THE GMS COMPANY

GAMASCO HOUSE 35 HORNSBY SQUARE SOUTHFIELDS INDUSTRIAL PARK LAINDON ESSEX SS15 6SD

UK

Telephone: 01268 419909 Fax: 01268 544346 E-mail: office@gamasco.co.uk or visit our Website: www.gamasco.co.uk

Data sheet

GAMASCO GLUE HT

Gamasco Glue HT is:

- Clear, water based, high temperature resistant, general purpose fixative.
- Designed for use as a clear glassy transparent adhesive in light film applications.
- Can also be used to reduce the viscosity of other high temperature adhesives.
- A maximum continuous operating temperature of 800°C.

It is typically used for:

- Fixing, bonding, assembling and repairing glass items and ceramics.
- A High Temperature thinner for High Temperature adhesives.

Its principle characteristics are:

- Suitable for thin films /coatings and bonding.
- Maximum continuous service temperature: 800°C.
- Available as a clear liquid.
- Can be re-dissolved at high pH and temperature.
- Ready to use.

Relative Viscosity	70 cP @ 20°C Spindle 3 Speed 10	Wet Density	1.41 g/cm ³	Softening Temperature	700°C
Melting Temperature	800°C	Thermal conductivity	1-2 W.m ⁻¹ .K ⁻¹	Packaging	45ml bottle with brush attached to lid
Solids by Weight	38.5%	рН	13	Volume Resistivity	>10^7
Oxidation Resistance	Excellent	Acid Resistance	Excellent – Except hydrofluoric	Thermal Expansion X10 -6 per °C	5 @ 100°C 30 @ 300°C

Health and Safety / Environmental Information

• RoHS Compliant.

Guidelines for use

Application:

- Stir/shake contents of the container prior to use, to ensure that the product is thoroughly mixed.
- Thoroughly clean and degrease all surfaces to be bonded or sealed.
- A light surface abrasion of the material to be bonded will increase the surface area available for adhesion and improve mechanical key.
- Apply the sealant as supplied to all surfaces to be bonded and complete tooling with 5-10 minutes.
- Apply moderate pressure to ensure even anchorage and solid contact of the surfaces to be bonded, so that all surfaces are fully wetted.
- Secure components and allow the adhesive to set.
- All application equipment should be cleaned with warm water immediately after application.

Curing Schedule.

- As this product is water based, it is necessary to fully dry and dehydrate the adhesive.
- The curing of this product may vary depending on the temperature, humidity, porosity of substrates, volume of adhesive, area etc.
- A rough guide for typical applications at room temperature and average humidity, would be approximately 36-48 hours.
- Curing may be accelerated by the application of gentle and progressive heat (do not exceed 100°C during curing as this may lead to product failure).
- The cured product may be removed using steam/boiling water (high pH will also aid removal).

Storage.

- Once opened this product is moisture sensitive. Avoid continuous exposure to air.
- Product should be stored in original packaging between 5 30°C.
- Shelf life 12 months

The information presented herein is based on data considered to be accurate as of the date of preparation of this Material Safety Data Sheet. However, no warranty or representation, express or implied, is made as to the accuracy or completeness of the foregoing data and safety information, nor is any authorisation given or implied to practice any patented invention without a license. In addition, no responsibility can be assumed by the vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommend practices, or from any hazards inherent in the nature of the product.

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Revision date: 03/05/2016 Revision: 1

SAFETY DATA SHEET Gamasco HT Adhesive 45ml Plain Bottles

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier Product name Gamasco Limited T/A the GMS Group - High Temperature Rope Adhesive 45ml Plain Bottles Product number 2769

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

1.3. Details of the supplier of the safety data sheet The GMS Company
35 Hornsby Square Southfields Industrial Park Laindon Essex
SS15 6SD

Tel: 01268 419909 Email: office@gamasco.co.uk

1.4. Emergency telephone number Emergency telephone 01268 419909 (MON TO THU 08:00 - 16:00. FRI 08:00 - 13:00)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification
Physical hazards Not Classified
Health hazards Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Dam. 1 - H318
Environmental hazards Not Classified
Classification (67/548/EEC or
1999/45/EC)

Xn; R22. Xi; R41, R38

Human health May cause serious eye damage. Harmful if swallowed. See Section 11 for additional information on health hazards.

Environmental The product is not expected to be hazardous to the environment.

Physicochemical Not considered to be a significant hazard due to the small quantities used.

2.2. Label elements Pictogram Signal word Danger Hazard statements H302 Harmful if swallowed. H315 Causes skin irritation. H318 Causes serious eye damage. Precautionary statements P102 Keep out of reach of children. P270 Do not eat, drink or smoke when using this product. P280 Wear protective gloves/protective clothing/eye protection/face protection. P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor. P302+P352 IF ON SKIN: Wash with plenty of water. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P501 Dispose of contents/container in accordance with national regulations. **Contains SODIUM SILICATE SOLUTION** Supplementary precautionary statements P264 Wash contaminated skin thoroughly after handling. P321 Specific treatment (see medical advice on this label). P330 Rinse mouth. P332+P313 If skin irritation occurs: Get medical advice/attention. P362+P364 Take off contaminated clothing and wash it before reuse.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures
SODIUM SILICATE SOLUTION 30-60%
CAS number: 1344-09-8 EC number: 215-687-4
Classification
Acute Tox. 4 - H302
Skin Irrit. 2 - H315
Eye Dam. 1 - H318
The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information Move affected person to fresh air and keep warm and at rest in a position comfortable for

breathing. Get medical attention if any discomfort continues.

Inhalation Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. If in doubt, get medical attention promptly.

Ingestion Rinse mouth thoroughly with water. Remove person to fresh air and keep comfortable for breathing. Get medical attention.

Skin contact Wash skin thoroughly with soap and water. Get medical attention promptly if symptoms occur

after washing.

Eye contact Remove any contact lenses and open eyelids wide apart. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes. Get medical attention promptly if symptoms occur after washing.

Protection of first aiders First aid personnel should wear appropriate protective equipment during any rescue.

4.2. Most important symptoms and effects, both acute and delayed General information See Section 11 for additional information on health hazards.

4.3. Indication of any immediate medical attention and special treatment needed Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media Foam, carbon dioxide or dry powder.
5.2. Special hazards arising from the substance or mixture
Specific hazards When handled correctly, undamaged units represent no danger.
5.3. Advice for firefighters
Protective actions during
firefighting
Not known.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures Personal precautions Avoid inhalation of vapours and contact with skin and eyes. Wash thoroughly after dealing with a spillage.

6.2. Environmental precautions

Environmental precautions Avoid discharge into drains.

6.3. Methods and material for containment and cleaning up Methods for cleaning up Provide adequate ventilation. Absorb in vermiculite, dry sand or earth and place into containers.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health

hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Read and follow manufacturer's recommendations. Use suitable respiratory protection if ventilation is inadequate.

Advice on general occupational hygiene

Wash promptly with soap and water if skin becomes contaminated. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Protect from freezing and direct sunlight. Store in a dry place. Do not store near heat sources or expose to high temperatures. Keep away from heat, sparks and open flame.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

8.2. Exposure controls

Eye/face protection Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible.

Hand protection No specific requirements are anticipated under normal conditions of use.

Other skin and body protection

Wear appropriate clothing to prevent repeated or prolonged skin contact.

Respiratory protection No specific recommendations. If ventilation is inadequate, suitable respiratory protection must be worn.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties Appearance Liquid. Colour Clear. Odour No characteristic odour. Odour threshold No information available. pH No information available. Melting point No information available. Initial boiling point and range 100°C @ Flash point No information available. Evaporation rate No information available. Evaporation factor No information available. Flammability (solid, gas) No information available. Upper/lower flammability or explosive limits No information available. Vapour pressure No information available. Vapour density No information available. Relative density 1.420 Solubility(ies) Soluble in water. Partition coefficient No information available. Auto-ignition temperature No information available. Decomposition Temperature No information available. Viscosity No information available. Explosive properties No information available. Oxidising properties No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No test data specifically related to reactivity available for this product or its ingredients.

10.2. Chemical stability Stability The product may not be stable under some conditions of storage or use.

10.3. Possibility of hazardous reactions Possibility of hazardous reactions None known.

10.4. Conditions to avoid Conditions to avoid Avoid heat, flames and other sources of ignition. Avoid exposure to high temperatures or direct sunlight.

10.5. Incompatible materials Materials to avoid None known.

10.6. Hazardous decomposition products Hazardous decomposition products None at ambient temperatures.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity - oral
ATE oral (mg/kg) 1,190.47619048
Inhalation No significant hazard at normal ambient temperatures.
Ingestion Harmful if swallowed.
Skin contact Causes skin irritation.
Eye contact Causes serious eye damage.
Acute and chronic health hazards
No known chronic or acute health risks.
Route of entry Inhalation Skin and/or eye contact
Toxicological information on ingredients.
SODIUM SILICATE SOLUTION
Acute toxicity - oral
ATE oral (mg/kg) 500.0

SECTION 12: Ecological Information

12.1. Toxicity

12.2. Persistence and degradability Persistence and degradability No data available.

12.3. Bioaccumulative potential Partition coefficient No information available.

12.4. Mobility in soil Mobility No data available 12.5. Results of PBT and vPvB assessment

This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Dispose of waste product or used containers in accordance with local regulations

Disposal methods Dispose of waste product or used containers in accordance with local regulations

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number Not applicable.

14.2. UN proper shipping name Not applicable.

14.3. Transport hazard class(es) No transport warning sign required.

14.4. Packing group Not applicable.

14.5. Environmental hazards Environmentally hazardous substance/marine pollutant No.

14.6. Special precautions for user Not applicable.

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 EU legislation Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

SDS number 6181

Hazard statements in full H302 Harmful if swallowed.

H315 Causes skin irritation.

H318 Causes serious eye damage.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.