



LiquiTank MSDS

1. Identification Of The Substance / Preparation And Of The Company:

1.1 Trade Name:	LiquiTank Spray Grade
1.2 Application Of The Preparation:	Protective waterproofing membrane
1.3 Supplier:	LRS Ltd Prees Green Whitchurch SY13 2BN
1.4 Contact Tel. No.	01948 841877

2. Composition / Information On Ingredients:

2.1 Description:	Water suspension of petroleum derived hydrocarbons (polymer modified emulsified asphalt) and inert fillers.
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3. Hazardous Identification:

3.1 Hazards:	This product is not classified as dangerous per EU directive 199/45/EU
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4. First Aid Measures:

4.1 After Skin Contact:	This is an alkaline product. If splashed on the skin immediately wash thoroughly with fresh water. If the product has dried on the skin massage the area with medical grade mineral oil, baby oil or edible oil, then wash with soap and water. If irritation persists, seek medical attention.
4.2 After Eye Contact:	Flush thoroughly with fresh water for at least ten minutes. Seek medical attention.
4.3 After Swallowing: DO NOT INGEST	DO NOT INDUCE VOMITING. Seek medical attention.
4.4 Note To Physician:	No attempt should be made to remove firmly adhering bitumen from the skin. Once the bitumen has cooled, it will do no further harm and in fact provides a sterile covering over a burnt area. As healing takes place, the bitumen plaque will detach itself, usually after a few days. If solvent treatment is used, it should be followed by washing with soap and water, then the application of a proprietary re-fatting agent or skin cleansing cream. Only medically approved solvents may be used to remove bitumen from burns, as other solvents could cause further skin damage.

5. Fire Fighting Measures:

5.1 Hazards:	Not explosive. Not auto – flammable. Not flammable. The product itself will not burn. If anything, the packaging may be involved in a fire.
5.2 Extinguishing Agent:	Use CO2, dry chemical powders or alcohol resistant foam. If water is used, contain any run-off.

6. Accidental Release Measures:

6.1 Environmental Protection:	Avoid spillage into sewers or surface water.
6.2 Measures For Cleaning/Collecting:	Large spills: Pump into plastic containers and rework/dispose as per local legislation. Small spills: Use non-combustible absorbent and shovel into a suitable container for disposal.

7. Handling And Storage:

7.1 Handling:	Ensure good ventilation when using in confined areas.
7.2 Storage:	Store in a cool dry place.
7.3 Training:	This product does not require any special training before use.

8. Exposure Controls / Personal Protection:

8.1 Hygienic Measures:	Not hazardous in normal use. Avoid contact with eyes and skin.
8.2 Personal Protective Equipment (PPE):	Eye protection: Safety glasses or splash goggles. Body protection: Long sleeves and loose clothing.

9. Physical And Chemical Properties:

9.1 Form:	Liquid
9.2 Colour:	Brown
9.3 Odour:	Slight resinous petroleum odour
9.4 Odour Threshold:	NA
9.5 Coefficient Of Water/Oil Distribution.	N/A
9.6 Change In Condition:	Boiling Point: 100°C (water) Freezing Point: 0°C
9.7 PH:	7-13
9.8 Specific Gravity:	1.00 (approx.)
9.9 Vapour Pressure:	(mm Hg) 17 @ 20°C (water)
9.10 Vapour Density:	>1 (air=1)
9.11 Evaporation Rate:	<1 (nBuAcetate=1)
9.12 Volatiles %:	30-60 (water)
9.13 Solubility In Water:	Partially soluble

10. Stability And Reactivity:

10.1 Stability:	Stable under normal conditions
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11. Toxicological Information:

11.1 Primary Irritant Effects:	On the eye: Slightly irritating to eyes. On the skin: Slightly irritating to skin. Chronic toxicity: Repeated exposure to low levels will not cause adverse effects. Contact sensitization: Does not provoke a sensitization reaction.
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11.2 Additional Info:	Not actually toxic. After ingestion, it may cause vomiting. If large quantities are ingested, treat symptomatically. Do not induce vomiting . If irritant effects are seen, these will be mild to moderate, depending on exposure. If in contact with eyes flushing with water is recommended.
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12. Ecological Information:

12.1 General Notes:	The product is not considered harmful to Aquatic organisms nor to cause long-term adverse effects in the environment. The surfactants used in the product are biodegradable in line with the requirements of EU directives 73/404/EEC and 73/405/EEC and their subsequent amendments.
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13. Disposal Considerations:

13.1 Recommendations:	Observe safe handling precautions and local legislation. May go to land fill.
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14. Transportation Information:

14.1 Regulations:	<ul style="list-style-type: none"> • Not subject to ADR/IATA/IMDG codes. • Not subject to the controlled products or the transportation of dangerous goods regulations.
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15. Regulatory Information:

15.1 Labelling per EU guidelines:	This product is not classified as dangerous per EU Directive 1999/45/EC and national laws.
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16. Other Information:

16.1 Liability:	<p>The information provided is offered in good faith and is based on our current knowledge without guarantee of accuracy. We do not accept responsibility for damage and claims arising from handling, transport, storage or disposal of the product. The information on this data sheet applies only to the product named above.</p> <p>This does not constitute a guarantee or warranty for any specific product feature and shall not establish a legally contractual relationship.</p>
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Supplier:	<p>LRS Ltd Prees Green Whitchurch SY13 2BN</p> <p>Tel. 01948 841877</p> <p>Fax.01948 841854</p> <p>E-mail: info@lrs-systems.co.uk</p>
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**THIS PRODUCT IS NOT SUBJECT TO THE CONTROLLED PRODUCTS OR THE
TRANSPORTATION OF DANGEROUS GOODS REGULATION**

1.1 Trade Name:	LiquiTank Spray Grade
1.2 Chemical family:	Water suspension of petroleum derived hydrocarbons (polymer modified emulsified asphalt) and inert filters.
1.3 Material Use:	Protective waterproof coating
1.4 T.D.G. Classification:	NON-REGULATED
1.5 WHIMIS Classification:	NON-REGULATED

2. Hazardous Ingredients:

COMPONENT	CAS#	% (BY MASS)	LC50 (pmm) (rat inhal)	LD50 (mg/kg) (rat oral)
Complex mixture of bitumens	N/A	40-70	N/A	N/A
Anionic surfactants	N/A	0.5-2.0	N/A	N/A
Water	7732-18-5	30-60	N/A	N/A
Polymer dispersion	N/A	5-25	N/A	N/A

3. Physical Properties:

3.1 Form:	Liquid
3.2 Colour:	Brown
3.3 Odour:	Slight resinous petroleum odour
3.4 Odour Threshold:	NA
3.5 Coefficient of water/oil distribution:	N/A
3.6 Boiling Point:	100°C (water)
3.7 Freezing Point:	0°C
3.8 PH:	7-13
3.9 Specific Gravity:	1.0 (approx.)
3.10 Vapour Pressure:	(mm Hg) 17 @ 20°C (water)
3.11 Vapour Density:	>1 (air=1)
3.12 Evaporation Rate:	<1 (nBuAcetate=1)
3.13 Volatiles %:	30-60 (water)
3.14 Solubility In Water:	Partially soluble

4. Fire & Explosion Data:

4.1 Means of Extinction:	Not explosive. Not auto – flammable. Not flammable.
4.2 Sensitivity to Mechanical Impact/Static Discharge:	N/A
4.3 Flash Point (method):	N/A (non-combustible)
4.4 Upper Flammable Limits %:	N/A
4.5 Lower Flammable Limits%:	N/A
4.6 Auto Ignition Temperature:	N/A
4.7 Fire Fighting Instructions:	Use CO2, dry chemical powders or alcohol resistant foam. If water is used, contain any run-off.
4.8 Fire % Explosion Hazards:	LiquiTank is a non-combustible Liquid and will not burn, but may splatter if the Liquid is heated above its boiling point. Avoid heating above 200 degrees centigrade / 392 degrees Fahrenheit.

5. Reactivity Data:

5.1 Chemical Stability:	Stable
5.2 Incompatible Materials:	Will react with alkaline sensitive materials such as acids and certain metals. Contact with reactive metals such as aluminium or magnesium will result in the formation of explosive hydrogen gas.
5.3 Hazardous Decomposition Products:	Avoid heating above 200°C. At elevated temperatures, hazardous vapours can be released, including carbon monoxide, hydrogen chloride, organic acids and aldehydes.
5.4 Hazardous Polymerization:	Will not occur.

6. Health Information:

6.1 Exposure Limit:	N/A
6.2 Inhalation:	N/A
6.3 Skin:	Adhesion
6.4 Eyes:	Adhesion & irritation
6.5 Ingestion:	Blockage of digestive system and/or respiratory tract.
6.6 Chronic Effects:	N/A

7. Emergency And First Aid Procedures:

7.1 Inhalation:	N/A
7.2 Skin:	This is an alkaline product. If splashed on the skin immediately wash thoroughly with fresh water. If the product has dried on the skin massage the

7.3 Eyes:	area with medical grade mineral oil, baby oil or edible oil, then wash with soap and water. If irritation persists, seek medical attention.
7.4 Ingestion:	Flush thoroughly with fresh water for at least ten minutes. Seek medical attention.
	DO NOT INDUCE VOMITING. Seek medical attention.

8. Spill Procedures:

8.1 In the Event of a Spill:	Dyke and contain, transfer to container for recovery or disposal. Keep out of sewers and surface water.
8.2 Disposal Methods:	Follow federal, provincial and local regulations regarding disposal.

9. Special Procedures:

9.1 Respiratory Protection:	N/A
9.2 Ventilation:	N/A
9.3 Protective Gloves:	Recommended
9.4: Eye Protection:	Safety glasses or splash goggles recommended
9.5 Other protection:	Long sleeves and loose clothing recommended

10. Special Precautions:

10.1 Storage & Handling Conditions:	Keep container tightly closed when not in use. Keep from freezing.
10.2 Special Shipping Info:	Not regulated by the Transportation of Dangerous Goods Regulations
10.3 Prepared By:	LRS Ltd
10.4 Prepared On:	28 th Sept 2004

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PLEASE READ MATERIAL SAFETY DATA SHEET AND COSHH DATA SHEET BEFORE USING
For full COSHH & Material Safety Data Sheets see your LRS specialist or visit www.LRS.co.uk

1. Uses:

LiquiTank Spray Grade is a cold applied waterproofing membrane for surface protection. LiquiTank Spray Grade can be applied over a wide range of surfaces including roofing, concrete foundations, basements, retaining walls, car parking decks, planters, valleys & guttering plus many more. It will cover many substrates including timber, concrete, metal, asphalt, asbestos and brick.

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| 2.1 | All surfaces should be dry and free from dust, grease and other debris. Any loose debris should be swept away, surfaces pressure washed and allowed to dry. |
| 2.2 | All surfaces should be structurally sound and stable before application. |
| 2.3 | Use LiquiTank Mastic Adhesive to fill smaller gaps (above 3mm). For best results build up in thin layers and allowed to fully dry and cure. |
| 2.4 | Use LiquiTank Strengthening Tape to cover joints, large gaps, pipe work, 90° angles and other details. |

2. Preparation:

3. Application:

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| 3.1 | Do not apply to wet or frozen surfaces, during or immediately prior to heavy rain. |
| 3.2 | Apply the dual component system with the appropriate specially designed spray machine. |
| 3.3 | Apply at an ambient temperature (above 5°C) |
| 3.4 | Apply an even 2mm covering over the prepared surface. |
| 3.5 | Cures to touch in about one minute (at 20°C) and is largely cured within 48 hours. |
| 3.6 | Protection boards or insulation may be applied to surfaces after an initial cure time of 30 minutes. |
| 3.7 | After preparation, it is possible to cover areas greater than 1000 square metres per day. |

4. Storage And Handling:

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| 4.1 | Store above 5°C in a cool dry place with containers tightly fastened. |
| 4.2 | Do not allow uncured material to freeze. |
| 4.3 | Although LiquiTank Spray Grade is non-combustible we recommend you avoid temperatures above 200°C |
| 4.4 | Not subject to the controlled products or the transportation of dangerous goods regulations. |
| 4.5 | Keep out of reach of children. |

5. Spillage & Clean Up:

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| 5.1 | Large spills: Pump into plastic containers and rework/dispose as per local legislation.
Small spills: Use non-combustible absorbent and shovel into a suitable container for disposal.
Alternatively: Should spillage occur pour an equivalent amount of salt solution (ratio 12:1) onto |
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	the spillage and scrape up the combined set products.
5.2	For general clean-ups, white spirits are recommended. For personal clean-up of your hands/face, baby oil is recommended.

6. Limitations:

6.1	Drying and curing time will vary depending on temperature and humidity.
6.2	LiquiTank Spray Grade is mildly alkaline. When applying observe normal health and safety precautions.
6.3	Wear eye protection and other suitable personal protective equipment (PPE).
6.4	For further information refer to the COSHH and MSDS data sheets.

LiquiTank Spray Grade is manufactured exclusively for LRS LTD

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 Web: www.lrs-systems.co.uk Email: info@lrs-systems.co.uk
 Tel: 01948 841877 Fax: 01948 841854

LiquiTank Spray Grade is a state of the art modified elastomeric asphalt emulsion developed to simplify the waterproofing process and overcome the problems of materials containing toxic solvents and VOC. It has been specifically formulated as a spray applied fully protective waterproofing membrane. The cold applied, dual component system is applied using a specialist airless spray system. LiquiTank Spray Grade provides a quick setting membrane that offers excellent strength, elasticity and adhesion.

LiquiTank Spray Grade is a waterproof adhesive and so fully bonds to most substrates. The specified thickness sets almost immediately and offers a seamless, flexible and watertight membrane with low environmental impact.

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SOLVENT FREE NON TOXIC ODOURLESS NOT FLAMMABLE

Property	Typical results
Specific gravity (liquid) kg/m ³ :	Approx. 1.0
Odour:	None
VOC:	Contains no solvents
Colour:	Brown
% solids: (wt)	57 - 62

Viscosity, SSF @ 25°C (seconds)	15 - 20
pH:	10 - 12

1. Physical Properties – Liquid Form:

2. Performance – Cured Membrane Form:

Property	Typical Form
Chemical resistance: Chemical resistance ASTM G20 10% hydrochloric acid 10% sodium hydroxide saturated lime water:	Resistant to atmospheric, chemical aerosols, or acid rain. Limited resistance to gasoline, diesel fuel and other petroleum products (see chemical resistance chart) Passed (no loss of integrity)
Biological resistance ASTM E154, ASTM D412:	Passed
Impact resistance CSB37-GP-56 @ 23°C (j):	>19
Impact resistance CSB37-GP-56 @ -10°C (j):	>27
Water tightness after impact:	Passed (no leakage)
Specific gravity g/cm ³ :	Approx. 1.0
Tensile strength ASTM D412 (p.s.i):	>22
Adhesion to concrete strength ASTM C907: (amended to tensile adhesion (p.s.i))	>50
Low temperature mandrel @ -25°C	Passed
Crack bridging ASTM C836, un-aged -20°C	Passed (70 cycles)
Crack bridging ASTM C836, aged E20°C	Passed (10 cycles)
Puncture resistance CGSB 37-GP-56: (24 hours @ 29N @ -5°C)	Passed (no perforations)
Water vapour transmission ASTM E96, ng/Pa.sm ²	>6.6
Water absorption CGSB37 – GP-56M, %inc	>2
Accelerated weathering ASTM G155: D412 tensile strength:	Passed
Hardness (durometer type 00)	78-80
Canadian Construction Materials Centre	Approved (13175)
Colour	Black