

Page : 1 / 12

Revision nr : 7.0

Issue date : 11/03/2016 Supersedes : 05/05/2015

# PAVING GRADE BITUMEN – EURO BITUMEN 50/70 (HOT STATE)

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

1.1. Product identifier

Product form : Substance

Trade name/designation : PAVING GRADE BITUMEN – EURO BITUMEN 50/70 (HOT STATE)

EC No : 265-196-4 CAS No. : 64742-93-4

REACH registration No : 01-2119498270-36-0049

Product group : Trade product

# 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, Professional use, Consumer use

Use of the substance/mixture : Coating

Rubber products

Building and construction work

## 1.2.2. Uses advised against

No data available

## 1.3. Details of the supplier of the safety data sheet

**Supplier** 

NIS a.d. Novi Sad Narodnog Fronta 12 21000 Novi Sad - Serbia T + 381 (0) 21 481 1111

Dragana.Cvetkov@nis.eu (Responsible person SDS/REACH)

Only Representative

REACH Law Ltd. Vänrikinkuja 3 JK 21 02600 Espoo - Finland

T +358(0) 9 412 3055 - F +358 (0) 9 412 3049

sds@reachlaw.fi

# Manufacturer

NIS a.d. Novi Sad Narodnog Fronta 12 21000 Novi Sad - Serbia T + 381 (0) 21 481 1111

Dragana.Cvetkov@nis.eu (Responsible person SDS/REACH)

### 1.4. Emergency telephone number

Emergency number : + 381 (0) 21 481 1111 (08-16h) + 381 (0)11 360 8440 (24 h) + 381 (0)11 266 1122

(24 h) + 381 (0)11 266 2755 (24 h)

Country	Official advisory body	Address	Emergency number
Ireland	National Poisons Information Centre Beaumont Hospital	Beaumont Hospital Beaumont Road 9 Dublin	+353 1 809 21 66 (public, 8am - 10pm, 7/7) +353 01 809 2566 (Professionals, 24/7)
United Kingdom	National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre, Wolfson Unit	Claremont Place Newcastle-upon-Tyne NE1 4LP Newcastle	0844 892 0111 (UK only, Monday to Friday, 08.00 to 18.00 hours, healthcare professionals only)

# **SECTION 2: Hazards identification**

## 2.1. Classification of the substance or mixture

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

Not classified



Page: 2 / 12 Revision nr: 7.0

Issue date: 11/03/2016

Supersedes : 05/05/2015

# PAVING GRADE BITUMEN – EURO BITUMEN 50/70 (HOT STATE)

## 2.2. Label elements

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

Not 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. Substance

Substance name : Asphalt, oxidised (paving grade bitumen, hot state) 50/70

CAS No. : 64742-93-4 EC No : 265-196-4

Substance name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Asphalt, oxidized	(CAS No.) 64742-93-4 (EC No) 265-196-4 (EC Index) - (REACH-no) 01-2119498270-36-0049	100	Not classified

Full text of H-statements: see section 16

## 3.2. Mixture

Not applicable

## **SECTION 4: First aid measures**

# 4.1. Description of first aid measures

Additional advice : First aider: Pay attention to self-protection. Never give anything by mouth to an

unconscious person or a person with cramps. Show this safety data sheet to the

doctor in attendance. Treat symptomatically.

Inhalation : Keep at rest. Provide fresh air. In case of doubt or persistent symptoms, consult

always a physician.

Skin contact : Rinse immediately with plenty of water for at least 15 minutes. In case of doubt or

persistent symptoms, consult always a physician.

Eyes contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15

minutes. In case of doubt or persistent symptoms, consult always a physician.

In case of ingestion : Rinse mouth. Rinse mouth immediately and drink plenty of water. Call a physician

immediately.

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

Inhalation : Elevated temperatures or mechanical action may form vapours, mists or fumes

which may be irritating to the eyes, nose, throat and lungs.

Skin contact : Hot product (liquid) can cause thermal burns.

Eyes contact : Hot product (liquid) can cause thermal burns.

Ingestion : According to experience not expected.

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

No data available



Page: 3 / 12 Revision nr: 7.0

Issue date : 11/03/2016

Supersedes : 05/05/2015

# PAVING GRADE BITUMEN – EURO BITUMEN 50/70 (HOT STATE)

# **SECTION 5: Firefighting measures**

# 5.1. Extinguishing media

Suitable extinguishing media : Water spray, Alcohol resistant foam, Carbon dioxide, Dry extinguishing powder.

Sand.

Unsuitable extinguishing media : Strong water jet.

## 5.2. Special hazards arising from the substance or mixture

Specific hazards : Combustible. Hazardous decomposition products.

5.3. Advice for firefighters

Firefighting instructions : Special protective equipment for firefighters. . In case of fire: Wear self-contained

breathing apparatus. Use water spray or fog for cooling exposed containers. Do not allow run-off from fire-fighting to enter drains or water courses. Dispose of waste in

accordance with environmental legislation.

## **SECTION 6: Accidental release measures**

# 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

For non-emergency personnel : Provide adequate ventilation. Evacuate personnel to a safe area. Use personal

protective equipment as required. Concerning personal protective equipment to use, see section 8. Keep away from heat, hot surfaces, sparks, open flames and other

ignition sources. No smoking. Ensure equipment is adequately earthed.

#### 6.1.2. For emergency responders

For emergency responders : Ensure procedures and training for emergency decontamination and disposal are in

place. Concerning personal protective equipment to use, see section 8.

#### 6.2. Environmental precautions

Do not allow to enter into surface water or drains.

## 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Stop leak if safe to do so. Dam up. Take up liquid spill into absorbent material, e.g.:

sand, earth, vermiculite or powdered limestone. Collect in closed and suitable containers for disposal. After cleaning, flush traces away with water. Dispose of

contaminated materials in accordance with current regulations.

#### 6.4. Reference to other sections

Concerning personal protective equipment to use, see section 8. Disposal: see section 13.

### **SECTION 7: Handling and storage**

## 7.1. Precautions for safe handling

Hygiene measures : Keep good industrial hygiene. Wash hands and face before breaks and immediately after handling of the product. Keep work clothes separately. Take off contaminated

clothing. Keep away from food, drink and animal feedingstuffs.

## 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Do not store near or with any of the incompatible materials listed in section 10.

Keep/Store only in original container. Keep container tightly closed in a cool, well-

ventilated place.

Packaging materials : Steel,. Stainless steel,. Coated steels,. metal containers.

## 7.3. Specific end use(s)

No data available.

## **SECTION 8: Exposure controls/personal protection**

## 8.1. Control parameters



Page: 4 / 12 Revision nr: 7.0

Issue date : 11/03/2016
Supersedes : 05/05/2015

# PAVING GRADE BITUMEN – EURO BITUMEN 50/70 (HOT STATE)

Asphalt, oxidized (64742-93-4)	
DNEL/DMEL (workers)	
Long-term - local effects, inhalation (8h) 2,9 mg/m³	
DNEL/DMEL (general population)	
Long-term - local effects, inhalation	(24h) 0,6 mg/m³
PNEC (additional information)	
Additional information	No data available UVCB

Additional information : Occupational Exposure Limits :. No data available

8.2. Exposure controls

Engineering control measures : Provide adequate ventilation. Use only in area provided with appropriate exhaust

ventilation. Ensure equipment is adequately earthed. Organisational measures to

prevent /limit releases, dispersion and exposure. See also section 7.

Personal protection equipment : The type of protective equipment must be selected according to the concentration

and amount of the dangerous substance at the specific workplace.

Hand protection : The selection of specific gloves for a specific application and time of use in a working

area, should also take into account other factors on the working space, such as (but not limited to): other chemicals that are possibly used, physical requirements

(protection against cutting/drilling, skill, thermal protection), and the

instructions/specification of the supplier of gloves. (EN407)

Eye protection : During splash contact: Face protection shield (EN166)

Body protection : Overalls, apron and boots recommended

Respiratory protection : In the case of vapour formation use a respirator with an approved filter. Self-

contained open-circuit compressed air breathing apparatus (EN 137)

Thermal hazard protection : Heat resistant gloves (EN407).

Environmental exposure controls : Do not allow to enter into surface water or drains. Comply with applicable

Community environmental protection legislation.

## **SECTION 9: Physical and chemical properties**

## 9.1. Information on basic physical and chemical properties

Physical state : Solid

Colour : dark brown -. Black.
Odour : No data available.
Odour threshold : No data available
pH : Not applicable
Relative evaporation rate (butylacetate=1) : No data available

Melting point/freezing point : 30 - 128 °C (ASTM D36)

Freezing point : No data available

Initial boiling point and boiling range : > 320 °C

Flash point :  $>= 230 \, ^{\circ}\text{C} \, (ASTM \, D92 \, / \, EN \, ISO \, 2592)$ 

Auto-ignition temperature : > 400 °C

Decomposition temperature : No data available Flammability (solid, gas) : Non-flammable Vapour pressure : << 0,1 kPa (20°C) Vapour density : No data available Relative density : 0,925 - 1,07 (15 °C)

Solubility : Water: NA: Substance is complex UVCB.

Partition coefficient n-octanol/water : NA: Substance is complex UVCB.



Page: 5 / 12 Revision nr: 7.0

Issue date : 11/03/2016

# PAVING GRADE BITUMEN – EURO BITUMEN 50/70 (HOT STATE)

Supersedes : 05/05/2015

Kinematic viscosity : 1000 - 16000 mm<sup>2</sup>/s (60°C)(EN12595)

>= 100 mm<sup>2</sup>/s (100°C)(EN12595) >= 295 mm<sup>2</sup>/s (135°C)(EN12595)

Dynamic viscosity : No data available

Explosive properties : Not applicable. The study does not need to be conducted because there are no

chemical groups associated with explosive properties present in the molecule.

Oxidising properties : Not applicable. The classification procedure needs not to be applied because there

are no chemical groups present in the molecule which are associated with oxidising

properties.

Explosive limits : No data available

9.2. Other information

Additional information : Softening point 46 - 54 °C (EN 1427)

## **SECTION 10: Stability and reactivity**

# 10.1. Reactivity

Reference to other sections: 10.5.

#### 10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

### 10.3. Possibility of hazardous reactions

None under normal processing.

### 10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. See also section 7.

#### 10.5. Incompatible materials

Incompatible with strong acids and oxidizing agents. Bases,. Nitrates . See also section 7: Handling and storage.

# 10.6. Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. Reference to other sections: 5.2.

# **SECTION 11: Toxicological information**

### 11.1. Information on toxicological effects

NOAEL, subacute, Dermal, rabbit, local

Acute toxicity : Not classified (Based on available data, the classification criteria are not met)

Asphalt, oxidized (64742-93-4)	
LD50/oral/rat	> 5000 mg/kg
LD50/dermal/rabbit	> 2000 mg/kg
LC50/inhalation/4h/rat	94,4 mg/m³
Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met)
	pH: Not applicable
Serious eye damage/eye irritation	: Not classified (Based on available data, the classification criteria are not met)
	pH: Not applicable
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
	NOAEC, Inhalation, Rat: 300 mg/m <sup>3</sup>
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Asphalt, oxidized (64742-93-4)	

200 mg/kg bw/day



Page: 6 / 12 Revision nr: 7.0

Issue date : 11/03/2016

PAVING GRADE BITUMEN – EURO BITUMEN 50/70 (HOT

STATE)

Supersedes: 05/05/2015

Asphalt, oxidized (64742-93-4)	
NOAEL, subacute, Dermal, rabbit,	2000 mg/kg bw/day
systemic	
NOAEC, subchronic, Inhalation, Rat,	103.9 mg/m³
systemic	
NOAEC, subchronic, Inhalation, Rat, local	10.4 mg/m <sup>3</sup>

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

 PAVING GRADE BITUMEN – EURO BITUMEN 50/70 (HOT STATE) (64742-93-4)

 Kinematic viscosity
 1000 - 16000 mm²/s (60°C)(EN12595)

Other information : Symptoms related to the physical, chemical and toxicological characteristics. Reference to other sections: 4.2.

# **SECTION 12: Ecological information**

### 12.1. Toxicity

Environmental properties : Ecological injuries are not known or expected under normal use.

Asphalt, oxidized (64742-93-4)	
Acute (short-term) fish toxicity, LL50 (96h)	> 1000 mg/l QSAR
Chronic (long-term) fish toxicity, LL50 (28d)	> 1000 mg/l QSAR
Chronic (long-term) fish toxicity, NOEL	≥ 1000 mg/l QSAR
Acute (short-term) daphnia toxicity, LL50 (48h)	> 1000 mg/l QSAR
Chronic (long-term) daphnia toxicity, NOEL (21d)	≥ 1000 mg/l QSAR
Acute (short-term) algae toxicity, EL50 (72h)	> 1000 mg/l QSAR (Inhibition of growth rate.)
Toxicity to other organisms (Tetrahymena pyriformis), LL50 (40h)	> 1000 mg/l QSAR
Toxicity to other organisms (Tetrahymena Pyriformis), NOEL (40h)	> 1000 mg/l Inhibition of growth rate.

# 12.2. Persistence and degradability

No data available

# 12.3. Bioaccumulative potential

PAVING GRADE BITUMEN – EURO BITU	MEN 50/70 (HOT STATE) (64742-93-4)
Partition coefficient n-octanol/water	NA: Substance is complex UVCB.

# 12.4. Mobility in soil

PAVING GRADE BITUMEN – EURO BITUMEN 50/70 (HOT STATE) (64742-93-4)	
Ecology - soil	No data available.
Asphalt, oxidized (64742-93-4)	
Surface tension	Not applicable

## 12.5. Results of PBT and vPvB assessment

PAVING GRADE BITUMEN - EURO BITUMEN 50/70 (HOT STATE) (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

Additional information : No data available



Page: 7 / 12 Revision nr: 7.0

Issue date: 11/03/2016

Supersedes: 05/05/2015

# PAVING GRADE BITUMEN -**EURO BITUMEN 50/70 (HOT** STATE)

# **SECTION 13: Disposal considerations**

#### Waste treatment methods <u>13.1.</u>

Waste disposal recommendations : Handle with care. Safe handling: see section 7: Handling and storage. Dispose of

contaminated materials in accordance with current regulations. Refer to

manufacturer/supplier for information on recovery/recycling. Collect and dispose of

waste product at an authorised disposal facility.

Additional information : Delivery to an approved waste disposal company. Do not allow to enter into surface water or drains. Further ecological information List of proposed waste codes/waste The following Waste Codes are only suggestions:

designations in accordance with EWC 05 01 17 - bitumen

(2001/573/EC, 75/442/EEC, 91/689/EEC) Waste codes should be assigned by the user, preferably in discussion with the waste

disposal authorities

# **SECTION 14: Transport information**

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

14.1. **UN** number

**UN** number : 3257 UN-No : 3257

UN-No : Not regulated

UN-No. (ADN) : 3257 UN-No. (RID) : 3257

<u>14.</u>2. **UN proper shipping name** 

**Proper Shipping Name** : ELEVATED TEMPERATURE LIQUID, N.O.S. (Asphalt, oxidized ()) Proper Shipping Name (IMDG) : ELEVATED TEMPERATURE LIQUID, N.O.S. (Asphalt, oxidized ())

Proper Shipping Name (IATA) : Not regulated

Proper Shipping Name (ADN) : ELEVATED TEMPERATURE LIQUID, N.O.S. (Asphalt, oxidized ()) : ELEVATED TEMPERATURE LIQUID, N.O.S. (Asphalt, oxidized ()) Proper Shipping Name (RID)

Transport document description (ADR) : UN 3257 ELEVATED TEMPERATURE LIQUID, N.O.S. (Asphalt, oxidized ()), 9, III,

(D)

Transport document description (IMDG) : UN 3257 ELEVATED TEMPERATURE LIQUID, N.O.S. (Asphalt, oxidized ()), 9, III Transport document description (ADN) : UN 3257 ELEVATED TEMPERATURE LIQUID, N.O.S. (Asphalt, oxidized ()), 9, III : UN 3257 ELEVATED TEMPERATURE LIQUID, N.O.S. (Asphalt, oxidized ()), 9, III Transport document description (RID)

#### <u>14.3</u>. Transport hazard class(es)

**ADR** 

Transport hazard class(es) (ADR) : 9 : 9 Danger labels (ADR)



#### **IMDG**

Transport hazard class(es) (IMDG) : 9 Danger labels (IMDG) : 9



Page: 8 / 12 Revision nr: 7.0

Issue date : 11/03/2016

Supersedes: 05/05/2015

# PAVING GRADE BITUMEN – EURO BITUMEN 50/70 (HOT STATE)

IATA

Transport hazard class(es) (IATA) : Not regulated

ADN

Transport hazard class(es) (ADN) : 9
Danger labels (ADN) : 9



**RID** 

Transport hazard class(es) (RID) : 9
Danger labels (RID) : 9



14.4. Packing group

Packing group (ADR) : III
Packing group (IMDG) : III

Packing group (IATA) : Not regulated

Packing group (ADN) : III
Packing group (RID) : III

14.5. Environmental hazards

Dangerous for the environment : No Marine pollutant : No

Other information : No supplementary information available

## 14.6. Special precautions for user

## - Overland transport

Classification code (ADR) : M9
Special Provisions : 274, 643
Limited quantities (ADR) : 0
Excepted quantities (ADR) : E0

Packing instructions (ADR) : P099, IBC99

Portable tank and bulk container : T3

instructions (ADR)

Portable tank and bulk container special

provisions (ADR)

: TP3, TP29



Page: 9 / 12 Revision nr: 7.0

Issue date: 11/03/2016

# PAVING GRADE BITUMEN – EURO BITUMEN 50/70 (HOT

STATE)

Supersedes: 05/05/2015

Tank code (ADR) : LGAV

Tank special provisions (ADR) : TU35, TC7, TE6, TE14, TE24

Vehicle for tank carriage : AT
Transport category (ADR) : 3
Special provisions for carriage - Bulk : VC3

(ADR)

Hazard identification number (Kemler No.) : 99

Orange plates :

99 3257

tunnel restriction code : D
EAC code : 2Y

- Transport by sea

Special provisions (IMDG) : 232, 274

Limited quantities (IMDG) : 0

Excepted quantities (IMDG) : E0

Packing instructions (IMDG) : P099

IBC packing instructions (IMDG) : IBC01

Tank instructions (IMDG) : T3

Tank special provisions (IMDG) : TP3, TP29

EmS-No. (Fire): F-AEmS-No. (Spillage): S-PStowage category (IMDG): AStowage and handling (IMDG): SW5

Flash point (IMDG) : above 100°C

Properties and observations (IMDG) : Any liquid which is transported at or above 100°C but below its flashpoint. May

cause fire if in contact with combustible material due to extreme temperature.

## - Air transport

Not regulated

## - Inland waterway transport

Classification code (ADN) : M9

Special provisions (ADN) : 274, 58, 643

Limited quantities (ADN) : 0

Excepted quantities (ADN) : E0

Carriage permitted (ADN) : T

Equipment required (ADN) : PP

Number of blue cones/lights (ADN) : 0

- Rail transport

Classification code (RID) : M9

Special provisions (RID) : 274, 643

Limited quantities (RID) : 0

Excepted quantities (RID) : E0

Packing instructions (RID) : P099, IBC99

: T3

Portable tank and bulk container

instructions (RID)



Page: 10 / 12 Revision nr: 7.0

Issue date: 11/03/2016

Supersedes : 05/05/2015

# PAVING GRADE BITUMEN – EURO BITUMEN 50/70 (HOT STATE)

Portable tank and bulk container special

: TP3, TP29

provisions (RID)

Tank codes for RID tanks (RID) : LGAV

Special provisions for RID tanks (RID) : TU35, TE6, TE14

Transport category (RID) : 3
Special provisions for carriage – Bulk : V

(RID)

: VC3

Special provisions for carriage - Loading,

: CW17, CW31

unloading and handling (RID)

, - -

Hazard identification number (RID) : 99

## 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

### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

PAVING GRADE BITUMEN – EURO BITUMEN 50/70 (HOT STATE) is not on the REACH Candidate List PAVING GRADE BITUMEN – EURO BITUMEN 50/70 (HOT STATE) is not on the REACH Annex XIV List

## 15.1.2. National regulations

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on the Canadian DSL (Domestic Substances List)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on the Korean ECL (Existing Chemicals List)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

## Germany

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV

12th Ordinance Implementing the Federal : Is not subject of the 12. BlmSchV (Hazardous Incident Ordinance)

## Netherlands

SZW-lijst van kankerverwekkende stoffen : Asphalt, oxidised (paving grade bitumen, hot state) 50/70 is listed SZW-lijst van mutagene stoffen : Asphalt, oxidised (paving grade bitumen, hot state) 50/70 is listed

NIET-limitatieve lijst van voor de

voortplanting giftige stoffen - Borstvoeding

: The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen –

: The substance is not listed

Vruchtbaarheid

NIET-limitatieve lijst van voor de

voortplanting giftige stoffen – Ontwikkeling

: The substance is not listed

## 15.2. Chemical safety assessment



Page : 11 / 12 Revision nr : 7.0

Issue date : 11/03/2016 Supersedes : 05/05/2015

# PAVING GRADE BITUMEN – EURO BITUMEN 50/70 (HOT STATE)

For this substance a chemical safety assessment has been carried out

# **SECTION 16: Other information**

DNEL = Derived No Effect Level
DMEL = Derived Minimal Effect level
PNEC = Predicted No Effect Concentration
OEL-STEL = Occupational Exposure Limits - Short Term Exposure Limits (STELs)
TWA = time weighted average
LC50 = Median lethal concentration
LD50 = Median lethal dose
LL50 = Median lethal level
EC50 = Median Effective Concentration
EL50 = Median effective level
ErC50 = EC50 in terms of reduction of growth rate
ErL50 = EL50 in terms of reduction of growth rate
NOEL = no-observed-effect level
NOEC = No observed effect concentration
NOELR = No observed effect loading rate
NOAEC = No observed adverse effect concentration
NOAEL = No observed adverse effect level
EWC = European waste catalogue
NA = Not applicable
N.O.S. = Not Otherwise Specified
VOC = Volatile organic compounds
mg/kg BW = mg/kg bodyweight
QSAR = Quantitative structure-activity relationship (QSAR)
ADN = Accord Européen relatif au Transport International des Marchandises Dangereuses par voie de Navigation du Rhin ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route CLP = Classification, Labelling and Packaging Regulation according to 1272/2008/EC IATA = International Air Transport Association IMDG = International Maritime Dangerous Goods Code LEL = Lower Explosive Limit/Lower Explosion Limit UEL = Upper Explosion Limit/Upper Explosive Limit REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
WGK = Wassergefährdungsklasse (Water Hazard Class under German Federal Water Management Act)

Sources of key data used to compile the : European Chemicals Bureau, CSR. datasheet

The contents and format of this SDS are in accordance with EEC Commission Directive 2015/830/EC, 1272/2008/EC and EEC Commission Regulation 1907/2006/EC (REACH) Annex II.

DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling,



Page : 12 / 12 Revision nr : 7.0

Issue date : 11/03/2016

# PAVING GRADE BITUMEN – EURO BITUMEN 50/70 (HOT STATE)

Supersedes : 05/05/2015

storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.