# SAFETY DATA SHEET

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**SAFETY DATA SHEET ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 2015/830**

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

**1.1 Product identifier**

| | |
|---|---|
| Product Name | QA-500 Part B |
| CAS No. | 552-30-7 |
| EINECS No. | 209-008-0 |
| REACH Registration No. | None assigned. |

**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 UK LTD<br>Stroudley Road<br>Basingstoke<br>Hampshire<br>RG24 8FW<br>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**

| | |
|---|---|
| | (00-1) 703-527-3887 – CHEMTREC |
| Languages spoken | 24 hours, English spoken |

## SECTION 2: HAZARDS IDENTIFICATION

**2.1 Classification of the substance or mixture**

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

Skin Sens. 1; H317
Eye Dam. 1; H318
Resp. Sens. 1; H334
STOT SE 3; H335

**2.2 Label elements**

According to Regulation (EC) No. 1272/2008 (CLP)

Product Name: QA-500 Part A

Hazard Pictogram(s)

Signal Word(s): DANGER

Contains: Benzene-1,2,4-tricarboxylic acid 1,2-anhydride

Hazard Statement(s):
H317: May cause an allergic skin reaction.
H318: Causes serious eye damage.
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335: May cause respiratory irritation.

Precautionary Statement(s):
P261: Avoid breathing dust.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P304+P341: IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

P342+P311: If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
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.

**Additional Information** None.

**2.3 Other hazards** None.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

**3.1 Substances**

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

| Chemical identity of the substance | CAS No. | EC No. | REACH Registration No. | Hazard Statement(s) |
|---|---|---|---|---|
| Benzene-1,2,4-tricarboxylic acid 1,2-anhydride (Trimellitic anhydride, TMA) | 552-30-7 | 209-008-0 | Not yet assigned in the supply chain | Skin Sens. 1; H317<br>Eye Dam. 1; H318<br>Resp. Sens. 1; H334<br>STOT SE 3; H335 |

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

**3.2 Mixtures** Not applicable

## SECTION 4: FIRST AID MEASURES

**4.1 Description of first aid measures**

Self-protection of the first aider: Wear suitable protective clothing, gloves and eye/face protection. Ensure adequate ventilation. Avoid breathing dust. Avoid contact with skin, eyes or clothing. Contaminated clothing should be laundered before reuse.

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. If experiencing respiratory symptoms: Call a POISON CENTER/doctor. If breathing is laboured, oxygen should be administered by qualified personnel. If breathing has stopped, apply artificial respiration.

Skin Contact: IF ON SKIN: Remove contaminated clothing. Brush off loose particles from skin. Wash affected skin with soap and water. Contaminated clothing should be thoroughly cleaned. If skin irritation or rash occurs: Get medical advice/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. Obtain prompt consultation, preferably from an ophthalmologist. Continue irrigation until medical attention can be obtained.

Ingestion: IF SWALLOWED: Rinse mouth. Give plenty of water to drink. Do not give anything by mouth to an unconscious person. Do NOT induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration into the lungs. Immediately call a POISON CENTER/doctor.

**4.2 Most important symptoms and effects, both acute and delayed** Causes serious eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. May cause an allergic skin reaction. Aspiration into the lungs may cause chemical pneumonitis, which can be fatal.

**4.3 Indication of any immediate medical attention and special treatment needed** Treat symptomatically.
IF IN EYES: Treatment by an ophthalmologist due to possible caustic burn of

| | |
|---|---|
| | the eyes may be required. Chemical eye burns may require extended irrigation. |
| Notes to a physician: | IF INHALED: Acute asthmatic reactions to Trimellitic Anhydride (TMA) should be treated like acute asthma from any cause. If the patient is cyanotic or acutely dyspneic, consider supplemental oxygen and systemic corticosteroids. The primary treatment for the late onset respiratory systemic syndrome (TMA flu) is systemic corticosteroids plus antipyretics and bronchodilators as needed. |

## SECTION 5: FIREFIGHTING MEASURES

| | | |
|---|---|---|
| **5.1** | **Extinguishing media** | |
| | Suitable Extinguishing media | As appropriate for surrounding fire. Extinguish with foam 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** | Avoid dust generation. May form combustible dust clouds in air. Finely dispersed particles form explosive mixtures with air. Hazardous decomposition product(s): Carbon monoxide, Carbon dioxide. |
| **5.3** | **Advice for fire-fighters** | Fight fire with normal precautions from a reasonable distance. Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Do not breathe fumes. Dampening with water can reduce dust. Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Do not allow run-off from fire fighting to enter drains or water courses. |

## 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 dust. 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** | Stop leak if safe to do so. Ensure suitable personal protection during removal of spillages. Vacuum spilled material. Recommended: High efficiency particulate air filter (HEPA filter). Use only non-sparking tools. Avoid dust generation. Do not use compressed air for cleaning purposes. 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** | Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid breathing dust. Avoid contact with heated or molten product. Use personal protective equipment as required. Keep away from fire, sparks and heated surfaces - no smoking. Take precautionary measures against static discharge. Do not allow dust to accumulate on surfaces and equipment. Do not use in confined spaces. Wash hands thoroughly after handling. Contaminated clothing should be thoroughly cleaned. Protect from moisture. |
| **7.2** | **Conditions for safe storage, including any incompatibilities** | Ground/bond container and receiving equipment. Keep in a cool, dry, well ventilated place. Keep only in original container. Keep away from fire, sparks and heated surfaces. Protect from moisture. |
| | Storage temperature | Stable at ambient temperatures. |
| | Storage life | Stable under normal conditions. |
| | Incompatible materials | Keep away from: Strong oxidising agents, Acids and Alkalis. Protect from moisture. |
| **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 |
|---|---|---|---|---|---|---|
| Benzene-1,2,4-tricarboxylic acid 1,2-anhydride | 552-30-7 | - | 0.04 | - | 0.12 | WEL |

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

**8.1.2 Biological limit value** Not established.

**8.1.3 PNECs and DNELs** Benzene-1,2,4-tricarboxylic acid 1,2-anhydride: A DNEL cannot be derived

| Benzene-1,2,4-tricarboxylic acid 1,2-anhydride Predicted No Effect Concentration | Value |
|---|---|
| Aquatic Compartment | PNEC Aqua (marine water) 0.074 mg/l<br>PNEC Aqua (freshwater) 0.739 mg/l<br>PNEC freshwater sediment 4.97 mg/kg dw<br>PNEC marine sediment 0.497 mg/kg dw |
| Soil | PNEC 9.95 Soil mg/kg dw |
| STP | PNEC 10 STP mg/l |

**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. Use non-sparking ventilation systems, approved explosion-proof equipment, and intrinsically safe electrical systems.

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

General hygiene measures for the handling of chemicals are applicable. Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier. Avoid contact with skin, eyes or clothing. Avoid breathing dust. 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. Do not use in confined spaces. Have available eyewash bottle with clean water.

Eye/ face protection

Use eye protection designed to protect against dusts. Wear eye protection with side protection.
Recommended: EN166

Skin protection

**Hand protection:** Wear impervious gloves. Gloves should be changed regularly to avoid permeation problems. The gloves type used must be chosen based on the work activity and duration as well as concentration/quantity of material being handled.
Recommended: EN374

**Body protection:** Wear dustproof working clothes. Wear impervious protective clothing, including boots, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection

Use only with adequate ventilation or closed system ventilation. Wear suitable respiratory protective equipment if processing involves working in areas where dusts or vapours are likely to be evolved. If above exposure limits are likely to be exceeded, breathing mask with fine dust filter.
Recommended: Select a filter suitable for organic gases and vapours. EN143

| | | |
|---|---|---|
| | 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 | White Solid |
| Odour | Pungent |
| Odour threshold | Not determined. |
| pH | Not applicable |
| Melting point/freezing point | 165°C (329°F) |
| Initial boiling point and boiling range | 390°C (734°F) |
| Flash point | 227°C (440°F) [Closed cup] |
| Evaporation rate | Not applicable |
| Flammability (solid, gas) | Non-flammable |
| Upper/lower flammability or explosive limits | Flammable Limits (Lower) (%v/v): 1<br>Flammable Limits (Upper) (%v/v): 7 |
| Vapour pressure | Not applicable |
| Vapour density | Not applicable |
| Relative density | 1.54 (Water = 1) |
| Solubility(ies) | Soluble in water (Hydrolysis to Benzene-1,2,4-tricarboxylic acid (Trimellitic acid) (CAS No. 528-44-9)) |
| Partition coefficient: n-octanol/water | Log Pow 0.06 @ 40°C and pH 7.2 |
| Auto-ignition temperature | Not determined. |
| Decomposition Temperature | Not determined. |
| Viscosity | Not applicable |
| Explosive properties | Not explosive (May form combustible dust clouds in air). |
| Oxidising properties | Not oxidising. |

**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** | May form combustible dust clouds in air. Contact with water or moist air causes production of opaque and corrosive fumes. |
| **10.4** | **Conditions to avoid** | Keep away from fire, sparks and heated surfaces. Take precautionary measures against static discharge. Do not use in confined spaces. Protect from moisture. |
| **10.5** | **Incompatible materials** | Keep away from: Strong oxidising agents, Acids and Alkalis. |
| **10.6** | **Hazardous decomposition product(s)** | May decompose in a fire giving off toxic fumes. (Carbon monoxide, Carbon dioxide). |

## SECTION 11: TOXICOLOGICAL INFORMATION

**11.1 Information on toxicological effects (Substances in preparations / mixtures)**

**Acute toxicity**

| | |
|---|---|
| Ingestion | Based upon the available data, the classification criteria are not met.<br>LD50 (oral,rat) mg/kg: 2030-3340 (OECD 401) |
| Inhalation | Based upon the available data, the classification criteria are not met.<br>LC50 (inhalation,rat) mg/l/4h: >2.33 (OECD 403) |
| Skin Contact | Based upon the available data, the classification criteria are not met.<br>LD50 (skin,rabbit) mg/kg: >2000 (OECD 402) |
| **Skin corrosion/irritation** | Based upon the available data, the classification criteria are not met.<br>Not irritating to skin (rabbit) (OECD 404) |
| **Serious eye damage/irritation** | Eye Dam. 1: Causes serious eye damage.<br>Severely irritating to eyes (rabbit) (Unnamed, 1991) |

| | | |
|---|---|---|
| | **Respiratory or skin sensitization** | Skin Sens. 1: May cause an allergic skin reaction.<br>Sensitisation (guinea pig) - Positive (1987). Buehler test, Equivalent or similar to OECD 406.<br>Resp. Sens. 1: May cause allergy or asthma symptoms or breathing difficulties if inhaled.<br>Sensitisation: Positive. (rat) (2006) |
| | **Germ cell mutagenicity** | Based upon the available data, the classification criteria are not met.<br>In vitro: Negative (OECD 471)<br>In vivo: No data |
| | **Carcinogenicity** | Based upon the available data, the classification criteria are not met.<br>No data |
| | **Reproductive toxicity** | Based upon the available data, the classification criteria are not met.<br>Reproductive Toxicity: NOAEL (rat): 1785-3570 mg/kg bw/day (ECHA registration dossier)<br>Developmental Toxicity: NOAEL (rat): >140 mg/kg bw/day. Studies in animals have shown that exposures produce no teratogenic effects. (OECD 414) |
| | **STOT - single exposure** | STOT SE 3: May cause respiratory irritation.<br>Oral: LD50 (oral,rat) mg/kg: >2000. Adverse effects observed (OECD 401)<br>Inhalation: LC50 (rat) mg/l/Air: >2.33. Clinical signs during the exposure included laboured breathing, gasping and reduced activity (OECD 403)<br>Dermal: LD50 (skin,rabbit) mg/kg: >2000. Adverse effects observed: Oedema (OECD 402) |
| | **STOT - repeated exposure** | Based upon the available data, the classification criteria are not met.<br>Oral: NOAEL (rat): 1000 mg/kg bw/day (OECD 407)<br>Inhalation: NOAEC (rat): 17 mg/m³ (ECHA registration dossier)<br>Dermal: No data |
| | **Aspiration hazard** | Based upon the available data, the classification criteria are not met.<br>No data |
| **11.2** | **Other information** | None. |

## SECTION 12: ECOLOGICAL INFORMATION

| | | |
|---|---|---|
| **12.1** | **Ecotoxicity** | Based upon the available data, the classification criteria are not met.<br>EC50 (48 hour): > 792 mg/l (Daphnia magna)<br>LC50 (96 hour): > 957 mg/l (Fish) |
| **12.2** | **Persistence and degradability** | Readily biodegradable. The substance hydrolyses quickly in the presence of water to: Benzene-1,2,4-tricarboxylic acid (CAS No. 528-44-9). |
| **12.3** | **Bioaccumulative potential** | The product has low potential for bioaccumulation. |
| **12.4** | **Mobility in soil** | The product is predicted to have high mobility in soil (Soluble in water). |
| **12.5** | **Other adverse effects** | Not classified as PBT or vPvB. |

## SECTION 13: DISPOSAL CONSIDERATIONS

| | | |
|---|---|---|
| **13.1** | **Waste treatment methods** | Dispose of this material and its container as hazardous waste. Containers of this material may be hazardous when empty since they retain product residue. Dispose of wastes in an approved waste disposal facility. |
| **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** |
|---|---|---|---|---|
| **14.1** | **UN number** | Not classified | Not classified | Not classified |
| **14.2** | **UN proper shipping name** | 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 as a | Not classified |

| | | |
|---|---|---|
| | | Marine Pollutant. |
| **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** | **EU regulations** | |
| | Authorisations and/or Restrictions On Use | Not listed |
| | Substance(s) of Very High Concern (SVHCs) | Not listed |
| | Community Rolling Action Plan (CoRAP) | Not listed |
| **15.1.2** | **National regulations** | |
| | Wassergefährdungsklasse (Germany) | Water hazard class: 1 |
| **15.2** | **Chemical Safety Assessment** | Not available. |

## SECTION 16: OTHER INFORMATION

**The following sections contain revisions or new statements:** New format has been issued, all sections have been updated to include new information. Review SDS with care.

**References:** Existing Safety Data Sheet (SDS), Harmonised Classification(s) for Benzene-1,2,4-tricarboxylic acid 1,2-anhydride (CAS No. 552-30-7). Existing ECHA registration(s) for Benzene-1,2,4-tricarboxylic acid 1,2-anhydride (CAS No. 552-30-7).

| GHS Classification of the substance or mixture | Classification Procedure |
|---|---|
| Skin Sens. 1; H317 | Harmonised Classification |
| Eye Dam. 1; H318 | Harmonised Classification |
| Resp. Sens. 1; H334 | Harmonised Classification |
| STOT SE 3; H335 | Harmonised Classification |

**LEGEND**

vPvB: very Persistent and very Bioaccumulative
LTEL: Long Term Exposure Limit
STEL: Short Term Exposure Limit
NOAEL: no observed adverse effect concentration
PNEC: Predicted No Effect Concentration
PBT: Persistent, Bioaccumulative and Toxic
DNEL: Derived No Effect Level
NOAEC: no observed adverse effect concentration

| Hazard Class / Classification code: | Hazard Statement(s) |
|---|---|
| Skin Sens. 1 ; Skin sensitisation, category 1 | H317: May cause an allergic skin reaction. |
| Eye Dam. 1; Serious eye damage/irritation, Category 1 | H318: Causes serious eye damage. |
| Resp. Sens. 1; Respiratory sensitisation, category 1 | H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| STOT SE 3; Specific target organ toxicity — single exposure; Category 3 | H335: May cause respiratory irritation. |

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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