760	UN 1760
14.2	**UN proper shipping name**	CORROSIVE LIQUID, N.O.S. (CONTAINS, 2,4,6-tris(dimethylaminomethyl)phenol)	CORROSIVE LIQUID, N.O.S. (CONTAINS, 2,4,6-tris(dimethylaminomethyl)phenol)	CORROSIVE LIQUID, N.O.S. (CONTAINS, 2,4,6-tris(dimethylaminomethyl)phenol)
14.3	**Transport hazard class(es)**	8	8	8
14.4	**Packing group**	III	III	III
14.5	**Environmental hazards**	Not classified	Not classified / Not classified as a Marine Pollutant.	Not classified
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		

SECTION 15: REGULATORY INFORMATION

15.1	**Safety, health and environmental regulations/legislation specific for the substance or mixture**	
15.1.1	**EU regulations**	
	Authorisations and/or Restrictions On Use	Not restricted
15.1.2	**National regulations**	
	IARC Monographs	IARC Classification: Group 1.
15.2	**Chemical Safety Assessment**	A chemical safety assessment is not required under REACH.

SECTION 16: OTHER INFORMATION

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

References:

Existing ECHA registration for 2,4,6-tris(dimethylaminomethyl)phenol (CAS No. 90-72-2). the Classification and Labelling Inventory for Polysulfid, polymer /1,2,3-trichloro-, polymer with 1,1'-[methylenebis(oxy)]bis[2-chloroethane] and sodium sulfide (Na2(Sx)), reduced Propane (CAS No. 68611-50-7), Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica (CAS No. 68909-20-6) and Quartz (CAS No. 14808-60-7).

Literature References:

1. Checkoway, H., Heyer, N.J., Demers, P.A. & Breslow, N.E. (1993) Mortality among workers in the diatomaceous earth industry. Br. 1. ind. Med., 50, 586-597
2. Rice, F.L., Park, R., Stayner, L., Smith, R., Gilbert, S., and Checkoway, H. 2001. Crystalline silica exposure and lung cancer mortality in diatomaceous earth industry workers: a quantitative risk assessment. Occup Environ Med, 58(1):38-45.
3. Rafnsson V & Gunnarsdottir H, 1997, Lung cancer incidence among an Icelandic cohort exposed to diatomaceoys earth and cristobalite., Scand J Work Environ Health, 23: 187 – 192. PMID:9243728.
4. INITIAL TARGETED ASSESSMENT PROFILE (Human Health), SIAM 32, 19-21 April 2011, OECD
5. Silica, Some Silicates, Coal Dust and para-Aramid Fibrils, IARC MONOGRAPHS ON THE EVALUATION OF CARCINOGENIC RISKS TO HUMANS, Volume 68 (1997)
6. 13th Report on Carcinogens, National Toxicology Program, 2014
7. Ziskind M, Jones RN, Weill H, 1976, Silicosis. American review of respiratory disease, 113:643–665.
8. Richard P Pohanish; Marshall Sittig, 2002, Sittig's handbook of toxic and hazardous chemicals and carcinogens, Norwich, N.Y., U.S.A. : Noyes Publications, ©2002.
9. Rohm & Haas, 1994, INITIAL SUBMISSION: CERTIFICATE OF AQUATIC TOXICITY TEST RESULTS FOR LP-3 LIQUID POLYSULPHIDE POLYMER IN DAPHNIA MAGNA, WITH COVER LETTER DATED 04/12/01

EU Classification: This Safety Data Sheet was prepared in accordance with EC Regulation (EC) 1907/2006 (REACH), 1272/2008 (CLP) & 2015/830.

Classification of the substance or mixture According to Regulation (EC) No. 1272/2008 (CLP)	**Classification Procedure**
Skin Corr. 1C; H314	Threshold Calculation
Eye Dam. 1; H318	Threshold Calculation
Skin Sens. 1B; H317	Threshold Calculation
Carc. 1A; H350 - Inhalation	Threshold Calculation
STOT SE 3; H335	Threshold Calculation
Aquatic Chronic 3; H412	Summation Calculation

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: The International Agency for Research on Cancer

Hazard classification / Classification code:

Acute Tox. 4; Acute toxicity, Category 4
Skin Corr. 1C; Skin corrosion/irritation, Category 1C
Skin Irrit. 2; Skin corrosion/irritation, Category 2
Skin Sens. 1B; Skin Sensitisation, Category 1B
Eye Dam. 1; Eye damage, category 1
Eye Irrit. 2; Eye Irritation, Category 2

Hazard Statement(s)

H302: Harmful if swallowed.
H314: Causes severe skin burns and eye damage.
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H318: Causes serious eye damage.
H319: Causes serious eye irritation.

STOT SE 3; Specific target organ toxicity — single exposure, Category 3	H335: May cause respiratory irritation.
Carc. 1A; Carcinogen, category 1A	H350: May cause cancer.
STOT RE 1; Specific target organ toxicity — repeated exposure, Category 1	H372: Causes damage to organs through prolonged or repeated exposure.
Aquatic Chronic 3; Hazardous to the aquatic environment, Chronic , Category 3	H412: Harmful to aquatic life with long lasting effects.

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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