



SAFETY DATA SHEET

Light oil (coal), coke-oven

20th May 2015
(v 3)

according to 1907/2006/EC, Article 31

Section 1 Identification of the substance/mixture and of the company

1.1 Product identifier

Identification on the label / trade name:

Light oil (coal), coke-oven

CAS 65996-78-3

EC 266-012-5

Additional identification:

Crude benzol

REACH registration number:

01-2119519215-46-0039

1.2 Relevant identified uses of the substance and uses advised against

Relevant identified uses:

Production of aromatic chemicals. Use as carbon black feedstock, complete conversion into carbon black.

Uses advised against:

use restricted to close systems

Details of the supplier of the safety data sheet

1.3 Manufacturer/Supplier: ISD Kokszołó Kft.

2400 Dunaújváros Vasmű tér 1-3. Hungary

web: www.dunaferr.hu

e-mail address: csjuhasz@dbk.dunaferr.hu

phone: 00.36.2558.1060

fax: 00.36.25.410.614i

Information: see Section 16 (Contact)

1.4 Emergency telephone number: see: Manufacturer/Supplier

Section 2 Hazards identification

2.1 Classification of the substance

According to Dangerous Substances

Directive (67/548/EEC):

F: R11; Xn: R20/21-63-65; Xi: R36/38; Carc. Cat. 1: R45; Muta. Cat. 2: R46 ; T: 48/23/24/25;
N: R51/53; R67

According to CLP regulations (EC)1272/2008:

Flam. Liq. 2 H225; Skin Irrit. 2 H315; Eye Irrit. 2 H319; Asp.Tox.1 H304; Repr.2 H361;
Muta.1B H340; Carc.1A H350; STOT SE 3 H336; STOT RE.1 H372; Aquatic Chronic 2 H411

2.2 Label elements according to CLP regulations (EC)1272/2008

Hazard pictograms:



Signal word:

Danger

Hazard statements:

- H225 Highly flammable liquid and vapour
- H304 May be fatal if swallowed and enters airways
- H315 Causes skin irritation
- H319 Causes serious eye irritation
- H336 May cause drowsiness or dizziness
- H340 May cause genetic defects
- H350 May cause cancer
- H361 Suspected of damaging fertility or the unborn child
- H372 Causes damage to organs through prolonged or repeated exposure
- H411 Toxic to aquatic life with long lasting effects

Precautionary statements:

- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P243 Take precautionary measures against static discharge.
- P260 Do not breathe mist/vapours.
- P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
- P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed
- P405 Store locked up.
- P501 Dispose of contents/container to recycling in accordance with national/international regulations.

2.3 Information pertaining to special dangers for human and environment:

Benzene, toluene, xylene and naphthalene: resorption through skin is possible.

according to 1907/2006/EC, Article 31

Section 3 Composition/information on ingredients

3.1 Chemical characterisation:

Light oil (coal), coke-oven

EG-No. 266-012-5

CAS No. 65996-78-3

3.2 Hazard ingredients:

EG-Nr.	CAS-Nr.	Name	Amount [%]	Classification	
				Richtl. 67/548/EWG	VO (EG) Nr.1272/2008
200-753-7	71-43-2	benzene	60 – 70	F, Xi, Xn, T; R11-36/38-45-46-48/23/24/25-65	Flam. Liq. 2, H225, Carc.1A H350, Muta. 1B H340, STOT RE. 1 H372, Asp. Tox. 1 H304, Eye Irrit. 2 H319, Skin Irrit. 2 H315
203-625-9	108-88-3	toluene	10 – 20	F, Xn; R11-38-48/20-63-65-67	Flam. Liq. 2 H225, Repr. 2 H361d, Asp. Tox. 1 H304, STOT RE 2 * H373, Skin Irrit. 2 H315, STOT SE 3 H336
215-535-7	1330-20-7	xylene (o,m,p)	1 – 10	Xn; R10-20/21-38	Flam. Liq. 3 H226, Acute Tox. 4 H332, Acute Tox. 4 H312, Skin Irrit. 2 H315
202-049-5	91-20-3	naphthalene	1 – 5	Xn, N; R22-40-50/53	Carc. 2 H351, Acute Tox. 4 H302, Aquatic Acute 1 H400, Aquatic Chronic 1 H410

Section 4 First aid measures

4.1 General information:

Call a physician immediately. Remove contaminated, saturated clothing immediately. Remove breathing apparatus only after soiled clothing has been completely removed.

In case of inhalation:

Remove casualty to fresh air and keep warm and at rest. In case of irregular breathing or respiratory arrest use artificial respiration equipment.

In case of skin contact:

Subsequently wash off with water and soap and rinse thoroughly.

In case of eye contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

In case of ingestion:

Rinse mouth immediately and drink plenty of water, to which activated charcoal may be added. Do NOT induce vomiting.

according to 1907/2006/EC, Article 31

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

The following symptoms may occur: contact with skin may cause redness or blistering, inhalation may cause drowsiness and other narcotic effects. Irritation to the throat may also occur upon ingestion.

4.3 Information to physician:

Long term monitoring of haematological parameters can be necessary.

Section 5 Fire-fighting measures

5.1 Extinguishing media:

Water spray jet, CO₂ or extinguishing powder.

Extinguishing media which must not be used for safety reasons:

Full water jet.

5.2 Special hazards arising from the substance or mixture:

May produce toxic fumes of carbon monoxide if burning. Burning produces heavy smoke.

5.3 Special protective equipment for fire-fighters:

Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information:

Keep containers cool with water spray. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

Section 6 Accidental release measures

6.1 Personal precautions:

Remove all sources of ignition. Wear personal protection equipment (refer to 8). Provide adequate ventilation. Wear breathing apparatus if exposed to vapours. Keep unprotected people away and stay on the upwind side.

6.2 Environmental precautions:

Do not allow to enter into soil, surface water or drains.

6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Collect in closed and suitable containers for disposal. Ventilate affected area.

6.4 Refer to Section 8 and 13.

Section 7 Handling and Storage

7.1 Precaution for safe handling:

This substance is handled under Strictly Controlled Conditions in accordance with REACH regulation Article 18(4) for transported isolated intermediates. 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 should be available at each site.

Technical measures:

Use extractor hood (laboratory).

according to 1907/2006/EC, Article 31

Precautions against fire and explosion:

Vapours can form an explosive mixture with air. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges.

General health and safety measures:

Wash hands before breaks and on finishing work. Remove contaminated, saturated clothing. Do not eat, drink, smoke or take snuff while working.

7.2 Conditions for safe storage:

Suitable material for containers and pipes: stainless steel. Keep container tightly closed. Ensure adequate ventilation of the storage area. Store in a place accessible by authorized persons only.

7.3 Specific end use:

No specific end uses, as this substance is an intermediate.

Section 8 Exposure controls / Personal protection

8.1 Control parameters

Occupational exposure limits (OELs): Source (German legislation): TRGS 900 "Arbeitsplatzgrenzwerte"

CAS-Nr.	substance	ml/m ³ (ppm)	mg/m ³	Peak limitation
108-88-3	toluene	50	190	4(II)
1330-20-7	xylene	100	440	2(II)

Occupational exposure limits (OELs): Source: Directive 2004/37/EC

CAS-Nr.	substance	long term (8h)		short term (15 min)	
		ml/m ³ (ppm)	mg/m ³	ml/m ³ (ppm)	mg/m ³
71-43-2	benzene	1	3.25		

Indicative limit value for occupational exposure: Source: Directive 91/322/EEC

CAS-Nr.	substance	long term (8h)		short term (15 min)	
		ml/m ³ (ppm)	mg/m ³	ml/m ³ (ppm)	mg/m ³
91-20-3	naphthalene	10	50		

DNEL/DMEL and PNEC values:

No DNEL/DMEL and PNEC have been derived for the registration dossier of this substance because it is handled under Strictly Controlled Conditions in accordance with REACH regulation Article 18(4) for transported isolated intermediates.

8.2 Exposure controls

8.2.1 Occupational exposure controls:

Refer to Section 7.

8.2.2 Respiratory protection:

In case of appearance of vapour wear full mask with filter Typ A according to EN136.

8.2.3 Hand protection: Draw up and observe skin protection programme.

Check the resistance to chemicals of the protective gloves together with the supplier of the gloves. Use only gloves conform to 89/686/EEC.

Wear duration at permanent contact: gloves made of fluoro rubber

Thickness of the glove material: 0.4 mm

Breakthrough time (maximal wear duration): > 480 min

according to 1907/2006/EC, Article 31

At occasional contact (splashes): gloves made of fluoro rubber.

Thickness of the glove material: 0.4 mm

Breakthrough time (maximal wear duration): > 480 min

8.2.4 Eye protection:

Safety glasses.

8.2.5 Suitable protective clothing:

Flame-retardant protective clothing.

8.3 Environmental exposure controls:

See Section 7. No additional measures necessary.

Section 9 Physical and chemical Properties

9.1 General information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Light brown
Odour:	organic
pH Value:	n.a.
Melting-point:	approx. -18°C (ca. 101 kPa)
Boiling point / boiling range:	approx. 82 °C - approx. 114 °C (1013 hPa)
Density:	0.85 - 1.05 g/cm ³ (20°C)
Water solubility):	approx. 0.1 - 100 mg/l (20°C)
Flash point:	< 2°C (EN ISO 2719) (1013 hPa)
Auto Flammability:	approx. 485 °C (1013 hPa)
Lower explosive limits:	1.2 Vol% (benzene)
Upper explosive limits:	8.0 Vol% (benzene)
Vapour pressure:	approx. 5.3 kPa (20°C)
9.2 Other information:	n.a.

Section 10 Stability and Reactivity

10.1 Chemical stability:	Under normal conditions the product is stable.
10.2 Incompatible materials:	Oxidising compounds.
10.3 Hazardous chemical reactions:	Will react with oxidising agents often explosively.
10.4 Conditions to avoid:	mixture with air (explosion hazard), potential ignition sources, including electrical equipment.
10.5 Materials to avoid:	Oxidising agents.
10.6 Hazardous decomposition products:	No dangerous decomposition products known.

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Section 11 Toxicological information

Acute effects

Acute oral toxicity:

oral: Rat, OECD 423

LD 0 2000 mg/kg

LD 50 > 2000 mg/kg (RD)

Irritant-/corrosive effects BTX:

Dermal: rabbit

Irritation of skin. (RD)

Eye: rabbit

Irritation of eye. (RD)

Sensitisation BTX

Dermal: negative in tests (RD)

Repeated dose toxicity (subacute,

subchronic, chronic): n.d.a.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):

Mutagen: OECD-Guideline 471, *S. typhimurium* (Ames test) Result: negative. (RD)

Studies on pure benzene show a mutagenic potential. Therefore the substance is classified as mutagenic too.

Carcinogen:

Pure benzene is classified as carcinogen for human. Therefore the substance is classified as carcinogenic too.

Phototoxicity:

n.d.a

Section 12 Ecological information

12.1 Ecotoxicity: BTX

Fish short term, OECD 203, *Oncorhynchus mykiss*

LC 50 (96 h) 2 – 10 mg/l (RD)

Destillates (coal tar), benzole fraction, short term:

Daphna toxicity, OECD 202, *Daphnia magna*

EL50 (48h) 3.8 mg/l (RD)

Algae toxicity, OECD 201, *Desmodesmus subspicatus*

EL50 (72h) 23 mg/l (RD)

NOELR (72h) < 10 mg/l (RD)

12.2 Persistence and degradability:

Light oil is comprised to large extent of BTX and alkylsubstituted monoaromatic compounds (> 50 %), which are easily biodegradable and proved to be readily biodegradable in the majority of biodegradation studies. Due to the presence of two-ring aromatic substances such as naphthalene, which in general are inherently biodegradable, light oil as a whole has to be considered as inherently biodegradable.

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12.3 Bioaccumulative potential:

low based on components.

12.4 Mobility in soil:

(moderate to be assumed, based on components)

12.5 Results of PBT and vPvB assessment:

no PBT/vPvB based on components

12.6 Other adverse effects:

None.

Section 13 Disposal considerations

Waste treatment methods

Material recycling possible.

List of proposed waste codes/waste designations in accordance with EWC:

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.: EWC-Code: 07 01 04 Other organic solvents, washing liquids and mother liquors.

Appropriate disposal / package:

n.a.

Section 14 Transport information

Land transport (ADR/RID/CDG Road/CDG Rail)

14.1 UN-Number: 3295

14.2 UN proper shipping name:

3295 HYDROCARBONS, LIQUID, N.O.S., special provision 640D

14.3 Transport hazard class: 3 Flammable liquids

Classification code – Hazard Index Number 33

14.4 Packing group: II

14.5 Environmental hazards: Special marking symbol (fish and tree)

14.6 Special precautions for user:

Special provisions:

Excepted quantities (EQ): E2

Limited quantities (LQ): LQ4

Tunnel restriction code: D/E

14.7 Marine transport (IMO): Not done.

Air transport (ICAO/IATA): Not done.

Section 15 Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Sevesio II (96/82/EC):

Toxic No 2 7b
amount 1:
50.000 kg
amount 2:
200.000 kg

Restrictions of occupation:

Observe restrictions to employment for juvenils according to the 'juvenil work protection guideline' (94/33/EC). Observe employment restrictions for pregnant and nursing mothers according to the 'mother protection guideline' (92/85/EEC).

National law:

Observe in addition the national legislative regulations!

15.2 Chemical Safety Assessment:

For this substance (transported isolated intermediate) a chemical safety assessment is not required.

Section 16 Other information

Documentation of changes:

* Data changed compared with the previous version.

Revision of Material safety data sheet from 2011. The changes needed formal reasons, the content did not change.

Relevant H- and EUH-phrases (Number, full text) according to CLP Regulations (EC 1272/2008):

H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation
H332 Harmful if inhaled.
H336 May cause drowsiness or dizziness.
H340 May cause genetic defects.
H350 May cause cancer.
H351 Suspected of causing cancer.
H361d Suspected of damaging the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Literature, References:

RD: Registration Dossier „Light oil (coal), coke oven“

Further information:

abbreviations:

n.d.a. = no data available

n.a. = not applicable

Department issuing data specification sheet:

Department of Technology

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Statement

The information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights.

The product is to be used exclusively for the applications named in the technical leaflet or in the processing instructions. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

Most common technical function of substance (what it does):

Intermediates



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Remarks

This substance is handled under Strictly Controlled Conditions in accordance with REACH regulation Article 18(4) for transported isolated intermediates. 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.

Written confirmation of application of Strictly Controlled Conditions has been received from every affected Distributor or Manufacturer / Downstream User of the Registrant's intermediate.



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Table 1. Uses by workers in industrial settings
All identified uses summarized below take place in closed system.

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
1	generation of coke oven light oil at cokery	as such (substance itself)	Process category (PROC): PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure Market sector by type of chemical product: PC 19: Intermediate Environmental release category (ERC): ERC 1: Manufacture of substances Sector of end use (SU): SU 8: Manufacture of bulk, large scale chemicals (including petroleum products) Subsequent service life relevant for that use?: no
2	use of light oil for the production of aromatic chemicals	as such (substance itself)	Process category (PROC): PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure Market sector by type of chemical product: PC 19: Intermediate Environmental release category (ERC): ERC 6a: Industrial use resulting in manufacture of another substance (use of intermediates) Sector of end use (SU): SU 8: Manufacture of bulk, large scale chemicals (including petroleum products) Subsequent service life relevant for that use?: no



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IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
3	Use of light oil as carbon black feedstock, complete conversion into carbon black	as such (substance itself) in a mixture	Process category (PROC): PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) Market sector by type of chemical product: PC 19: Intermediate Environmental release category (ERC): ERC 6a: Industrial use resulting in manufacture of another substance (use of intermediates) Sector of end use (SU): SU 8: Manufacture of bulk, large scale chemicals (including petroleum products) Subsequent service life relevant for that use?: no
4	Mixing with other coal tar oils	as such (substance itself)	Process category (PROC): PROC 3: Use in closed batch process (synthesis or formulation) Market sector by type of chemical product: PC 19: Intermediate Environmental release category (ERC): ERC 2: Formulation of preparations Sector of end use (SU): SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) Subsequent service life relevant for that use?: no



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IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
5	Sampling, loading and unloading of light oil (for all uses)	as such (substance itself) in a mixture	Process category (PROC): PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities Market sector by type of chemical product: PC 19: Intermediate Environmental release category (ERC): ERC 1: Manufacture of substances ERC 6a: Industrial use resulting in manufacture of another substance (use of intermediates) Sector of end use (SU): SU 8: Manufacture of bulk, large scale chemicals (including petroleum products) Subsequent service life relevant for that use?: no
6	Laboratory analysis of light oil (for all uses)	as such (substance itself) in a mixture	Process category (PROC): PROC 15: Use as laboratory reagent Market sector by type of chemical product: PC 21: Laboratory chemicals PC 19: Intermediate Environmental release category (ERC): ERC 1: Manufacture of substances ERC 6a: Industrial use resulting in manufacture of another substance (use of intermediates) Sector of end use (SU): SU 8: Manufacture of bulk, large scale chemicals (including petroleum products) Subsequent service life relevant for that use?: no