



Modified Bitumens

Safety Data Sheet

according to Regulation (EU) 2015/830

Date of issue: 10/3/2002

Revision date: 5/30/2017

Version: 2.0

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

1.1. Product identifier

Chemical type : Substance
Trade name : Modified Bitumens
EC-No. : 265-196-4
CAS-No. : 64742-93-4
REACH registration No : 01-2119498270-36
Product code : MOL_1031_005_MOL_1031_006_MOL_1031_011_MOL_1031_012_MOL_1031_013_MOL_1031_014

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

1.2.1. Relevant identified uses

Main use category : Industrial use, Consumer use, Professional use
Industrial/Professional use spec :
Manufacture of substance
Distribution of substance
Use as an intermediate
Formulation & (re)packing of substances and mixtures
Uses in Coatings
Use in Oil and Gas field drilling and production operations
Road and construction applications
Rubber production and processing
Use as a fuel
Lubricants

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer: MOL Hungarian Oil and Gas Public Limited Company, Refining

Address: 2443 Százhalombatta, POB.1.

Telephone: +36-23-552-511,

Fax: +36-23-553-122

Distributor: MOL Hungarian Oil and Gas Public Limited Company

Address: 1117 Budapest, Október huszonharmadika utca 18.

Telephone, fax.: +36-1-209-0000

The competent person responsible for Safety Data Sheet: sds@mol.hu

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
United Kingdom	National Poisons Information Service (Belfast Centre) Royal Victoria Hospital	Grosvenor Road BT12 6BA Belfast	0344 892 0111	
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH Birmingham	0344 892 0111	
United Kingdom	National Poisons Information Service (Cardiff Centre) Gwenwyn Ward, Llandough Hospital	Penarth CF64 2XX Cardiff	0344 892 0111	
United Kingdom	National Poisons Information Service Edinburgh Royal Infirmary of Edinburgh	Little France Crescent EH16 4SA Edinburgh	0344 892 0111	
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER London	0870 243 2241	
United Kingdom	National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre, Wolfson Unit	Claremont Place Newcastle-upon-Tyne NE1 4LP Newcastle	0344 892 0111	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

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2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type	: UVCB
Name	: Modified Bitumens
CAS-No.	: 64742-93-4
EC-No.	: 265-196-4

Name	Product identifier	%
Asphalt, oxidized (Main constituent)	(CAS-No.) 64742-93-4 (EC-No.) 265-196-4 (REACH-no) 01-2119498270-36-0034	< 98

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Hydrogen sulphide (H ₂ S) can accumulate in the headspace of product storage tanks and reach potentially hazardous concentrations. Contact with hot product may cause severe thermal burns.
First-aid measures after inhalation	: Inhalation is unlikely because of the low vapour pressure of the substance at ambient temperature. Inhalation of fumes or oil mists produced at high temperatures may cause irritation of the respiratory tract. If casualty is unconscious and Not breathing, Ensure that there is no obstruction to breathing and give artificial respiration by trained personnel. If necessary, give external cardiac massage and obtain medical advice. Breathing Place in the recovery position. Obtain medical assistance if breathing remains difficult. Administer oxygen if necessary. If there is any suspicion of inhalation of H ₂ S (hydrogen sulphide): Rescuers must wear breathing apparatus, belt and safety rope, and follow rescue procedures.
First-aid measures after skin contact	: No attempt must be made to remove the bitumen adherent to the skin at the worksite. In the case of a circumferential burn with adhesion of the bitumen, the adhering material should be split to prevent a tourniquet effect as it cools. Send patient for specialist care. For minor thermal burns, cool the burn. Hold the burned area under cold running water for at least five minutes, or until the pain subsides. Body hypothermia must be avoided. Do not put ice on the burn. Remove non-sticking garments carefully. DO NOT attempt to remove portions of clothing glued to burnt skin but cut round them. Seek medical attention in all cases of serious burns.
First-aid measures after ingestion	: Do not induce vomiting. Ask for medical advice. Do not give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation	: irritation of the respiratory tract due to excess fume, mists or vapour exposure.
Symptoms/effects after skin contact	: Contact with hot/molten product will cause severe burns.
Symptoms/effects after eye contact	: Contact with hot/molten product will cause severe burns. minimal redness and irritation.
Symptoms/effects after ingestion	: few or no symptoms expected. If any, nausea and diarrhoea might occur.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Never use gasoline, kerosene or other solvents for washing of contaminated skin.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Foam (trained personnel only). Water fog (trained personnel only). Carbon dioxide. Other inert gases (subject to regulations). Sand or earth. Dry powder.
Unsuitable extinguishing media	: Do not use direct water jets on the burning product. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Combustible.
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Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Carbon dioxide. Carbon monoxide.
Hungarian fire hazard	

5.3. Advice for firefighters

Firefighting instructions	: Evacuate area. Contain the extinguishing fluids by bunding.
Protection during firefighting	: In case of a large fire or in confined or poorly ventilated spaces, wear full fire resistant protective clothing and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Other information	: Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates, gases, including carbon monoxide. H ₂ S, SO _x (sulfur oxides) or sulfuric acid. unidentified organic and inorganic compounds.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Evacuate area.
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6.1.1. For non-emergency personnel

Protective equipment	: Small spillages: normal antistatic working clothes are usually adequate. Large spillages: full body suit of chemically resistant and thermal resistant material should be used. If contact with hot product is possible or anticipated, gloves should be heat-resistant and thermally insulated. Work helmet with neck cloth. Face shield, if contact of hot product or vapours with eyes is possible or anticipated. Respiratory protection: a half or full-face respirator with filter(s) for organic vapours/H ₂ S, or a Self-contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.
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Emergency procedures	: Keep non-involved personnel away from the area of spillage. Alert emergency personnel. In case of large spillages, alert occupants in downwind areas. Stay upwind. Avoid direct contact with released material. Stop or contain leak at the source, if safe to do so. Except in case of small spillages. The feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency. Eliminate all ignition sources if safe to do so (e.g. electricity, sparks, fires, flares. If required, notify relevant authorities according to all applicable regulations. If necessary dike the product with dry earth, sand or similar non-combustible materials. In those cases when the presence of dangerous amounts of H ₂ S in the leaked/spilled product is suspected or proved, additional or special actions may be warranted, including access restrictions, use of special protection equipment, procedures and personnel training. When inside buildings or confined spaces, ensure adequate ventilation. Let hot product cool down naturally. If necessary, cautiously use water fog to help the cooling. Do not play direct jets of foam or water on the spilled molten product, as this may cause splattering.
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6.1.2. For emergency responders

Emergency procedures	: Leaks and spillages will consist of molten hot material with risk of severe burns. recommended measures are based on the most likely spillage scenarios for this material.
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6.2. Environmental precautions

solidified product may clog drains and sewers. prevent product from entering sewers, rivers or other bodies of water. If possible, contain the product. In case of spillage in the water. the product will cool down rapidly and become solid.

6.3. Methods and material for containment and cleaning up

For containment	: Stop leak without risks if possible. Let hot product cool down naturally. Collect solidified product with suitable means . Transfer collected product and other contaminated materials to suitable containers for recovery or safe disposal. In case of spillage in the water. the product will cool down rapidly and become solid. Consult an expert on waste disposal or treatment. Transfer recovered product and other materials to suitable tanks or containers and store/dispose according to relevant regulations.
Methods for cleaning up	: Mechanically recover the product.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure that all relevant regulations regarding handling and storage facilities of flammable products are followed. A specific assessment of inhalation risks from the presence of H₂S in tank headspaces, confined spaces, product residue, tank waste and waste water, and unintentional releases must be made to help determine controls appropriate to local circumstances. Do not breathe fumes from hot product. Avoid contact of hot bitumen products with water. Use adequate personal protective equipment as required. Keep away from food and beverages. Do not eat, drink or smoke when using this product. Change contaminated clothes at the end of working shift.
- Hygiene measures : Remove contaminated clothes. Contaminated work clothing should not be allowed out of the workplace. Separate working clothes from town clothes. Launder separately.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Before entering storage tanks and commencing any operation in a confined area, check the atmosphere for oxygen content, hydrogen sulphide (H₂S) and flammability. Empty containers may contain flammable product residues. Do not weld, solder, drill, cut or incinerate empty containers, unless they have been properly cleaned. Hot product must never be filled into containers without first checking that the container is completely dry.
- Storage conditions : Keep only in original container. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Incompatible products : Oxidizing agent.
- Storage area : Storage installations should be designed with adequate bunds in case of leaks or spills. Store separately from oxidising agents.

7.3. Specific end use(s)

Site documentation to support safe handling arrangements including the selection of engineering, administrative and personal protective equipment controls in accordance with risk-based management systems is available at each manufacturing site.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

- Additional information : There is no specified limit for the product (or for the ingredients) according to the 25/2000. (IX. 30.) EüM-SzCsM Hungarian regulation.

8.2. Exposure controls

- Appropriate engineering controls : Hydrogen sulphide may accumulate in the head space of storage tanks containing bitumen and can reach potentially hazardous concentrations. Ensure that there is a suitable ventilation system. Where hot product is handled in confined spaces, effective local ventilation must be provided. Monitoring procedures should be chosen according to the indications set by national authorities or labour contracts. In absence of such indications, direct exposure to bitumen fumes can be assessed with a number of methods. Dermal exposure can be assessed by the dermal patch method. Do not enter empty storage tanks until measurements of available oxygen have been carried out. Storage and handling temperatures should be kept as low as feasible to minimize fume production.
- Personal protective equipment : Use of personal protective equipment must be consistent with good occupational hygiene practices. Heatproof clothing.

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Materials for protective clothing	: Protective clothing. Clothing to protect against heat and flame (EN 11612)
Hand protection	: Heat resistant gloves with long cuffs, or gauntlets. Gloves must be periodically inspected and changed in case of wear, perforations or contaminations.
Eye protection	: Hot/molten product. If splashing is likely, full head and face protection (protective shield and/or safety goggles) should be used.
Skin and body protection	: Wear protective clothing for operations with hot material: heat resistant coveralls (with trousers legs over boots and sleeves over cuffs of gloves), heat resistant heavy duty antiskid boots (e. g. leather). For loading/unloading operations: wear safety helmet, if necessary integrated full face visor
Respiratory protection	: Heated bitumen will give off fumes. Although these are unlikely to present a significant health hazard. to avoid respiratory tract irritation inhalation exposure should be kept to a minimum. by observing good work practice and ensuring good ventilation around work areas. Asphalt [bitumen] fume. Hydrogen sulphide. For this material there are occupational exposure limits set by: National Authorities of EU-member countries. National Authorities of other countries (non EU members). Competent Professional Bodies (i.e. American Conference of Industrial Hygienists, ACGIH). These values are recommended but not legally binding by themselves, unless adopted in a national legislation or labor contracts. If exposure levels cannot be determined or estimated with adequate confidence, or an oxygen deficiency is possible, only SCBA's should be used



Thermal hazard protection	: Material handled at elevated temperature may cause thermal burns by contact with molten product.
Environmental exposure controls	: Store finished products in closed containers (e.g. bulk tanks, drums, cans).

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	: Flexible solid material, molten solid.
Physical state	: Liquid
Boiling point	: > 400 °C
Flash point	: >= 230 °C Cleveland
Density	: > 1 g/cm ³

9.2. Other information

Additional information	: The above data are informative, accurate physical-chemical data of the product are specified on the product certificate.
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SECTION 10: Stability and reactivity

10.1. Reactivity

This substance is stable under all ordinary circumstances at ambient temperatures, and if released into the environment.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5. Incompatible materials

Oxidizing agent.

10.6. Hazardous decomposition products

No decomposition if stored normally.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified
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Asphalt, oxidized (64742-93-4)

LD50 oral rat	> 5000 mg/kg bodyweight literature data
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Asphalt, oxidized (64742-93-4)	
LD50 dermal rabbit	> 2000 mg/kg bodyweight literature data
LC50 inhalation rat (mg/l)	> 94.4 mg/m ³ literature data
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation:	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Asphalt, oxidized (64742-93-4)	
LC50 fish 1	> 1000 mg/l literature data
EC50 Daphnia 1	> 1000 mg/l literature data
EC50 other aquatic organisms 1	> 1000 mg/l literature data
TLM other aquatic organisms 1	> 1000 mg/l literature data

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Asphalt, oxidized (64742-93-4)	
Log Kow	>= 4 literature data

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Modified Bitumens (64742-93-4)	
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII	
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) : 2012. évi CLXXXV. törvény a hulladékról. DIRECTIVE 2008/98/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 19 November 2008 on waste and repealing certain Directives.

Waste treatment methods : Contain and dispose of waste according to local regulations. External recovery and recycling of waste should comply with applicable local and/or national regulations. Where possible (e.g. in the absence of relevant contamination), recycling of used substance is feasible and recommended. If recycling is not possible, eliminate in accordance with local valid waste disposal regulations.

Waste disposal recommendations : Dispose of waste and used sacks/containers according to local regulations.

Ecology - waste materials : Hazardous waste. Avoid any discharge of the product into waste water. Recycle by distillation. Recycle/reuse. Disposal in high-temperature incinerator (> 1200 °C).

EWC (EURAL) code : 05 01 17 - bitumen



SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

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ADR	RID	ADN	IMDG	IATA
14.1. UN number				
3257	3257	3257	3257	Forbidden
14.2. UN proper shipping name				
ELEVATED TEMPERATURE LIQUID, N.O.S.	ELEVATED TEMPERATURE LIQUID, N.O.S.	ELEVATED TEMPERATURE LIQUID, N.O.S.	ELEVATED TEMPERATURE LIQUID, N.O.S.	Forbidden
14.3. Transport hazard class(es)				
9 	9 	9	9	Forbidden
14.4. Packing group				
III	III	III	III	Forbidden
14.5. Environmental hazards				
Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Forbidden
14.6. Special precautions for user				
99	99		EmS-No. (Fire) F-A EmS-No. (Spillage) S-P	
M9	M9	M9		
No supplementary information available				

14.7. Transport in bulk according to Annex II of Marpol 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

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006. 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, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

No REACH Annex XVII restrictions

Modified Bitumens is not on the REACH Candidate List

Modified Bitumens is not on the REACH Annex XIV List

15.1.2. National regulations

15.2. Chemical safety assessment

A chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes:

1.-16.	All Sections	updated	All Sections have been updated
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Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
IARC	International Agency for Research on Cancer

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IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
TLM	Median Tolerance Limit
vPvB	Very Persistent and Very Bioaccumulative

Data sources : 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, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. <http://echa.europa.eu/>. CONCAWE registration dossier. Data arise from reference works and literature. Data relies on practical experience.

Training advice : Normal use of this product shall imply use in accordance with the instructions on the packaging.

Classification for mixtures and used evaluation method according to regulation (EC) 1272/2008 (CLP)

SDS EU (REACH Annex II) MOL

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product