

EG-MATERIAL SAFETY DATA SHEET

according to regulation (EG) Nr. 1907/2006 (REACH)



Product name: Bunker 380 cst

Status: 03.01.2011

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Version: 1.0 GB-MSDS

Date of printing: 04.02.2011

1.) Identification of the substance/preparation and company

Product details

Product Code and Trade names:

554 Heavy fuel oil, 0,5 % Sulphur
571 Bunker 380cst

Use

Diesel fuel for marine engines (MBF)

REACH-Registration number

01-2119474894-22-0058

Identification of the manufacturer / supplier

Address

Holborn Europa Raffinerie Hamburg GmbH
Moorburger Str. 16
21079 Hamburg
Telephone no. +49 (0)40 / 7663 - 0

Product Information provided by

Telephone

+49 (0)40 / 7663 – 1215

E-Mail

SDB@holborn.de

Emergency telephone number

+49 (0)40 / 7663 – 1351

Fax: +49 (0)40 / 7663 - 9915

2.) Hazards identification

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

Carc.Cat.2; T; R45	May cause cancer.
Xn; R20	Harmful by inhalation.
Xn; R48/21	Harmful: danger of serious damage to health by prolonged exposure in contact with skin.
Xn; R66	Repeated exposure may cause skin dryness or cracking.
N; R50/53	Very toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.

Hazard symbols according to Directive 67/548/EEC or Directive 1999/45/EC



T

Toxic



Xn

Harmful



N

Dangerous for the environment

R phrases

R20	Harmful by inhalation.
R45	May cause cancer.
R48/21	Harmful: danger of serious damage to health by prolonged exposure in contact with skin.
R50/53	Very toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.
R66	Repeated exposure may cause skin dryness or cracking.

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Classification according to Regulation (EC) No 1272/2008

Carc.Cat.1B; GHS08; H350 May cause cancer.
GHS07; H332 Harmful if inhaled.
GHS08; H304 May be fatal if swallowed and enters airways.
GHS08; H361d Suspected of damaging fertility or the unborn child.
GHS08; H373 May cause damage to organs through prolonged or repeated exposure.
GHS09; H410 Very toxic to aquatic life with long lasting effects.
GHS07; EUH066 Repeated exposure may cause skin dryness or cracking.

Hazard symbols according to Regulation (EC) No 1272/2008



GHS07 Exclamation Mark



GHS08 Health Hazard



GHS09 Environment

Signal word: Danger

H phrases

H304 May be fatal if swallowed and enters airways.
H332 Harmful if inhaled.
H350 May cause cancer.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.
EUH066 Repeated exposure may cause skin dryness or cracking.

Additional hazard advice:

When opening containers is important to note that the product may release hydrogen sulfide.
Heated material can cause burns to eyes and skin.

3.) Composition / information on ingredients

Chemical characterization

The liquid product from various refinery streams, usually residues. The composition is complex and varies with the source of the crude oil.

Substance / product identification

Index no. 649-024-00-9
CAS no. 68476-33-5
EC no. 270-675-6

Hazardous ingredients

BENZO(A)PYRENE

EC no. 200-028-5 Index no. 601-032-00-3 CAS no. 50-32-8
Concentration < 0,1 %-b.w.
Classification Carc.Cat.1B; H350-Repr.Cat.1B; H360-Repr.Cat.1B; Muta.Cat.1B; H340-GHS09; H410, H317
Hazard symbols GHS06, GHS09 H phrases 317, 340, 350, 360, 410

Other information (Chapter 3)

Product contains small amounts of hydrogen sulfide in their preparation (For limits see Chapter 8).

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4.) First aid measures

General information

In case of persisting adverse effects consult a physician. Remove contaminated clothing and shoes immediately, and launder thoroughly before reusing.

After inhalation

Remove affected persons from dangerous area by observing suitable respiratory protection measures. Ensure supply of fresh air. Irregular breathing/no breathing: artificial respiration. Summon a doctor immediately.

After skin contact

Wash off immediately with soap and water. After contact with molten product cool quickly with cold water. Cover wounds with sterile dressing. Seek medical attention.

After eye contact

Separate eyelids, wash the eyes thoroughly with water (15 min.). Eye treatment by an oculist.

After ingestion

Do not induce vomiting. Summon a doctor immediately. If individual is drowsy or unconscious, place in recovery position (on left side, with head down). Never give anything by mouth to an unconscious person.

Medical Advice

Treatment

According DGMK (German Society for Petroleum Sciences and Coal Chemistry Association) Report 538 "Petroleum products / first aid, medical and toxicological data and technical information for doctors. "

5.) Fire-fighting measures

Suitable extinguishing media

Foam; Carbon dioxide; extinguishing powder; Water spray jet; Sand

Extinguishing media that must not be used for safety reasons

Full water jet

Special exposure hazards arising from the substance or preparation itself, its combustion products or from resulting gases

In the event of fire, the following can be released:

Carbon dioxide (CO₂)

Carbon monoxide (CO)

Hydrogen sulfide (H₂S)

Pyrolysis products

Polycyclic aromatic hydrocarbons

Special protective equipment for fire fighting

Use self-contained breathing apparatus. Wear protective clothing.

Other information

Cool endangered containers with water spray jet. Fire residues and contaminated fire fighting water must be disposed off in accordance with the local regulations.

6.) Accidental release measures

Personal precautions

Refer to protective measures listed in sections 7 and 8. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.

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Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers). Do not discharge into the drains / surface waters/groundwater. Do not discharge into the subsoil/soil. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities. On water surface: Remove product by skimming or by suitable (buoyant) absorbents from water surface.

Methods for cleaning up/taking up

Let product cool down. Pick up with absorbent material (e.g., sand, sawdust, general-purpose binder). Send in suitable containers for recovery or disposal.

7.) Handling and storage

Handling

Advice on safe handling

Provide adequate ventilation, local exhaust ventilation at the workplace. When exceeding the OEL suitable respiratory protection must be worn. In closed containers, toxic hydrogen sulphide can be formed, which will accumulate in the upper part of the container. Appropriate respiratory protection measures! For level controlling and sampling use appropriate respiratory protection! Hydrogen sulfide is no longer perceptible to the smell at higher, more dangerous levels! Inhalation of high concentrations (from about 1000 ppm) can lead to an apnoea in seconds!

Advice on protection against fire and explosion

Heated product forms combustible vapour-air mixtures. Keep away from sources of heat and ignition. Do not smoke. Take precautionary measures against static charges. When spraying the hot product, spontaneous combustion is possible.

Fire Class

B (flammable liquids)

Storage

Requirements for storage rooms and vessels

Always keep in containers of same material as the original one. Emptied containers may contain product residues and therefore must be handled with care. Reuse only after appropriate cleaning. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on storage assembly

Do not store together with:
Oxidizing agents

Further information on storage conditions

Keep container tightly closed in a cool, well-ventilated place.

Storage category

10 Combustible liquids neither LGK 3A or 3B

Recommended storage temperature

Value max. 90 °C

8.) Exposure controls / personal protection

Exposure limit values

HYDROGEN SULPHIDE

CAS-No. 7783-06-4
EC-No. 231-977-3

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DFG

Hydrogen sulfide

Value of 7.1 mg / m³ or 5 ml / m³

PEAK I (2)

Pregnancy Category C

Personal protective equipment

Respiratory protection

Breathing protection required in special cases (i.e. unintentional release of matters, exceeding of the air threshold values) . Adhere to the period of usage limitations!; Breathing apparatus: gas filter ABEK 2 P3.Code colour: brown, grey, yellow, green, white; Use of insulating apparatus if concentrations exceed the period of usage specified for filtering apparatus and oxygen contents fall below 17 vol. %.

Hand protection

Protective gloves required. Chemical resistant protective gloves complying with (acc. to EN 374) or plastic coated protective gloves complying with (acc. to EN 388) are suitable. Adhere to the manufacturer's instructions for use because of the great number of glove types.

Eye protection

Appropriate eye protection required. Use basket-type goggles (acc. to EN 166).

Skin protection

Heat-resistant protective clothing (acc. to EN 531). Protective shoes (at least S2)

General protective and hygiene measures

Do not eat or drink during work time. Keep away from foodstuffs and beverages. Avoid contact with eyes and skin. Remove soiled or soaked clothing immediately. Do not inhale vapours.

9.) Physical and chemical properties

General information

Form viscous liquid
Colour Dark brown - black
Odour Bitumen-like

Important health, safety and environmental information

Changes in physical state

Art boiling point
Value > 350 °C
Method ASTM D 1160

Flash point

Value > 100 °C
Method DIN 51758

Ignition temperature

Value of ~ 220 °C

Explosion limits

Upper explosive limit ~ 6.00 Vol-%
Lower explosion limit ~ 1.50 Vol-%

Vapour pressure

Value <1.00 kPa
Reference temperature 20 °C
Method DIN 51 366

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Density

Value of 0.85 - 1.20 g/cm³
Method DIN 51757
Reference temperature 15 °C

Viscosity

Art kinematic
Value <80 mm²/s
Method DIN 51366
Reference temperature 100 °C

Water solubility

Note: practically insoluble

10.) Stability and reactivity

Materials to avoid

Oxidizing agents; Liquid sulphur

Hazardous decomposition products

polycyclic aromatic hydrocarbons

11.) Toxicological information

Experience in practice

Inhalation of high concentrations of vapour irritates the eyes, nose and respiratory tract. Inhalation of vapours may cause headache, drowsiness and dizziness. Repeated and prolonged skin contact may cause defatting and irritation. Inhalation of hydrogen sulfide at high concentrations (from about 1000 ppm) can lead to an apnoea in seconds.

12.) Ecological information

General information / ecology

Do not discharge into the drains or waters and do not store on public depositories. The majority of the components in the product is not easily biologically degradable in the environment, and concentrates itself in the environment.

13.) Disposal considerations

Product

Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

Packaging

Residuals must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer.

14.) Transport information

Land transport ADR/RID

Class 9
Classification code M6
Packaging group III
Hazard id. no. 90
Label 9
UN number 3082
Technical name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(heavy fuel oil)
Special Provision 640 C



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Inland waterways transport ADN/ADNR

Class	9
Packaging group	III
UN number	3082
Technical name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (heavy fuel oil)

Marine transport IMDG

Class	9
Packaging group	III
UN number	3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (heavy fuel oil)
EmS	F-A S-F
MARPOL	P
Label	9

Air transport ICAO/IATA

Air shipment by passenger/cargo aircraft is forbidden.

Other information (chapter 14.)

Transport temperature: 50 - 80 °C.

15.) Regulatory information

Labelling in accordance with EC directives

EC - Name	Fuel oil, residual
EC - Number	270-675-6

Hazard symbols according to Directive 67/548/EEC or Directive 1999/45/EC

T	Toxic
Xn	Harmful
N	Dangerous for the environment

R phrases

R20	Harmful by inhalation.
R45	May cause cancer.
R48/21	Harmful: danger of serious damage to health by prolonged exposure in contact with skin.
R50/53	Very toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.
R66	Repeated exposure may cause skin dryness or cracking.

S phrases

S53	Avoid exposure --- obtain special instructions before use.
S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S61	Avoid release to the environment. Refer to special instructions/ material safety data sheet

Hazard symbols according to Regulation (EC) No 1272/2008

GHS07	Exclamation mark
GHS08	Health Hazard
GHS09	Environment

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H phrases

- H304 May be fatal if swallowed and enters airways.
H332 Harmful if inhaled.
H350 May cause cancer.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.
EUH066 Repeated exposure may cause skin dryness or cracking.

P phrases

- P101 IF medical advice is needed, have product container or label at hand.
P201 Obtain special instructions before use.
P273 Avoid release to the environment.
P301 + 310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P307 + 311 IF exposed: Call a POISON CENTER or doctor/physician.
P308 + 313 IF exposed or concerned: Get medical advice/attention.
P309 + 311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.
P314 Get medical advice/attention if you feel unwell.
P342 + 311 IF experiencing respiratory symptoms: Call a POISON CENTER or doctor / physician.

Special labelling for certain preparations

"Restricted to professional users"

Additional national regulations for labour and/or environmental protection should be taken in to account, if applicable.

Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances

Remarks Annex I, part 1 + 2: not mentioned. With regard to possibly appropriate decomposition products see Chapter 10.

National regulations

Germany

Water hazard class

Class 1
Source acc. to the German WHG, VwVwS, Annex 2

Other regulations, restrictions and prohibitions

UVV "dealing with carcinogenic substances" (VBG 113)

16.) Other information

Sources of key data used to compile the data sheet:

Regulation (EC) No 1907/2006 (REACH), as amended.
Regulation (EC) No 1272/2008 (CLP), as amended.
EC Directive 2000/39/EC in the current version.
National Threshold Limit Values of the respective countries in the current version.
Transport regulations according to ADR, RID, ADN, IMDG, IATA in the current version.
GESTIS database (<http://www.dguv.de/ifa/de/gestis/stoffdb/index.jsp>)
Data sources that were used to determine physical, toxicological and ecotoxicological data are entered directly in the respective chapters.

Department issuing safety data sheet

Holborn Europa Raffinerie GmbH
Department RS

This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.