

SAFETY DATA SHEET



Revision: 27/03/2023 Version: 2.0

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 2020/878

V 40-60

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

1.1 Product identifier	
Product name	V 40-60
Product description	Bitumen
Trade Name	V 40-60
Product code	BIT 40/60
CAS No.	8052-42-4
EC No.	232-490-9
REACH Registration No.	01-2119480172-44-xxxx
1.2 Relevant identified uses of the substance or mixture and uses advised against	
Identified Use(s)	Bitumen for road construction.
Uses advised against	Anything other than the above.
1.3 Details of the supplier of the safety data sheet	
Company Identification	Vitol SA Place des Bergues 3 1201 Geneva Switzerland
Telephone	+31 10 498 7200
Fax	+31 10 452 9545
E-mail (competent person)	xreach@vitol.com
1.4 Emergency Telephone Number	
Emergency Phone No.	+44 (0) 1235 239 670, 24/7
Language(s) spoken:	All official European languages.

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture	
2.1.1 Regulation (EC) No. 1272/2008 (CLP)	Not classified as hazardous for supply/use.
2.2 Label elements	According to Regulation (EC) No. 1272/2008 (CLP)
Product description	V 40-60
Hazard Pictogram(s)	None assigned
Signal Word(s)	None assigned
Hazard Statement(s)	None assigned
Precautionary Statement(s)	None assigned
2.3 Other hazards	Product may release Hydrogen Sulphide: A specific assessment of inhalation risks from the presence of hydrogen sulphide in tank headspaces, confined spaces, product residue, tank waste and waste water, and unintentional releases should be made to help determine controls appropriate to local circumstances. Solid: Handling of this material may generate a dust which can cause mechanical irritation of the eyes, skin nose and throat. Contact with hot liquid causes skinburns.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

SUBSTANCE	CAS No.	EC No.	%W/W
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Asphalt	8052-42-4	232-490-9	100
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SECTION 4: FIRST AID MEASURES



4.1 Description of first aid measures

Self-protection of the first aider

If it is suspected that fumes are still present, the responder should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Inhalation

If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If irritation develops and persists, get medical attention. Remove clothing and wash thoroughly before use. Remove clothing and wash thoroughly before use. If skin irritation or rash occurs: Get medical advice/attention.

Skin contact

Eye contact

If substance has got into the eyes, immediately wash out with plenty of water for at least 15 minutes. If irritation develops and persists, get medical attention.

Ingestion

Do NOT induce vomiting. Wash out mouth with water and give 200-300 ml (half a pint) of water to drink. If symptoms develop, obtain medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Solid: Handling of this material may generate a dust which can cause mechanical irritation of the eyes, skin nose and throat.

4.3 Indication of any immediate medical attention and special treatment needed

Unlikely to be required but if necessary treat symptomatically.

Hydrogen sulphide

Inhalation: Remove to fresh air immediately. Apply artificial respiration if breathing has ceased or shows signs of failing. Obtain immediate medical attention.

Hot/molten product

Skin contact: In the event of burns from the molten liquid, do not attempt to remove adhering material. Cool affected area quickly with water. Do not put ice on the burn. 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.

Eye contact: If hot product is splashed into the eye, it should be cooled immediately to dissipate heat, under cold running water. Obtain prompt consultation, preferably from an ophthalmologist.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Extinguish with sand or dry chemical. Foam, Carbon dioxide, Water fog or dry powder.

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

Decomposes in a fire giving off toxic fumes: A mixture of solid and liquid particulates and gases including unidentified organic and inorganic compounds. Carbon monoxide, Carbon dioxide, Hydrogen sulphide, Sulphur oxides, Sulphuric acid.

5.3 Advice for firefighters

Fight fire with normal precautions from a reasonable distance. Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Keep containers cool by spraying with water if exposed to fire. Avoid release to the environment. Dike fire control water for later disposal.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Stop leak if safe to do so. Ensure suitable personal protection during removal of spillages. Avoid all contact. Keep upwind. Eliminate sources of ignition. Ensure suitable personal protection during removal of spillages. Product may release Hydrogen Sulphide: A specific assessment of inhalation risks from the presence of hydrogen sulphide in tank headspaces, confined spaces, product residue, tank

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Large spillages:	waste and waste water, and unintentional releases should be made to help determine controls appropriate to local circumstances.
Hot/molten product:	Take care that activity is executed only by specialists or authorised personnel. Personal protection equipment: full body dermal protection.
6.2 Environmental precautions	Risk of burns from molten product. Let hot material cool naturally. If necessary, cautiously use water fog to help the cooling. Do not direct jets of foam or water on the spilled molten product, as this may cause splattering.
6.3 Methods and material for containment and cleaning up	Avoid release to the environment. Do not allow to enter drains, sewers or watercourses. Spillages or uncontrolled discharges into watercourses must be alerted to the Environment Agency or other appropriate regulatory body.
Hot/molten product	Sweep up and shovel into waste drums or plastic bags. Transfer to a lidded container for disposal or recovery. Ventilate the area and wash spill site after material pick-up is complete.
6.4 Reference to other sections	Allow product to cool/solidify and pick up as a solid. See Section: 8, 13

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling	Use only outdoors or in a well-ventilated area. Avoid all contact. Do not ingest. Use personal protective equipment as required. See Section: 8. Keep good industrial hygiene. Wash hands thoroughly after handling. Contaminated clothing should be thoroughly cleaned.
H2S Warning	Product may release Hydrogen Sulphide: A specific assessment of inhalation risks from the presence of hydrogen sulphide in tank headspaces, confined spaces, product residue, tank waste and waste water, and unintentional releases should be made to help determine controls appropriate to local circumstances. These controls may include: Segregation of areas, Access only to authorised persons, Permit to work systems, Confined space working procedures, Area H2S alarms, Personal H2S alarms, Personal escape sets, H2S awareness training.
7.2 Conditions for safe storage, including any incompatibilities	Ground/bond container and receiving equipment. Bund storage facilities to prevent soil and water pollution in the event of spillage. Keep only in the original container. Keep containers properly sealed when not in use. Protect from sunlight. Containers of this material may be hazardous when empty since they retain product residue. Deposits (carbonaceous materials and iron sulphides) can develop on the internal walls and roofs of tanks in case of long term storage. These deposits may be pyrophoric and self-ignite in contact with the air. See Also Section: 7.1: H2S Warning
Storage temperature	Keep cool. Protect from sunlight.
Storage measures	Keep only in the original container.
Incompatible materials	Keep away from oxidising agents.
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/m ³)	STEL (ppm)	STEL (mg/m ³)	Note
Asphalt, petroleum fumes	8052-42-4	-	5	-	10	-

Source: WEL: Workplace Exposure Limit (UK HSE EH40) Ireland

SUBSTANCE	CAS No.	Occupational Exposure Limit Value (8-hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		Notes
		ppm	mg/m ³	ppm	mg/m ³	
Asphalt (Bitumen), petroleum fumes, (inhalable fraction)	8052-42-4	-	0.5	-	-	-

Source: 2021 Code of Practice for Safety, Health and Welfare at Work (Chemical Agents) Regulation (2001 – 2021) and the Safety, Health and

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Welfare at Work (Carcinogens) Regulations (2001 – 2019); Health and Safety Authority

8.1.2	Biological limit value	Not established
8.1.3	PNECs and DNELs	Not established
8.2	Exposure controls	
8.2.1	Appropriate engineering controls	Ensure adequate ventilation to remove vapours, fumes, dust etc. Guarantee that the eye flushing systems and safety showers are located close to the working place.
8.2.2	Individual protection measures, such as personal protective equipment	Keep good industrial hygiene. Wash contaminated clothing before reuse.

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.

Eye/ face protection



Wear eye protection with side protection (EN166).

Skin protection



Hand protection: Use gloves with insulation for thermal protection, when needed. EN374 – 407. Gloves should be changed regularly to avoid permeation problems. Breakthrough time of the glove material: refer to the information provided by the gloves' producer.

Body protection: Apron or other light protective clothing, boots and plastic or rubber gloves. Hot/molten product: Heat resistant coveralls (with trousers legs over boots and sleeves over cuffs of gloves), heat resistant heavy duty antiskid boots. EN943 – 1034 – 14605.

Head: For loading/unloading operations; Wear safety helmet with integrated full face visor and neck protection. EN 937

Respiratory protection



When the product is heated / In case of inadequate ventilation wear respiratory protection. Filter type B / Self-contained breathing apparatus (DIN EN 137)

Thermal hazards

Not applicable

8.2.3	Environmental exposure controls	Avoid release to the environment.
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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	Ambient: Solid Hot/molten product: Viscous liquid
Colour	Black / Brown
Odour	Not established
Melting point/freezing point	Softening Point (°C): 30 – 128 (EN 1427)
Boiling point or initial boiling point and boiling range	> 320 °C
Flammability	Not flammable
Lower and upper explosion limit	Not established
Flash point	> 230 °C (COC) (EN ISO 2592)
Auto-ignition temperature	> 400 °C
Decomposition temperature	Not established

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pH	Not applicable
Kinematic viscosity	≥ 325 mm ² /s at 135°C (EN 12595)
Solubility	Insoluble in water. Toluene: 99% (EN 12592)
Partition coefficient: n-octanol/water (log value)	Not established
Vapour pressure	< 0.1 kPa at 20°C
Density and/or relative density	0.925 - 1.07 at 15°C
Relative vapour density	Not established
Particle characteristics	Not established

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	Hazardous polymerisation will not occur.
10.4 Conditions to avoid	Keep away from heat, sources of ignition and direct sunlight.
10.5 Incompatible materials	Keep away from oxidising agents. Strong acids, Alkalis, Nitrates. Avoid friction, sparks, or other means of ignition.
10.6 Hazardous decomposition products	Product may release Hydrogen Sulphide. Decomposes in a fire giving off toxic fumes: Carbon monoxide, Carbon dioxide, Hydrocarbons. A mixture of solid and liquid particulates and gases including unidentified organic and inorganic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008	
Acute toxicity - Ingestion	Based upon the available data, the classification criteria are not met. LD50 (oral) mg/kg: > 5000 mg/kg bw/day (OECD 401) (Unnamed publication, 1982)
Acute toxicity - Inhalation	Based upon the available data, the classification criteria are not met. LC50 (inhalation) > 94.4 mg/m ³ (rat) (OECD 403) (Unnamed publication, 2000)
Acute toxicity - Skin contact	Based upon the available data, the classification criteria are not met. LD50 (dermal) mg/kg: > 2000 mg/kg bw/day (OECD 402) (Unnamed publication, 1982)
Skin corrosion/irritation	Based upon the available data, the classification criteria are not met. Non-irritant (rabbit) (OECD 404) (Unnamed publication, 1982)
Serious eye damage/irritation	Based upon the available data, the classification criteria are not met. Non-irritant (rabbit) (OECD 405) (Unnamed publication, 1982)
Respiratory or skin sensitisation	Based upon the available data, the classification criteria are not met. Sensitisation (guinea pig) – Negative (OECD 406) (Unnamed publication, 1984)
Germ cell mutagenicity	Based upon the available data, the classification criteria are not met. There is no evidence of mutagenic potential. (ASTM Standard Method E 1687-04) (Kriech et al., 2007)
Carcinogenicity	Based upon the available data, the classification criteria are not met. No evidence of carcinogenicity. (OECD 453) (Unnamed publication, 2011)
Reproductive toxicity	Based upon the available data, the classification criteria are not met. No evidence of reproductive effects. (US EPA OPPTS 870.3800 and OECD 416) (Unnamed publication, 2011)
STOT - Single Exposure	Based upon the available data, the classification criteria are not met.
STOT - Repeated Exposure	Based upon the available data, the classification criteria are not met.
Aspiration hazard	Based upon the available data, the classification criteria are not met.
11.2 Information on other hazards	
11.2.1 Endocrine disrupting properties	This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.
11.2.2 Other information	None known

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SECTION 12: ECOLOGICAL INFORMATION

12.1	Toxicity	Not classified. Non-toxic to aquatic life. Estimated LC50 (fish) mg/l: > 1000
12.2	Persistence and degradability	The product is poorly biodegradable. (CONCAWE 2013)
12.3	Bioaccumulative potential	No data available
12.4	Mobility in soil	The product is predicted to have low mobility in soil. Insoluble in water.
12.5	Results of PBT and vPvB assessment	Not classified as PBT or vPvB. None of the substances in this product fulfil the criteria for being regarded as a PBT or vPvB substance. (CONCAWE 2013)
12.6	Endocrine disrupting properties	This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.
12.7	Other adverse effects	None known

SECTION 13: DISPOSAL CONSIDERATIONS

13.1	Waste treatment methods	Disposal should be in accordance with local, state or national legislation. Containers of this material may be hazardous when empty since they retain product residue. Containers must not be punctured or destroyed by burning, even when empty. Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.
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SECTION 14: TRANSPORT INFORMATION

	ADR/RID	IMDG/ADN	
14.1	UN number or ID number	3257	3257
14.2	UN proper shipping name	ELEVATED TEMPERATURE LIQUID, N.O.S (Bitumen)	ELEVATED TEMPERATURE LIQUID, N.O.S (Bitumen)
14.3	Transport hazard class(es)	9	9
14.4	Packing group	III	III
14.5	Environmental hazards	Not classified	Not classified as a Marine Pollutant.
14.6	Special precautions for user	See Section: 2	
14.7	Maritime transport in bulk according to IMO instruments	No information available.	No information available.
14.8	Additional information	ADR HIN: 99 Tunnel restriction code: 3 (D) Limited Quantity: 0	EmS: F-A, S-P Limited Quantity: 0

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	None assigned
15.1.2	National regulations Germany	Water hazard class: nwg
15.2	Chemical Safety Assessment	A chemical safety assessment is not required under REACH.

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: New SDS Regulation 2020/878 format, all sections have been updated to include new information. Please review SDS with care.

References:

Existing Safety Data Sheet (SDS)
Existing ECHA registration for Asphalt (CAS No. 8052-42-4)
CONCAWE 2013 Chemical Safety Report

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Literature References:

1. Kriech, A. J., Osborn, L. V., Wissel, H. L., Redman, A. P., Smith, L. A., & Dobbs, T. E. (2007). Generation of Bitumen Fumes Using Two Fume Generation Protocols and Comparison to Worker Industrial Hygiene Exposures. *Journal of Occupational and Environmental Hygiene*, 4(sup1), 6–19. <https://doi.org/10.1080/15459620701358102>

EU Classification: This Safety Data Sheet was prepared in accordance with EC Regulation (EC) 1907/2006 (REACH), 1272/2008 (CLP) & 2020/878

Legend

ADR	ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN	ADN: European Agreement on the International Transport of Dangerous Goods by Inland Waterways
CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DNEL	Derived no effect level
EC	European Community
EU	European Union
HSE	Health and Safety Executive
IATA	IATA: International Air Transport Association
ICAO	ICAO: International Civil Aviation Organization
IMDG	IMDG: International Maritime Dangerous Goods
LC50	Lethal Concentration at which 50% of the population is killed
LD50	Lethal Dose at which 50% of the population is killed
LTEL	Long term exposure limit
MARPOL	The International Convention for the Prevention of Pollution from Ships
OECD	Organisation for Economic Cooperation and Development
PBT	PBT: Persistent, Bioaccumulative and Toxic
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	RID: Regulations concerning the international railway transport of dangerous goods
STEL	Short term exposure limit
UN	United Nations
US EPA	United States Environmental Protection Agency
vPvB	vPvB: very Persistent and very Bioaccumulative

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.

Disclaimers

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Annex to the extended Safety Data Sheet (eSDS)

Not applicable