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

1.1 Product identifier

Product Name	WC-16 Ceramic Cement

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

Identified Use(s)	Bonding strain gages to a component
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) Eye Dam.1 : H318

2.2 Label elements

Product Name	WC-16 Ceramic Cement
Contains:	Mono Aluminum Phosphate
Hazard Pictogram(s)	
Signal Word(s)	DANGER
Hazard Statement(s)	H318: Causes serious eye damage.
Precautionary Statement(s)	P280: Wear protective gloves/protective clothing/eye protection/face protection. 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 Statement(s)
Aluminum Oxide*	40 - 50	1344-28-1	215-691-6	Not yet assigned in the supply chain	Not classified
Mono Aluminum Phosphate	10 - 15	13530-50-2	236-875-2	Not yet assigned in the supply chain	Eye Dam. 1; H318

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. Avoid contact with eyes. Ensure adequate ventilation.
Inhalation	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.
Skin Contact	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. Immediately call a POISON CENTER/doctor.
Ingestion	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. Get medical advice/attention if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed Causes serious eye damage.

4.3 Indication of any immediate medical attention and special treatment needed Treatment by an ophthalmologist due to possible caustic burn of the eyes may be required.

SECTION 5: FIRE-FIGHTING 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,

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. Contaminated clothing should be laundered before reuse. Ensure adequate ventilation. Avoid contact with eyes.
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.
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 contact with eyes. 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. 4 – 26 ℃
	Incompatible materials	Avoid contact with acids and alkalis. Avoid contact with steel. Nitrates, Chlorates, calcium carbure, cyanide, Sulphur and sulphites.
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
Aluminum Oxide	1344-28-1	- -	10 4	- -	- -	WEL Inhalable Dust Respirable Dust

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. A washing facility/water for eye and skin cleaning purposes should be present.
8.2.2	**Individual protection measures, such as personal protective equipment (PPE)**	Keep good industrial hygiene. Wear appropriate personal protective equipment, avoid direct contact. Wash contaminated clothing before reuse. Do not eat, drink or smoke at the work place. Avoid contact with eyes.
	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: Nitrile rubber (Minimum thickness: 0.4mm), Polychloroprene - CR (Minimum thickness: 0.5mm), Butyl rubber (Minimum thickness: 0.7mm) **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. Open system(s): Wear suitable respiratory protective equipment. A suitable dust mask or dust respirator with filter type P (EN143 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	Clear Liquid with White Slurry
Odour	Odourless
Odour threshold	Not established
pH	Not established
Melting point/freezing point	Not established
Initial boiling point and boiling range	100℃
Flash point	Not established
Evaporation rate (Water = 1)	1
Flammability (solid, gas)	Not flammable
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	Not established
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**	Avoid contact with heat and ignition sources.
10.5	**Incompatible materials**	Avoid contact with acids and alkalis. Avoid contact with steel. Nitrates, Chlorates, calcium carbure, cyanide, Sulphur and sulphites.
10.6	**Hazardous decomposition product(s)**	Above 300°C, releases corrosive vapours. Combustion products: Carbon monoxide, Carbon dioxide,

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.
	Inhalation	Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: Estimated LC50 >20.0 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	Eye Dam. 1; Causes serious eye damage.
	Mono Aluminum Phosphate:	Test Result: Corrosive (OECD 437)
	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.
	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**	None known.

SECTION 12: ECOLOGICAL INFORMATION

12.1	**Toxicity**	Based upon the available data, the classification criteria are not met. Estimated Mixture LC50 >100 mg/l (Fish)
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 substance 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

Not classified according to the United Nations 'Recommendations on the Transport of Dangerous Goods'.

		ADR/RID	**IMDG**	**IATA/ICAO**
14.1	**UN number**	Not classified	Not classified	Not classified
14.2	**UN proper shipping name**	Not classified	Not classified	Not classified
14.3	**Transport hazard class(es)**	Not classified	Not classified	Not classified
14.4	**Packing group**	Not classified	Not classified	Not classified
14.5	**Environmental hazards**	Not classified	Not classified	Not classified
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

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

15.2 Chemical Safety Assessment: A REACH chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

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

References:

Existing Safety Data Sheet (SDS)**,** Existing ECHA registration(s) for Aluminum Oxide (CAS No. 1344-28-1) and Mono Aluminum Phosphate (CAS No. 13530-50-2)

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
Eye Dam. 1; H318	Threshold 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

Hazard classification / Classification code:

Eye Dam. 1; Eye damage, category 1

Hazard Statement(s)

H318: Causes serious eye damage.

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