

SAFETY DATA SHEET

according to Regulation (EC) No. 453/2010

HS 1523 M

Revision Date: 02-May-2012

Revision Number: 1

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Identifier

Product Name HS 1523 M

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

Recommended Use Solvent

Uses Advised Against No information available

Details of the supplier of the safety data sheet

Halliburton Energy Services

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Kirkhill Industrial Estate

Dyce

Aberdeen, AB21 0GN

United Kingdom

Emergency Phone Number: +44 1224 795277 or +1 281 575 5000

www.halliburton.com

For further information, please contact

E-Mail address: fdunexchem@halliburton.com

Emergency telephone number

+44 1224 795277 or +1 281 575 5000

Emergency telephone §45 - (EC)1272/2008

Europe	112
Denmark	Poison Control Hotline (DK): +45 82 12 12 12
France	ORFILA (FR): + 01 45 42 59 59
Germany	Poison Center Berlin (DE): +49 030 30686 790
Italy	Poison Center, Milan (IT): +39 02 6610 1029
Netherlands	National Poisons Information Center (NL): +31 30 274 88 88 (NB: this service is only available to health professionals)
Norway	Toxline: +47 22 591300
Poland	Poison Control and Information Centre, Warsaw (PL): +48 22 619 66 54; +48 22 619 08 97
Spain	Poison Information Service (ES): +34 91 562 04 20
United Kingdom	NHS Direct (UK): +44 0845 46 47

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Acute Oral Toxicity	Category 4- (H302)
Acute Inhalation Toxicity - Vapors	Category 4- (H332)
Skin Corrosion / irritation	Category 2- (H315)
Serious Eye Damage / Eye Irritation	Category 2- (H319)
Carcinogenicity	Category 2- (H351)
Acute Aquatic Toxicity	Acute 1- (H400)

2. HAZARDS IDENTIFICATION

Chronic Aquatic Toxicity	Chronic 1- (H410)
Flammable liquids.	Category 3- (H226)

Classification according to EU Directives 67/548/EEC or 1999/45/EC

For the full text of the R-phrases mentioned in this Section, see Section 16

Classification Xn - Harmful.

Risk Phrases

R40 Limited evidence of a carcinogenic effect.
 R20/22 Harmful by inhalation and if swallowed.
 R36/37/38 Irritating to eyes, respiratory system and skin.

Label Elements
Hazard Pictograms

Signal Word
Warning
Hazard Statements

H226 - Flammable liquid and vapor
 H351 - Suspected of causing cancer
 H302 - Harmful if swallowed
 H332 - Harmful if inhaled
 H315 - Causes skin irritation
 H319 - Causes serious eye irritation
 H400 - Very toxic to aquatic life
 H410 - Very toxic to aquatic life with long lasting effects

Contains
Substances

	CAS Number
Cyclohexanol	108-93-0
Heavy aromatic petroleum naphtha	64742-94-5
Naphthalene	91-20-3
Cyclohexanone	108-94-1
1,2,4 Trimethylbenzene	95-63-6
Methyl ethyl ketone	78-93-3
1,3,5 Trimethylbenzene	108-67-8

Precautionary Statements - EU (§28, 1272/2008)

P301+ P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
 P332 + P313 - If skin irritation occurs: Get medical advice/attention
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P337 + P313 - If eye irritation persists: Get medical advice/attention
 P370 + P 378 - In case of fire: Use CO₂, dry chemical, or foam

Other Hazards

None known

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances	EINECS	CAS Number	PERCENT	EEC Classification	EU - CLP Substance Classification	REACH No.
Cyclohexanol	203-630-6	108-93-0	1 - 5%	Xn: R20/22 Xi; R37/38	Acute Tox. 4 (H302) Tox. 4 (H332) Skin Irrit. 2 (H315) STOT SE 3 (H335)	No data available
Heavy aromatic petroleum naphtha	265-198-5	64742-94-5	60 - 100%	Xn; R65	Asp. Tox. 1 (H304)	No data available
Naphthalene	202-049-5	91-20-3	5 - 10%	Carc.Cat.3; R40 Xn; R22 N; R50-53	Acute Tox. 4 (H302) Carc. 2 (H351) Aquatic acute 1 (H400) Aquatic Chronic 1 (H410)	No data available
Cyclohexanone	203-631-1	108-94-1	1 - 5%	R10 Xn; R20	Acute Tox. 4 (H332) Flam. Liq. 3 (H226)	No data available
1,2,4 Trimethylbenzene	202-436-9	95-63-6	1 - 5%	R10 Xn; R20 Xi; R36/37/38 N; R51-53	Acute Tox. 4 (H332) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335) Aquatic Chronic 2 (H411) Flam. Liq. 3 (H226)	No data available
Methyl ethyl ketone	201-159-0	78-93-3	1 - 5%	F; R11 Xi; R36 R66 R67	Eye Irrit. 2 (H319) STOT SE 3 (H336) Flam. Liq. 2 (H225)	No data available
1,3,5 Trimethylbenzene	203-604-4	108-67-8	0 - 1%	R10 Xi; R37 N; R51-53	STOT SE 3 (H335) Aquatic Chronic 2 (H411) Flam. Liq. 3 (H226)	No data available

For the full text of the R-phrases mentioned in this Section, see Section 16

4. FIRST AID MEASURES

Description of first aid measures**Inhalation**

If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult give oxygen. Get medical attention.

Eyes

In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing. Wash with soap and water. Get medical attention if irritation persists. Remove contaminated clothing and launder before reuse.

Skin

Get medical attention! If vomiting occurs, keep head lower than hips to prevent aspiration.

Most Important symptoms and effects, both acute and delayed

May cause eye and skin irritation. May be harmful if swallowed. May be harmful if inhaled. May cause headache, dizziness, and other central nervous system effects. Potential carcinogen.

Indication of any immediate medical attention and special treatment needed**Notes to Physician**

Treat symptomatically

5. FIREFIGHTING MEASURES

Extinguishing media

Suitable Extinguishing Media

Carbon dioxide, dry chemical, foam.

Extinguishing media which must not be used for safety reasons

Avoid spraying water directly into storage containers due to danger of boilover.

Special hazards arising from the substance or mixture

Special Exposure Hazards

Use water spray to cool fire exposed surfaces. Closed containers may explode in fire. Avoid spraying water directly into storage containers due to danger of boilover. Decomposition in fire may produce toxic gases. Vapors are heavier than air and may accumulate in low areas. Vapors may travel along the ground to be ignited at distant locations.

Advice for firefighters

Special Protective Equipment for Fire-Fighters

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Use appropriate protective equipment. Wear self-contained breathing apparatus in enclosed areas.

See Section 12 for additional information

Environmental precautions

Prevent from entering sewers, waterways, or low areas.

Methods and material for containment and cleaning up

Isolate spill and stop leak where safe. Contain spill with sand or other inert materials. Scoop up and remove.

Reference to other sections

See Section 12 for additional information.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. Wash hands after use. Launder contaminated clothing before reuse.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice

Conditions for safe storage, including any incompatibilities

Store away from oxidizers. Keep from heat, sparks, and open flames. Store in a cool well ventilated area. Keep container closed when not in use.

Specific End Use(s)

Exposure Scenario

No information available

Other Guidelines

No information available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Substances	EU	UK OEL	Netherlands	France OEL	Germany MAK/TRK
Cyclohexanol	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Heavy aromatic petroleum naphtha	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Naphthalene	Not applicable	10 ppm	50 mg/m ³	10 ppm	10 ppm
Cyclohexanone	Not applicable	10 ppm	12.5 ppm	10 ppm	20 ppm
1,2,4 Trimethylbenzene	Not applicable	25 ppm	100 mg/m ³	20 ppm	20 ppm
Methyl ethyl ketone	Not applicable	200 ppm	590 mg/m ³	200 ppm	200 ppm
1,3,5 Trimethylbenzene	Not applicable	25 ppm	100 mg/m ³	20 ppm	20 ppm

Substances	Italy	Poland	Hungary	Czech Republic	Denmark
Cyclohexanol	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

Substances	Italy	Poland	Hungary	Czech Republic	Denmark
Heavy aromatic petroleum naphtha	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Naphthalene	Not applicable	20 mg/m ³	50 mg/m ³	50 mg/m ³	Not applicable
Cyclohexanone	10 ppm	40 mg/m ³	40.8 mg/m ³	40 mg/m ³	Not applicable
1,2,4 Trimethylbenzene	20 ppm	100 mg/m ³	100 mg/m ³	100 mg/m ³	Not applicable
Methyl ethyl ketone	200 ppm	450 mg/m	600 mg/m ³	600 mg/m ³	Not applicable
1,3,5 Trimethylbenzene	20 ppm	100 mg/m ³	100 mg/m ³	100 mg/m ³	Not applicable

Derived No Effect Level (DNEL) No information available.
Predicted No Effect Concentration (PNEC) No information available.

Exposure controls

Engineering Controls

Use in a well ventilated area. Local exhaust ventilation should be used in areas without good cross ventilation.

Personal protective equipment

Respiratory Protection

Organic vapor respirator.

Hand Protection

Impervious rubber gloves.

Skin Protection

Rubber apron.

Eye Protection

Chemical goggles; also wear a face shield if splashing hazard exists.

Other Precautions

Eyewash fountains and safety showers must be easily accessible.

Environmental Exposure Controls

No information available

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State: Liquid

Odor: Sweet aromatic

Color: Amber

Odor Threshold: No information available

Property

Remarks/ Method

pH:

Melting Point/Range

Freezing Point/Range (C):

Boiling Point/Range

Flash Point

Evaporation rate

Vapor Pressure

Vapor Density

Specific Gravity

Water Solubility

Solubility in other solvents

Partition coefficient: n-octanol/water

Autoignition Temperature

Decomposition Temperature

Viscosity

Explosive Properties

Oxidizing Properties

Values

No data available

No data available

No data available

No data available

50.3°C

< 0.1

No data available

No data available

No data available

Insoluble in water

No data available

No information available

Other information

VOC Content (%)

No data available

10. STABILITY AND REACTIVITY

Reactivity

Not applicable

Chemical Stability

Stable

Possibility of Hazardous Reactions

Will Not Occur

Conditions to Avoid

10. STABILITY AND REACTIVITY

Keep away from heat, sparks and flame.

Incompatible Materials

Strong oxidizers.

Hazardous Decomposition Products

Carbon monoxide and carbon dioxide.

11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Acute Toxicity

Inhalation

May cause central nervous system depression including headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness.

May cause respiratory irritation.

Eye Contact

May cause eye irritation.

Skin Contact

May cause skin irritation.

Ingestion

Aspiration into the lungs may cause chemical pneumonitis including coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal. May cause central nervous system depression including headache, dizziness, drowsiness, muscular weakness, incoordination, slowed reaction time, fatigue blurred vision, slurred speech, giddiness, tremors and convulsions.

Chronic Effects/Carcinogenicity Repeated overexposure may cause liver and kidney effects. Prolonged or repeated exposure may cause central nervous system and brain effects. The International Agency for Research on Cancer (IARC) has evaluated naphthalene and determined it to be a possible carcinogen to humans (Group 2B, based on sufficient evidence in experimental animals and inadequate evidence in humans).

Substances	LD50 Oral	LD50 Dermal	LC50 Inhalation
Cyclohexanol	LD50: 1400 mg/kg	No data available	LC50: >3.6 mg/L 4 h
Heavy aromatic petroleum naphtha	LD50: > 5000 mg/kg	LD50: > 2000 mg/kg	LC50: > 590 mg/m ³ 4 h
Naphthalene	LD50: 490 mg/kg	No data available	LC50: > 340 mg/m ³ 1 h
Cyclohexanone	1530 mg/kg	948 mg/kg	8000 ppm/4 h
1,2,4 Trimethylbenzene	LD50: 3400 mg/kg	LD50: > 3160 mg/kg	LC50: 18 g/m ³ 4 h
Methyl ethyl ketone	LD50: 2737 mg/kg	LD50: 6480 mg/kg	LC50: 32 g/m ³ 4 h
1,3,5 Trimethylbenzene	LD50: 5000 mg/kg	No data available	LC50: 24 g/m ³ 4 h

12. ECOLOGICAL INFORMATION

Toxicity

Ecotoxicity Effects

Substances	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Cyclohexanol	EC50: 29.2 mg/L (Desmodesmus subspicatus)	LC50: 704 mg/L (Pimephales promelas); 704 mg/L; LC50: 1100 mg/L (Lepomis macrochirus)	No information available	No information available
Heavy aromatic petroleum naphtha	EC50: < 1 mg/l (Skeletonema costatum)	LC50: 2.34 mg/L (Oncorhynchus mykiss); LC50: 41 mg/L (Pimephales promelas)	No information available	EC50: 0.95 mg/L (Daphnia magna)
Naphthalene	EC50: 0.4 mg/L (Skeletonema costatum)	LC50: 5.74-6.44 mg/L (Pimephales promelas)	No information available	LC50: 2.16 mg/L (Daphnia magna)
Cyclohexanone	EC50: 20 mg/l (Chlorella vulgaris)	LC50: 481-578 mg/L (Pimephales promelas)	No information available	EC50: 800 mg/l (Daphnia magna)

12. ECOLOGICAL INFORMATION

1,2,4 Trimethylbenzene	No information available	LC50: 7.19-8.28 mg/L (Pimephales promelas)	No information available	EC50: 6.14 mg/L (Daphnia magna)
Methyl ethyl ketone	No information available	LC50: 3130-3320 mg/L (Pimephales promelas)	No information available	EC50: 5091 mg/L (Daphnia magna)
1,3,5 Trimethylbenzene	No information available	LC50: 3.48 mg/L (Pimephales promelas)	No information available	EC50: 50 mg/L (Daphnia magna)

Persistence and degradability

Not readily biodegradable

Bioaccumulative potential

No information available

Substances	Log Pow
Heavy aromatic petroleum naphtha	2.9 - 6.1
Naphthalene	3.28
1,2,4 Trimethylbenzene	3.42

Mobility in soil

No information available

Results of PBT and vPvB assessment

No information available.

Other adverse effects

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal Method	Disposal should be made in accordance with federal, state, and local regulations.
Contaminated Packaging	Follow all applicable national or local regulations.

14. TRANSPORT INFORMATION

IMDG/IMO

UN Number:	UN1268,
UN Proper Shipping Name:	Petroleum Distillates, N.O.S.
Transport Hazard Class(es):	, 3
Packing Group:	, III
EMS:	EmS F-E, S-E

RID

UN Number:	UN1268,
UN Proper Shipping Name:	Petroleum Distillates, N.O.S.
Transport Hazard Class(es):	, 3
Packing Group:	, III

ADR

UN Number:	UN1268,
UN Proper Shipping Name:	Petroleum Distillates, N.O.S.
Transport Hazard Class(es):	, 3
Packing Group:	, III

IATA/ICAO

UN Number:	UN1268,
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14. TRANSPORT INFORMATION

UN Proper Shipping Name: Petroleum Distillates, N.O.S.
Transport Hazard Class(es): , 3
Packing Group: , III

Special Precautions for User None

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

15. REGULATORY INFORMATION**Safety, health and environmental regulations/legislation specific for the substance or mixture****International Inventories**

EINECS Inventory This product, and all its components, complies with EINECS
US TSCA Inventory All components listed on inventory or are exempt.
Canadian DSL Inventory All components listed on inventory or are exempt.

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

Germany, Water Endangering Classes (WGK) WGK 2: Hazard to waters.

Chemical Safety Assessment

No information available

16. OTHER INFORMATION**Full text of R-phrases referred to under Sections 2 and 3**

R40 Limited evidence of a carcinogenic effect.

R20/22 Harmful by inhalation and if swallowed.

R36/37/38 Irritating to eyes, respiratory system and skin.

Key literature references and sources for data

www.ChemADVISOR.com/

Revision Date: 02-May-2012
Revision Note Not applicable

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer Statement

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End of Safety Data Sheet