PRODUCT SAFETY DATA SHEET

This generic SDS is provided by MGS Ltd to give information to assist with material handling of the products listed which are conforming to Regulation (EC) 1272/2018

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SECTION 1: Identification of the substance / mixture and of the company / undertaking	
1.1 Product Identifier	
Product Name:	Cold Lay Macadam
Synonyms / Trade Name:	Macadam
1.2 Relevant identified uses of the substance or mixture and uses advised against	
Recommended Use:	Asphalt is used industrially, by professionals, and by consumers in building, surfacing and construction work.
Restriction on Use:	Any uses not described above are advised against.
Physical Properties:	Granular solid, variable particle size. Typically, black/dark brown. Strong characteristic odour.
1.3 Details of the supplier of the Safety Data Sheet	
Name:	MGS Ltd
Address:	Rougham Industrial Estate, Bury St Edmunds, IP30 9ND
Country:	UK
Phone N°:	+44 1359 271167
Email:	info@mgs.co.uk
Website:	www.mgs.co.uk
1.4 Emergency telephone number	
Emergency telephone at the company:	+44 7738 197 517
Available outside office hours:	Yes
Language of the phone service:	English
E-mail of competent person responsible:	darren.portway@mgs.co.uk
National contact:	Darren Portway

SECTION 2: Hazard Identification

2.1 Classification of the substance or mixture

NOT classified as hazardous according to Regulation (EC) 1272/2018.
This product contains flux oil in quantities of up to 1.8% of the finished product. In liquid state flux oil carries a risk of aspiration (GHS08 Health Hazard H304: May be fatal if swallowed and enters airways). Once fully mixed with bitumen and aggregate, the flux oil becomes part of the solid mass and is extremely unlikely to enter the airways.
This product may contain low levels of respirable crystalline silica within the aggregates present in the material, but the bituminous binder will prevent these from being an inhalation hazard. If the material is used whilst it is still hot the main hazard will be due to the elevated temperature of the product.

2.2 Label elements

No statutory safety labels are required for this material in accordance with the provisions of EC/1907/2006 or EC/1272/2008.

2.3 Other hazards

Material at elevated temperatures may cause thermal burns to exposed or unprotected body tissues. Take adequate measures to reduce risks of thermal burns when handling or using this material.
Fumes from Asphalt are unlikely to be hazardous when laid in open air situations, but there may be a risk to health by continuous inhalation of high vapour concentrations which might arise in poorly ventilated, confined or semi-confined spaces.
The quartz content of the product will vary depending on the type of mineral deposit from which the aggregate originated. Long-term exposure to respirable dust can lead to respiratory system damage and disease. Respirable crystalline silica has been associated with the lung disease silicosis. Exposure to respirable silica is only likely to occur if cutting, drilling or planning hardened asphalt.

SECTION 3: Composition / Information on Ingredients

3.1 Substances

As below.

3.2 Mixtures

Asphalts are mixtures of aggregates and bitumen. Bitumen is a hydrocarbon derived from the distillation of petroleum crude oil but may be synthetic or modified by the use of polymers and other chemicals. Bitumen content is typically <10%. Other materials such as cellulose fibres, latex and other additives may be added to the product. Aggregates used in asphalt may be naturally occurring (e.g. limestone, gritstone, granite, sand etc), artificial (e.g. slag aggregates) or recycled (e.g. road planings, inert construction and demolition waste, glass etc).

CAS No	EC No	Index No	Classification	Concentration
Natural or artificial aggregate				
N/A	N/A		Not classified as hazardous according to Regulation (EC) No: 1272/2008	>85%
Asphalt (Bitumen Binder)				
8052-42-4	232-490-9		Not classified as hazardous according to Regulation (EC) No: 1272/2008	<10%
Hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics				
	934-956-3		Asp. Tox. 1 H304	07.-1.8%
Quartz (respirable fraction)				
14808-60-7	238-878-4		STOT RE 2 H373i	Variable less than 5%

SECTION 4: First Aid Measures

4.1 Description of first aid measures

Skin contact:	Burns caused by contact with hot material should be cooled by immediately flushing with large amounts of cold water. Do not attempt to remove anything from the burn area unless required to allow breathing and do not attempt to peel set material from the skin. Seek medical attention. For contact not resulting in burns, remove contaminated clothing and wash skin with soap/cleanser and rinse with plenty of water. If irritation occurs and persists or there are signs of skin damage, obtain medical attention.
Eye contact:	If material is hot, apply the same measures as 'skin contact' above. If the material is cool, immediately and thoroughly irrigate with eye wash solution or clean water. If symptoms develop or persist, seek medical attention. Do not rub eyes, as the material is abrasive and may scratch the surface of the eye.
Ingestion:	Remove to fresh air. If person is conscious, rinse out mouth and seek further medical attention. Never give anything by mouth to an unconscious person.
Inhalation:	Immediately remove to fresh air. If breathing difficulties are experienced, seek medical attention. If breathing has stopped, commence artificial resuscitation and seek medical attention immediately.
Aspiration:	Whilst extremely unlikely, if the product is believed to have entered the lungs (eg as a result of vomiting), take the person to hospital immediately for medical treatment.

4.2 Most important symptoms and effects, both acute and delayed

The product when properly handled is not likely to be dangerous to human health. Harmful effects are expected only in case of misuse. The main danger will be from thermal burns if the product is still hot.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5: Fire Fighting Measures

5.1 Extinguishing media

Use media such as alcohol/aqueous foam, dry chemical, or carbon dioxide or water fog. Do not use direct water jets. Cool affected containers with flooding quantities of water if safe to do so.

5.2 Special hazards arising from the substance or mixture

Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, polycyclic aromatic hydrocarbons (PAH) and unidentified organic compounds will be evolved when this material undergoes combustion. Inclusion of water into molten material may allow pockets of superheated steam to form which may cause an explosion.

5.3 Advice for fire fighters

Do not breathe decomposition products and fumes. Use approved self-contained breathing apparatus. Wear fire retardant clothing. Do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus Use water spray to cool containers. Prevent runoff from fire control from entering waterways. Large fires should only be dealt with by trained personnel.

SECTION 6: Accidental Release Measures

6.1 Personal precautions, protective equipment, and emergency procedures

Use suitable personal protective equipment (refer to Section 8 for details). Avoid breathing fume and dust if present. Avoid contact with hot material, Ensure adequate ventilation. Remove sources of ignition from the vicinity of the spillage.

6.2 Environmental precautions

Prevent further spillage if safe to do so. Do not let product enter drains or watercourses and prevent from being deposited anywhere other than the intended placement site.

6.3 Methods and material for containment and cleaning up

Scrape up using mechanical methods. Bitumen may be removed from tools and machinery using proprietary bitumen remover, but ensure you refer to the products' safety datasheet before using. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

6.4 Reference to other sections

For disposal, see Section 13.

SECTION 7: Handling & Storage

7.1 Precautions for safe handling

Avoid skin contact. Avoid inhalation of fumes as far as possible. Do not eat, drink of smoke whilst handling. Fumes from hot material may cause irritation to eyes and respiratory tract. Do not heat the product and only use in open air. Keep away from sources of ignition. Refer to Section 8 for guidance on personal protection.

7.1.1 Information on General Occupational Hygiene:

Always wash hands before eating, drinking and smoking. Do not eat or drink in work areas. Remove contaminated clothing before entering canteens, vehicles, offices and other 'clean' areas. Clean overalls as necessary to prevent bitumen permeating through clothing to skin underneath.

7.2 Conditions for safe storage, including any incompatibilities

No special requirements. The material may be delivered in bulk or packed in bags or tubs. Store in a well-ventilated area and away from sources of heat and ignition.

7.3 Specific end use(s)

See section 1.2. and relevant Technical Data Sheet for further information.
No other data available.

SECTION 8: Exposure Controls / Personal Protection

8.1 Control parameters

As below.

8.2 Exposure controls

Component	CAS No	Reference Period	Exposure Limit	Basis
Asphalt (as fume)	8052-42-4	8hr TWA 15minSTEL	5mg/m3 10mg/m3	UK. EH40 WEL
Respirable crystalline silica	14808-60-7	8hr TWA	0.1mg/m3	UK. EH40 WEL
Nuisance dust	Total Inhalable Respirable	8hr TWA 8hr TWA	10mg/m3 4mg/m3	UK. EH40 WEL

W.E.L. = Workplace Exposure Limit T.W.A. = Time Weighted Average S.T.E.L = Short Term Exposure Limit

8.2.1 Appropriate Engineering Controls

Asphalt should only be laid in well-ventilated areas. Use mechanical ventilation/engineering controls if required. Use appropriate specialist equipment for bulk handling and laying material.

8.2.2 Personal Protective Equipment (PPE)

Eye / Face:	Use goggles or protective glasses tested to EN 166 to prevent material and dust entering the eyes if required.	
Skin / Hands:	**Skin Protection:** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with good practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and standards EN 374 and EN 388 derived from it. Recommended glove types include heavy duty, impermeable (and heat resistant when working with hot material) gloves. Consider using barrier cream.	
Body Protection:	Overalls and/or long-sleeved jackets and full-length trousers should be worn to protect skin from thermal burns and exposure to bitumen. Impervious clothing should be considered where necessary to prevent material reaching skin. Contaminated clothing should be removed and replaced with clean clothing regularly and before bitumen permeates through clothing to skin. Heat resistant safety boots should be worn to protect the feet if the product is hot. The type of protective equipment must be selected according to the specific workplace.	

Respiratory:	Use only in well-ventilated areas (open air). Use mechanical ventilation if required. If cutting, planing, drilling or carrying out surface treatment of hardened material and dust is generated, use a respirator with filter type P3 to Standard EN14387, EN149 or equivalent. If fume is present, use a respirator with filter type A and filter type P3 to Standard EN14387, EN149 or equivalent.	

8.2.3 Enviromental Exposure Controls:
Deferred set asphalt products covered by this Safety Data Sheet are classified as non-hazardous, inert waste when hardened. Hardened asphalt can be readily recycled with the appropriate environmental permits or licenses in place. The environmental regulator will be able to provide specific instructions relating to environmental controls required.

SECTION 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance:	Granular, solid, variable particle size. Typically, black/dark brown.
Odour:	Strong, characteristic.
Odour threshold:	No data available.
pH:	Not applicable.
Melting point / freezing point:	90-100°C
Initial boiling point and boiling range:	Not available.
Flash point:	>230°C
Evaporation rate:	Negligible.
Flammability:	Not available.
Upper/lower flammability and explosive limits:	Not available.
Vapour pressure:	Negligible.
Vapour density:	Not applicable.
Relative density:	>2
Solubility:	Immiscible in water.
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature:	>230°C
Decomposition temperature:	Not available.
Viscosity:	Not available.
Explosive properties:	None.
Oxidising properties:	None.

9.2 Other information

No data available.

SECTION 10: Stability and Reactivity

10.1 Reactivity

No data available.

10.2 Chemical stability

Stable at normal temperatures and under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available.

10.4 Conditions to avoid

Sources of ignition and temperatures above 200°C.

10.5 Incompatible materials

May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

10.6 Hazardous decomposition products

No hazardous decomposition products likely when stored and handled correctly.

Substances arising from thermal decomposition of asphalt will depend on the particular conditions, but may contain the following: Hydrogen Sulphide, Carbon Dioxide, Carbon Monoxide, Water, Particulate Matter, Sulphur Oxides, Polycyclic Aromatic Hydrocarbons, Unburnt Hydrocarbons, Nitrogen Oxides, Vanadium Pentoxide.

SECTION 11: Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - rat – >2mg/kg, LD50 Dermal - rabbit – >2mg/kg

Skin corrosion/irritation

Exposure to asphalt may cause skin dryness, cracking or blistering. Prolonged contact with material may cause skin tumours or other irreversible skin damage. Contact with hot material may cause thermal burns.

Serious eye damage/irritation

Whilst contact eyes is unlikely, contact with hot asphalt may cause burns. Fine particles resulting from cutting, planing, drilling or carrying out surface treatment of hardened asphalt may scratch the surface of the eye, causing irritation and possible damage. Exposure to fumes may cause eye irritation.

Respiratory or skin sensitisation

Unlikely to cause sensitisation.

Germ cell mutagenicity

Not tested.

Carcinogenicity

IARC: The aggregate used in asphalt may contain crystalline silica. IARC classify respirable crystalline silica as a Category 1 carcinogen. May contain trace amounts of many different complex polycyclic aromatic hydrocarbons which exhibit carcinogenic potential when present at higher concentrations.

Reproductive toxicity

Not tested.

STOT – single exposure

Not applicable.

STOT – repeated exposure

Repeated skin contact may cause damage to organs. Exposure to respirable crystalline silica may cause respiratory system damage and disease including silicosis, which can in turn lead to increased risk of developing cancer.

Aspiration hazard

Extremely unlikely.

11.2 Information on possible health effects

(a) Inhalation

Excessive inhalation of vapours, fumes, aerosols and mists may cause irritation of the respiratory tract. Inhalation of dust produced when drilling, cutting, planning or surface treating the hardened asphalt may cause respiratory system damage and disease.

(b) Ingestion

Ingestion is very unlikely but may be harmful if ingested in quantity.

(c) Skin

Prolonged skin contact may lead to skin drying and cracking, skin tumours and possible irreversible effects. Harmful compounds absorbed through the skin may cause irreversible effects, including cancer. Thermal burns may result from contact with hot asphalt.

(d) Eyes

Fine particles may scratch the surface of the eye, causing irritation and possible damage. Exposure to excessive vapours, fumes, aerosols and mists may cause irritation to the eyes.

11.3 Signs and symptoms of exposure

Thermal burns to the skin may result from contact with hot asphalt. Inhalation of high concentrations of vapours or fumes may cause irritation of the respiratory tract leading to coughing, sneezing and shortness of breath. Exposure to high concentrations of vapours or fumes may cause irritation of the eyes, leading to soreness. Inhalation of dust from drilling, cutting, planning or surface treating the hardened asphalt may cause irritation of the respiratory system leading to coughing, sneezing and shortness of breath, and also respiratory system damage such as Chronic Obstructive Pulmonary Disease and silicosis. Silicosis is associated with an increased risk of developing lung cancer. Repeated or prolonged skin contact may result in drying, scaling dermatitis, development of secondary skin infections, lumps, warts and other serious irreversible effects. The onset of effects of prolonged exposure may be delayed for many months or years after the actual exposure has ceased.

SECTION 12: Ecological Information

Environmental Assessment:

When used and disposed of as intended, no adverse environmental effects are foreseen.

12.1 Toxicity

No data available. May be harmful to aquatic organisms.

12.2 Persistence and degradability

No data available. Will persist in the environment.

12.3 Bio accumulative potential

Not data available.

12.4 Mobility in soil

Immobile. Will sink in water and form a layer on the surface of the ground. May contaminate soil.

12.5 Results of PBT and vPvB assessment

Not tested.

12.6 Other adverse effects

Not available.

SECTION 13: Disposal Considerations

13.1 Waste treatment methods

Hardened asphalt is classified as non-hazardous, inert waste. It can be readily recycled opportunities for doing so should be encouraged. Recycling or disposal must be carried out in accordance with the relevant waste regulations. Suggested EWC Codes: 17.03.02 - Bituminous mixtures not containing coal tar.

SECTION 14: Transportation Information

14.1 UN number

ADR/RID: - N/A IMDG: - N/A IATA: - N/A

14.2 UN proper shipping name

ADR/RID/IMDG/IATA: Not dangerous goods.

14.3 Transport hazard class(es)

Not applicable.

14.4 Packing group

Not applicable.

14.5 Environmental hazards

Not applicable.

14.6 Special precaution for user

Not applicable.

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.
Health & Safety at Work etc. Act 1974.
Control of Substances Hazardous to Health Regulations 2002 (as amended).
Classification, Labelling and Packaging of Substances and Mixtures Regulations 2008 (as amended).
EH40/2005 Workplace Exposure Limits (as amended).
Environmental Protection Act 1990.
Hazardous Waste Regulations 2005 (as amended).

15.2 Chemical safety assessment

No data available.

SECTION 16: Other Information

16.1 Indication of Changes

This is a revision of the format of the Safety Data Sheet to include all the subsections specified by the REACH Regulations as amended by Regulation 453/2010. It also includes amended company information and branding.

16.2 Recommended Uses and Applications

See Section 1.2. This product must only be used by professionals, with appropriate environmental licenses in place.

16.3 Abbreviations

CLP	Classification, labelling and packaging (Regulation (EC) No 1272/2008)
COSHH	Control of Substances Hazardous to Health Regulations 2002
EWC	European Waste Catalogue
HSE	Health and Safety Executive
IARC	International Agency for Research on Cancer
PBT	Persistent, Bio-accumulative and Toxic
PPE	Personal Protective Equipment
RE	Repeated Exposure
REACH	Registration, Evaluation and Authorisation of Chemicals
RPE	Respiratory Protective Equipment
STOT	Specific Target Organ Toxicity
TWA	Time Weighted Average
vPvB	Very Persistent, Very Bio-accumulative
WEL	Workplace Exposure Limit

16.4 References

HSE, 2005: EH40 – Workplace Exposure Limits (as amended).

16.5 Full test of H-Statements referred to under Sections 2 and 3

H304	May be fatal if swallowed and enters airways
H373i	May cause damage to organs (lungs) through prolonged or repeated exposure (inhalation). This statement is specifically in relation to inhalation of dust containing respirable crystalline silica when hardened asphalt is drilled, cut, planed or surface treated.
	Other H- and P- Statements recommended to be observed:
H317	May cause skin irritation
H335	May cause respiratory irritation
P261	Avoid breathing dust/fume/vapours
P271	Only use outdoors or in a well-ventilated area
P281	Use personal protective equipment (PPE) as required (see Section 8).

16.6 Training Advice

Wear and use of PPE, including RPE. Employers must ensure their employees understand and apply the requirements of this Safety Data Sheet and any risk assessments (including COSHH assessments) relating to the use of this product.

Disclaimer:

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 of completeness. It is the user's responsibility to satisfy themselves as to the suitability of such information for their own particular use.