

SIBUR TOBOLSK LLC

SAFETY DATA SHEET

According to 1907/2006/EC (REACH), 1272/2008 (CLP) & 453/2010

NAPHTA

VERSION: 2.2
Date created: 17/05/2016

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

1.1 Product identifier

PRODUCT NAME: Solvent naphtha (petroleum), light aliph.
SYNONYMS: Low boiling point naphtha, Gasoline
TRADE NAMES: Naphta, Gasoline
Index No 649-267-00-0
CAS #: 64742-89-8
EC #: 265-192-2
REGISTRATION #: 01-2119471306-40-0005

1.2. Relevant identified uses of the substance

See Annex I

Uses advised against: The use of the substance should be limited to those specified in Annex I.

1.3 Details of the supplier of the safety data sheet

SUPPLIER

Company name: SIBUR Tobolsk LLC
Address: Promzona, Tobolsk, Tumen region,
626150, Russian Federation
Contact phone: +7 (3456) 398-7-42; 398-9-51
Fax: +7 (3456) 39-89-51
Email Address: tnhk@tn.tob.ru
Emergency Telephone: +7 (3456) 398-7-63, +7 (912) 922-33-24 (office hours only)

ONLY REPRESENTATIVE:

Company name: Gazprom Marketing and Trading France
Address: 68 avenue des Champs-Élysées, Paris, 75008,
France
Contact phone: +33 1 42 99 73 50
Fax: +33 1 42 99 73 99
Email address: yury.severinchik@gazprom-mt.com

Emergency phone in the country of delivery: 112 (Please note that emergency numbers may vary depending upon the country of delivery though 112 remains valid as universal number)

2. HAZARDS IDENTIFICATION

2.1 CLASSIFICATION

Low boiling point naphtha

VERSION: 2.2

DATE CREATED: 17/05/2016

CLASSIFICATION ACCORDING TO DSD / DPDPhysical/Chemical Hazards:

F+; R12 Extremely flammable;

Health Hazards:

Xn; R65 Harmful; Harmful: may cause lung damage if swallowed

R67. Vapours may cause drowsiness and dizziness

Xi; R38 Irritant; Irritating to skin

Carc. Cat. 2; R45 May cause cancer

Muta. Cat. 2; R46 May cause heritable genetic damage

Muta. Cat. 3; R62 Possible risk of impaired fertility

Environmental hazards:

N; R51/53 Dangerous for the environment; Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

CLASSIFICATION ACCORDING TO EU CLP 2008Physical/Chemical Hazards:

Flam. Liquid 1 (Hazard statement: H224: Extremely flammable liquid and vapour)

Health Hazards:

Skin: Skin Irritation 2. H315: Causes skin irritation.

Aspiration hazard: Asp. Tox. 1 H304. May be fatal if swallowed and enters airways

Repr.2. H361 Suspected of damaging fertility or the unborn child.

Germ cell mutagenicity: Muta. 1B. H340. May cause genetic defects

Carcinogenicity: Carc. 1B. H350. May cause cancer

Specific target organ toxicity - single: STOT Single Exp. 3. H336: May cause drowsiness or dizziness.

Environmental hazards:

Aquatic Chronic 2 H411: Toxic to aquatic life with long lasting effects

2.2 LABELLING**EU LABELLING****F+ (extremely flammable)****Xn (harmful)****N (dangerous for the environment)****Symbol: F+; Xn; N**

CLP LABELLING

Signal word: Danger

Hazard pictogram



GHS02: flame



GHS07: exclamation mark



GHS08: health hazard



GHS09: environment

The Full Text for all S, P-Phrases is displayed in Section 15.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Naphta is a complex combination of hydrocarbons obtained from the distillation of crude oil or natural gasoline. It consists predominantly of saturated hydrocarbons having carbon numbers predominantly in the range of C₅ through C₁₀ and boiling in the range of approximately 35 °C to 160 °C.

| Name EC-No | EC-No | CAS-No | Content % | Classification 67/548 and EEC/EU CLP 2008 |
|--|-----------|------------|-----------|--|
| Naphta | 265-192-2 | 64742-89-8 | 100 | F+:R12, CMR2&2:R45/46, Repr.3: R62; Repr.3: R63; N:R51/53 H224;H315;H304;H361;H340;H350; H336; H411 |
| Including substances affecting general product classification and labelling: | | | | |
| Benzene | 200-753-7 | 71-43-2 | 0.2-1.6 | F:R11, CMR1&2:R45/46, T:R48/23/24/25, Xn:R65, Xi: R36/38 |
| n-hexane | 203-777-6 | 110-54-3 | 6.0-20.0 | F:R11, CMR3/R62, Xn:R48/20-65 Xi: R38, R67, N:R51/53 |
| toluene | 203-625-9 | 108-88-3 | 0.16-1.1 | F:R11;Car3:R63; Xn:R48/20, R65 Xi:R38,67 |
| n-pentane | 203-692-4 | 109-66-0 | 5.0-55.0 | F+:R12, Xn:R65, R66, R67, N:R51/53 |
| 2-methylbutane | 201-142-8 | 78-78-1 | 0.1- 33.5 | F+:R12, Xn:R65, R66, R67, N:R51/53 |
| 2-methylpentane | 203-523-4 | 107-83-5 | 5.5-17.0 | F:R11, Xn:R65, Xi:R38, R67, N:R51/53 |
| Butane | 203-448-7 | 106-97-8 | 0.1-7.0 | F+:R12 |
| methylcyclopentane | 202-503-2 | 96-37-7 | 3.0-14.0 | F:R11, R52/53 |
| cyclohexane | 203-806-2 | 110-82-7 | 1.0-5.5 | F:R11, Xn:R65, Xi: R38, R67, |

| | | | | |
|-------------------|-----------|----------|---------|--|
| | | | | N:R50/53 |
| n-heptane | 205-563-8 | 142-82-5 | 1.3-4.9 | R11, Xn:R65, Xi: R38, R67, N:R50/53 |
| 3-methylpentane | 202-481-4 | 96-14-0 | 3.0-9.5 | F:R11, Xn:R65, Xi: R38, R67, N:R51/53 |
| methylcyclohexane | 203-624-3 | 108-87-2 | 0.5-6.5 | F:R11, Xn:R65, Xi: R38, R67, N:R51/53 |
| cyclopentane | 206-016-6 | 287-92-3 | 1.5-5.5 | F:R11, R52/53 |
| 3-methylhexane | 209-643-3 | 589-34-4 | 0.1-2.7 | F:R11, Xn:R65, Xi: R38, R67, N:R50/53 |

Specific Conc. Limits (CLP): none

4. FIRST-AID MEASURES

WARNING BEFORE INTERVENTION

Before attempting to rescue casualties, isolate area from all potential sources of ignition including disconnecting electrical supply.

Ensure adequate ventilation and check that a safe, breathable atmosphere is present before entry into confined spaces.

Drench contaminated clothing with water before removing to avoid risk of sparks from static electricity.

INHALATION

Symptoms: inhalation of vapours may cause headache, nausea, vomiting and an altered state of consciousness.

If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

If the casualty is unconscious and:

* Not breathing – ensure that there is no obstruction to breathing and give artificial respiration by trained personnel. If necessary, give external cardiac massage and obtain medical assistance.

* Breathing - place in the recovery position and keep the head below the level of the torso. Administer oxygen if necessary;

Obtain medical attention if casualty has an altered state of consciousness or if symptoms do not resolve.

INGESTION

Symptoms: few or no symptoms expected. If any, nausea and diarrhoea might occur.

Ingestion (swallowing) of this material may result in an altered state of consciousness and loss of coordination

In case of ingestion, always assume that aspiration has occurred .The casualty should be sent immediately to a hospital. Do not wait for symptoms to develop.

Do not induce vomiting as there is high risk of aspiration.

Do not give anything by mouth to an unconscious person.

SKIN CONTACT

Symptoms: reddening, irritation.

Remove contaminated clothing and footwear, and dispose of safely

Wash affected area with soap and water.

Seek medical attention if skin irritation, swelling or redness develops and persists.

When using high-pressure equipment, injection of product can occur. If high-pressure injuries occur, immediately seek professional medical attention. Do not wait for symptoms to develop

For minor thermal burns: Cool the burn. Hold the burned area under cold running water for at least five minutes, or until the pain subsides. However, body hypothermia must be avoided.

EYE CONTACT

Symptoms: slight irritation (unspecific).

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.

If irritation, blurred vision or swelling occurs and persists, obtain medical advice from a specialist.

5. FIRE-FIGHTING MEASURES

PRODUCT SPECIFIC HAZARDS AND OTHER ISSUES

This substance will float and can be reignited on surface water.

EXTINGUISHING MEDIA

- Foam (Specifically trained personnel only)
- Water fog (Specifically trained personnel only)
- Dry chemical powder
- Carbon dioxide
- Other inert gases (subject to regulations)
- Sand or earth

UNSUITABLE EXTINGUISHING MEDIA

Do not use direct water jets on the burning product; they could cause splattering and spread the fire. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

COMBUSTION PRODUCTS

Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates and gases, including carbon monoxide and unidentified organic and inorganic compounds.

PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

In case of a large fire or in confined or poorly ventilated spaces wear full fire resistant protective clothing and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

GENERAL INFORMATION

Stop or contain leak at the source if safe to do so. Avoid direct contact with released material. Stay upwind. In case of large spillages, alert occupants in downwind areas.

Keep non-involved personnel away from the area of spillage. Alert emergency personnel.

Except in case of small spillages, the feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency.

Eliminate all ignition sources if safe to do so (e.g. electricity, sparks, fires, flares).

If required, notify relevant authorities according to all applicable regulations.

PERSONAL PROTECTION EQUIPMENT FOR EMERGENCY RESPONDERS

Small spillages: normal antistatic working clothes are usually adequate. Large spillages: full body suit of chemically resistant and antistatic material

Work gloves providing adequate chemical resistance, specifically to aromatic hydrocarbons. Note: gloves made of PVA are not water-resistant, and are not suitable for emergency use.

Work helmet. Antistatic non-skid safety shoes or boots

Goggles or face shield, if splashes or contact with eyes is possible or anticipated.

Respiratory protection: A half or full-face respirator with filter(s) for organic vapours (and when applicable for H₂S) or a Self Contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.

SPILLAGES ONTO LAND

Prevent product from entering sewers, rivers, waterways or other bodies of water

If necessary dike the product with dry earth, sand or similar non-combustible materials.

Large spillages may be cautiously covered with foam, if available, to limit vapour cloud formation.

Do not use direct jets

When inside buildings or confined spaces, ensure adequate ventilation.

Absorb spilled product with suitable non-combustible materials.

Collect free product with suitable means. Transfer collected product and other contaminated materials to suitable containers for recovery or safe disposal.

In case of soil contamination, remove contaminated soil and treat in accordance with local regulations.

SPILLAGES ON WATER OR AT SEA

In case of small spillages in closed waters (i.e. ports), contain product with floating barriers or other equipment. Collect spilled product by absorbing with specific floating absorbents

Large spillages in open waters should be contained with floating barriers or other mechanical means and recovered, only if this is strictly necessary and if fire/explosion risks can be adequately prevented. Otherwise control the spreading of the spillage, and let the substance evaporate naturally. The use of dispersants should be advised by an expert, and, if required, approved by local authorities.

Collect all waste materials in suitable tanks or containers for recovery or safe disposal.

ADDITIONAL INFORMATION

1. Note: recommended measures are based on the most likely spillage scenarios for this material; however, local conditions (wind, air temperature, wave/current direction and speed) may significantly influence the choice of appropriate actions. For this reason, local experts should be consulted when necessary. Local regulations may also prescribe or limit actions to be taken.

PERSONAL PRECAUTIONS

See section 8.

7. HANDLING AND STORAGE

GENERAL INFORMATION

Obtain special instructions before use.

Risk of explosive mixtures of vapour and air. Ensure that all relevant regulations regarding explosive atmospheres, and handling and storage facilities of flammable products, are followed.

Keep away from heat/sparks/open flames/hot surfaces. – No smoking

Use and store only outdoors or in a well-ventilated area

Avoid contact with the product.

Avoid release to the environment.

VERSION: 2.2

DATE CREATED: 17/05/2016

HANDLING

Take precautionary measures against static electricity.

Ground/bond containers, tanks and transfer/receiving equipment

Use explosion-proof electrical/ventilating/lighting equipment

Use only non-sparking tools

The vapour is heavier than air. Beware of accumulation in pits and confined spaces.

Use only bottom loading of tankers, in compliance with European legislation.

Do not use compressed air for filling, discharging, or handling operations.

Avoid contact with skin and eyes. Do not ingest. Do not breathe vapours.

Use personal protective equipment as required.

For more information regarding protective equipment and operational conditions see Exposure scenarios.

STORAGE

Storage area layout, tank design, equipment and operating procedures must comply with the relevant European, national or local legislation.

Storage installations should be designed with adequate bunds so as to prevent ground and water pollution in case of leaks or spills.

Cleaning, inspection and maintenance of the internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations.

Before entering storage tanks and commencing any operation in a confined area check the atmosphere for oxygen content and flammability. (Subject to applicability) If sulphur compounds are suspected to be present in the product, check the atmosphere for H₂S content.

Store separately from oxidising agents.

RECOMMENDED AND UNSUITABLE MATERIALS FOR STORAGE

Recommended materials: For containers, or container linings use mild steel, stainless steel.

Unsuitable materials: Some synthetic materials may be unsuitable for containers or container linings depending on the material specification and intended use. Compatibility should be checked with the manufacturer.

CONTAINER ADVICE

If the product is supplied in containers:

Keep only in the original container, or in an approved container for this kind of product.

Keep containers tightly closed and properly labelled. Protect from the sunlight

Light hydrocarbon vapours can build up in the headspace of containers. These can cause flammability / explosion hazards. Open slowly in order to control possible pressure release.

Empty containers may contain flammable product residues. Do not weld, solder, drill, cut or incinerate empty containers, unless they have been properly cleaned.

HYGIENE MEASURES

Ensure that proper housekeeping measures are in place.

Contaminated materials should not be allowed to accumulate in the workplace and should never be kept inside the pockets.

Keep away from food and beverages.

Do not eat, drink or smoke when using this product.

Wash the hands thoroughly after handling.

Change contaminated clothes at the end of working shift.

For more information please see the relevant exposure scenario in Appendix II of this SDS

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

PROTECTIVE EQUIPMENT

Protective gloves, safety goggles, breathing apparatus and protective clothing.

RESPIRATORY EQUIPMENT

Wear breathing apparatus.

HAND PROTECTION

Wear appropriate protective gloves to prevent skin exposure.

EYE PROTECTION

Wear approved safety goggles.

HYGIENE MEASURES

Wash at the end of each work shift and before eating, drinking, smoking or using the toilet.

SKIN PROTECTION

Wear protective clothing and boots.

DN(M)ELs for workers (R45/46; R62/63)

| | Effect | Route | DNEL | Dose Descriptor |
|--------------------|----------|------------|------------------------------------|---|
| Acute Exposure | Systemic | Dermal | (a) | |
| | | Inhalation | 1300 mg/m ³ /15 min (a) | 4320 mg/m ³ /h (LOAEC based on for neuromuscular symptoms in human volunteers) |
| | Local | Inhalation | 1100 mg/m ³ /15 min | 2400 mg/m ³ /h (LOAEC based on irritation of nose and throat in human volunteers) |
| Long-Term Exposure | Systemic | Dermal | (a) | |
| | | Inhalation | (a) | |
| | Local | Inhalation | 840 mg/m ³ /8h | 10,000 mg/m ³ /6h (NOAEC based on red nasal discharge in rats exposed by inhalation for 6 h/day, 5 days/wk for 13 wk) |

a) Additional consideration should be given to an inhalation DMEL-worker for benzene of 1 ppm if benzene air concentrations are sufficiently high. A dermal reference value for workers of 23.4 mg of benzene/kg/day (1 % absorption of benzene from benzene-containing petroleum naphtha streams via the skin) should be considered if dermal exposure is expected.

DN(M)ELs for the general population (R45/46; R62/63)

| | Effect | Route | DNEL | Dose Descriptor |
|----------------|----------|------------|------------------------------------|--|
| Acute Exposure | Systemic | Dermal | (a) | |
| | | Inhalation | 1200 mg/m ³ /15 min (a) | 4320 mg/m ³ /h (LOAEC based on for neuromuscular symptoms in human volunteers) |

| | | | | |
|--------------------|----------|------------|--------------------------------|---|
| | Local | Inhalation | 640 mg/ m ³ /15 min | 2400 mg/m ³ /h (LOAEC based on irritation of nose and throat in human volunteers) |
| Long-Term Exposure | Systemic | Dermal | (a) | |
| | | Inhalation | (a) | |
| | | Oral | (a) | |
| | Local | Inhalation | 180 mg/m ³ /24h | 10,000 mg/m ³ /6h (NOAEC based on red nasal discharge in rats exposed by inhalation for 6 h/day, 5 days/wk for 13 wk) |

a) Additional consideration should be given to an inhalation DMEL-general population for benzene of 1 ppb if benzene air concentrations are sufficiently high. Using this air concentration reference value for benzene in air of 1 ppb (3.5 microgram/m³) and assuming a default inhalation rate of 20 m³/day and a body weight of 70 kg yields a reference value for indirect exposure of 1.0 microgram benzene/kg/d. The ratio of benzene to total gasoline vapor utilized was 0.01. Thus, the resulting reference value utilized for indirect exposure of man via the environment is 100 micrograms total naphtha hydrocarbon containing benzene/kg/d. A dermal reference value for general population of 23.4 micrograms of benzene/kg/day [1 % absorption of benzene from benzene-containing petroleum naphtha streams via the skin], should be considered if dermal exposure is expected. An oral reference value for general population, of 0.234 micrograms of benzene/kg/day, from benzene-containing petroleum naphtha streams in the environment should be considered if exposure via the oral route is expected (this is not expected).

EXPOSURE LIMITS

ACGIH 300 ppm TWA
 NIOSH none listed
 OSHA none listed

PROTECTIVE EQUIPMENT

Protective gloves, safety goggles, breathing apparatus and protective clothing.

RESPIRATORY EQUIPMENT

Wear breathing apparatus.

HAND PROTECTION

Wear appropriate protective gloves to prevent skin exposure.

EYE PROTECTION

Wear approved safety goggles.

HYGIENE MEASURES

Wash at the end of each work shift and before eating, drinking, smoking or using the toilet.

SKIN PROTECTION

Wear protective clothing and boots.

For more information please see the relevant exposure scenario in Appendix II of this SDS

9. PHYSICAL AND CHEMICAL PROPERTIES

| Property | Value | Remarks |
|--|-------------------------------------|--|
| State of the substance at 20°C and 101,3 kPa | Liquid | All low boiling point naphthas are low viscosity, mobile, volatile hydrocarbon liquids. |
| Melting/freezing point | Not applicable | Single values for the category or individual UVCB members are not applicable. Data not required as freezing point is less than -20°C (REACH Annex VII). |
| Boiling point | Boiling point range -88 to 260°C | Single values for the category or individual UVCB members are not applicable. Indicative values for the category are -88°C to 260°C as calculated by the EN ISO 3405 and ASTM D-86 methods. These are based on the Category domain and representative values for products and individual category members. |
| Absolute Density | 0.62-0.88 kg/mi | Single values for the category or individual UVCB members are not applicable. Indicative values for the category for absolute density range 0.62 to 0.88 kg/mi at 15°C. |
| Vapour pressure | 4 - 240 kPa @37.8 °C | Single values for the category or individual UVCB members are not applicable. Indicative values for the category for vapour pressure range are 4 to 240 kPa at 37.8°C. |
| Surface tension | Not applicable | In line with REACH Annex VII, data on surface tension are not required as, based on structural considerations, surface activity is not expected or predicted, and surface activity is not a desired property of the material. |
| Water solubility | Not applicable | Substance is a hydrocarbon UVCB. Standard tests for water solubility are intended for single substances and are not appropriate for this complex substance. |
| Partition coefficient n-octanol/water | Not applicable | Substance is a hydrocarbon UVCB. Standard tests for partition co-efficient are intended for single substances and are not appropriate for this complex substance. |
| Flash-point | <0°C to < 21 °C | Single values for the category or individual UVCB members are not applicable. The values for the category are generally in the range < 0 °C to < 21 °C. |
| Flammability | Extremely Flammable | Single values for the category or individual UVCB members are not applicable. Gasoline naphthas are classified for flammability based on flash point data. The flammability range for substances that comprise the gasoline naphtha category is 1.4% (LFL) to 7.6% (UFL). |
| Explosive properties | Non-explosive | Low Boiling Point Naphthas (Gasolines) are not |

| Property | Value | Remarks |
|-------------------------------|--|---|
| | | considered explosive, based on structural and oxygen balance considerations. |
| Self-ignition temperature | 280 to 470 °C | Single values for the category or individual UVCB members are not applicable The auto flammability range for substances included in this category is 280 to 470°C. |
| Oxidising properties | Not oxidising | In accordance with column 2 of REACH Annex VII, this study need not be conducted if the substance is highly flammable. |
| Granulometry | NA | Substance is a liquid. In accordance with column 2 of REACH Annex VII, the study does not need to be conducted if the substance is marketed or used in a non solid or granular form |
| Stability in organic solvents | NA | Substances that comprise the Low Boiling Point Naphtha (Gasoline) category all comprise combinations of organic hydrocarbons. Stability in organic solvents is therefore not considered relevant for this category. |
| Dissociation constant | NA | In accordance with REACH Chapter R.7A Endpoint Specific Guidance, specifically R.7.1.17.1 Information Requirements on Dissociation Constant, if the substance cannot dissociate due to a lack of relevant functional groups, the dissociation constant is not required. As petroleum hydrocarbons do not contain functional groups subject to dissociation, data for this endpoint is not needed. |
| Viscosity | Less than 7 mm ² /sec @ 40°C | The viscosity of substances that are included in the gasoline naphtha category is typically <1 mm ² /sec @ 37.8°C |

10. STABILITY AND REACTIVITY

STABILITY

Stable at room temperature in closed containers under normal storage and handling conditions.

MATERIALS TO AVOID

Oxidizing agents.

CONDITIONS TO AVOID

Ignition sources, excess heat, prolonged exposure to air.

HAZARDOUS DECOMPOSITION PRODUCTS

Carbon monoxide, carbon dioxide.

11. TOXICOLOGICAL INFORMATION

| Property | Relevance to Category | Value | Remarks |
|--|-----------------------|---|---|
| Skin irritation or skin corrosion | | | |
| In vivo skin irritation | Yes | Irritant | Based on key study test data. |
| Eye irritation | | | |
| In vivo eye irritation | Yes | Not irritant | Based on key study test data. |
| Skin sensitisation | Yes | No evidence of sensitisation | Based on key study test data. |
| Mutagenicity | | | |
| In vitro gene mutation study in bacteria | No | Not applicable | Bacterial mutation studies have been shown to be unreliable for predicting the effects of petroleum hydrocarbons. |
| In vitro cytogenicity study in mammalian cells | Yes | Negative | |
| In vitro gene mutation study in mammalian cells | Yes | Mostly negative but isolated positive or equivocal mouse lymphoma studies. | |
| In vivo cytogenicity | Yes | Negative | |
| In vivo gene mutation | Yes | Negative | |
| | | Mutagenic | Most mutagenicity studies are negative but most members of this category of complex UVCB petroleum substances contain more than 0.1% benzene. |
| Acute toxicity | | | |
| By oral route | Yes | > 5000 mg/kg | Based on key study test data. |
| By inhalation | Yes | >5610mg/m* | Based on key study test data. |
| By dermal route | Yes | > 2000 mg/kg | Based on key study test data. |
| Repeated dose toxicity | | | |
| Short-term repeated dose toxicity study (28 days) | Yes | Rat dermal NOAEL 3750 mg/kg/day Rat inhalation NOAEL 9840 mg/m³ air | Based on key study test data - 28 day rat dermal. Based on key study test data - 28 day rat inhalation |
| Sub-chronic toxicity study (90-day) | Yes | Rat inhalation NOAEL 20000mg/m³ | Based on key study test data - 90 day rat inhalation |
| Reproductive toxicity | | | |
| Screening for reproductive/developmental toxicity (OECD421 or 422) | Yes | Rat inhalation NOAEL > 20000 mg/m³ | Based on key study test data. No effect on development observed. However content of toluene may result in hazard |

| Property | Relevance to Category | Value | Remarks |
|--|-----------------------|---|---|
| | | | classification for development. |
| Pre-natal developmental toxicity study | No | NA | See screening data. |
| Two-generation reproductive toxicity study | Yes | Rat inhalation NOAEL > 20000 mg/m ³ | Based on key study test data - 2 generation fertility study. No effect on fertility observed. However content of n-hexane may result in hazard classification for fertility. |
| Toxicokinetics | | | |
| Assessment of the toxicokinetic behaviour of the substance | No | ND | Substances in this category are UVCBs. It is not possible to apply standard methodology for assessing absorption, distribution and metabolism. Data on gasoline constituents can be used as the basis for understanding the toxicokinetics of gasoline or naphthas, and are included in the dossier |
| Carcinogenicity | | | |
| Carcinogenicity study | Yes | Carcinogenic, (based on presence of more than 0.1% benzene. | .Carcinogenicity data available following inhalation or dermal exposure do not support classification of gasoline perse as carcinogenic. There is however an EU regulatory requirement to classify gasoline and naphtha streams containing > 0.1% benzene as carcinogenic. |

12. ECOLOGICAL INFORMATION

| Property | Relevance to Category | Value | Remarks |
|--|-----------------------|--|--|
| Aquatic toxicity | | | |
| Short-term toxicity testing on invertebrates (preferred species Daphnia) | Yes | EL50 =4.5mg/l (<i>Daphnia Magna</i>) | Based on key study. Test material was a water accommodated fraction. |
| Growth inhibition study aquatic plants (algae preferred) | Yes | 72 hr EL50 =3.1 mg/l (<i>Selenastrum capricornutum</i>) | Based on key study. Test material was a water accommodated fraction, |
| Short-term toxicity testing on fish. | Yes | LL50 = 8.2 mg/l (<i>Pimephales</i>) | Based on key study. Test material was a water accommodated fraction |

| Property | Relevance to Category | Value | Remarks |
|--|-----------------------|---|---|
| | | <i>promelas</i>) | |
| Activated sludge respiration inhibition testing | No | Not applicable | Substance is a hydrocarbon UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for this complex substance. |
| Long-term toxicity testing on invertebrates (preferred species Daphnia) | Yes | NOEC= 21d 2.6 mg/l (reproduction study) (<i>Daphnia magna</i>) | Based on key study. Test material was a water accommodated fraction |
| Long-term toxicity testing on fish: -Fish early-life stage (FELS) toxicity test; -Fish short-term toxicity test on embryo and sac-fry stages; -Fish, juvenile growth test | Yes | No data | Read across has been applied for this endpoint, using the results of long-term toxicity testing on invertebrates (<i>Daphnia magna</i>)- |
| Degradation | | | |
| Biotic | | | |
| Ready biodegradability | Yes | Not applicable | Substance is a hydrocarbon UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for this complex substance. |
| Simulation testing on ultimate degradation in surface water | Yes | Not applicable | Substance is a hydrocarbon UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for this complex substance. |
| Soil simulation testing (for substances with a high potential for adsorption to soil) | No | Not applicable | Substance is a hydrocarbon UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for this complex substance. |
| Sediment simulation testing (for substances with a high potential for adsorption to sediment) | No | Not applicable | Substance is a hydrocarbon UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for this complex substance. |
| Abiotic | | | |
| Abiotic hydrolysis as a function of pH. | No | Not applicable | The available data and available weight of evidence demonstrate that naphthas are resistant to hydrolysis because they lack a functional group that is hydrolytically reactive. Further testing is not required under |

| Property | Relevance to Category | Value | Remarks |
|--|-----------------------|----------------|--|
| | | | Annex XI, section 1.2. |
| Identification of degradation products | No | Not applicable | Substance is a hydrocarbon UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for this complex substance |
| Fate and behaviour in the Environment | | | |
| Adsorption/desorption screening | No | Not applicable | Substance is a hydrocarbon UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for this complex substance. |
| Bioaccumulation in aquatic species, preferably fish | No | Not applicable | Substance is a hydrocarbon UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for this complex substance. |
| Further information on adsorption/desorption. | No | Not applicable | Substance is a hydrocarbon UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for this complex substance. |
| Further information on the environmental fate and behaviour of the substance and/or degradation products | No | Not applicable | Substance is a hydrocarbon UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for this complex substance. |
| Effects on terrestrial organisms | | | |
| Short-term toxicity to invertebrates | No | Not applicable | Substance is a hydrocarbon UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for this complex substance. |
| Effects on soil micro-organisms | No | Not applicable | Substance is a hydrocarbon UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for this complex substance. |
| Short-term toxicity to plants | No | Not applicable | Substance is a hydrocarbon UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for this complex substance. |
| Long-term toxicity testing on invertebrates | No | Not applicable | Substance is a hydrocarbon UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for this complex substance. |

| Property | Relevance to Category | Value | Remarks |
|---|--|----------------|---|
| Long-term toxicity testing on plants | No | Not applicable | Substance is a hydrocarbon UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for this complex substance. |
| Long-term toxicity to sediment organisms | No | Not applicable | Substance is a hydrocarbon UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for this complex substance. |
| Long-term or reproductive toxicity to birds | No | Not applicable | In accordance with Column 2 of REACH Annex X, studies on long-term or reproductive toxicity to birds do not need to be conducted due to the existence of a large mammalian dataset demonstrating little toxicity to higher organisms. |
| <u>PBT/vPvB Properties</u> | Naphta is neither a PBT nor a vPvB substance. | | |
| Emission Characterisation | Emission Characterisation is not required because the substance does not fulfill the PBT / vPvB criteria | | |

13. DISPOSAL CONSIDERATIONS

GENERAL INFORMATION

Place into a suitable closed container for disposal.

DISPOSAL METHODS

Dispose of in accordance with local and national regulations. All equipment must be grounded. DO NOT CUT, DRILL, GRIND, WELD OR PERFORM SIMILAR OPERATIONS ON OR NEAR CONTAINERS EVEN WHEN EMPTY.

14. TRANSPORT INFORMATION

GENERAL

The product is covered by international regulations on the transport of dangerous goods under UN DOT, hazard class 3 (flammable liquid).

ROAD/RAIL TRANSPORT ADR/RID

UN-Number

UN-1203

UN proper shipping name

MOTOR SPIRIT or GASOLINE or PETROL.

Chemical name

Low boiling point naphtha

Transport hazard class(es)

Class 3 (flammable liquid)

Classification code F1

Packing group
I (Initial boiling point $\leq 35^{\circ}\text{C}$ requires packaging group I)

Labels
Flammable liquids. Environmentally hazardous substance mark.
Hazard identification number (HIN) 33,
UK Emergency action code (EAC) 3YE;
Tunnel restriction code: D/E (Note: ADR requirement only).

INLAND WATERWAY TRANSPORT (AND (R))

UN-Number

UN-1203

UN proper shipping name

MOTOR SPIRIT or GASOLINE or PETROL.

Chemical name

Low boiling point naphtha

Transport hazard class(es)

Class 3 (flammable liquid)

Classification code F1

Packing group: I

Labels

Flammable liquids. Environmentally hazardous substance mark.

MARINE TRANSPORT (IMDG)

Marine pollutant -Yes

UN-Number

UN-1203

UN proper shipping name

MOTOR SPIRIT or GASOLINE or PETROL.

Chemical name

Low boiling point naphtha

Transport hazard class(es)

Class 3 (flammable liquid)

Packing group: I

Labels

Flammable liquids. Marine pollutant mark

EmS

F-E, S-E

VERSION: 2.2

DATE CREATED: 17/05/2016

AIR TRANSPORT ICAO**UN-Number**

UN-1203

UN proper shipping name

MOTOR SPIRIT or GASOLINE or PETROL.

Chemical name

Low boiling point naphtha

Transport hazard class(es)

Class 3 (flammable liquid)

Packing group: I**Labels**

Flammable liquids. Environmentally hazardous substance mark.

15. REGULATORY INFORMATION

Chemical Safety Report has been performed for Low boiling point naphtha

APPENDIX II and III TO THE eSDS: Exposure scenarios for Low boiling point naphtha

S-phrases:

S2-Keep out of the reach of children

S23-Do not breathe fumes/r/spray

S24- Avoid contact with skin

S29-Do not empty into drains

S36/37 - wear suitable protective clothing and gloves

S43 –In case of fire use: dry chemical powder, carbon dioxide, other inert gases (subject to regulations), sand or earth, water fog.

S45 - in case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)

S51-Use only in well-ventilated areas

S53 - avoid exposure - obtain special instructions before use

S61 - avoid release to the environment. refer to special instructions/safety data sheets

S62- If swallowed, do not induce vomiting: seek medical advice immediately

Precautionary statements:

P201: obtain special instructions before use

P210: Keep away from heat/sparks/open flames/... /hot surfaces.... No smoking.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P501: Dispose of absorbed material in accordance with regulations.

UK REGULATORY REFERENCES

Chemicals (Hazard Information & Packaging) Regulations. The Control of Substances Hazardous to Health Regulations 1988. Health and Safety at Work Act 1974.

ENVIRONMENTAL LISTING

Control of Pollution Act 1974.

VERSION: 2.2

DATE CREATED: 17/05/2016

EU DIRECTIVES

System of specific information relating to Dangerous Preparations. 2001/58/EC. Dangerous Preparations Directive 1999/45/EC.

STATUTORY INSTRUMENTS

Notification of New Substances Regulations (NONS) 1993. The Export and Import of Dangerous Chemicals Regulations 2005 number 928.

APPROVED CODE OF PRACTICE

Classification and Labelling of Substances and Preparations Dangerous for Supply (EU 2001/59/EC). Safety Data Sheets for Substances and Preparations (REACH).

GUIDANCE NOTES

Workplace Exposure Limits EH40. Introduction to Local Exhaust Ventilation HS(G)37. CHIP for everyone HSG(108).

NATIONAL REGULATIONS

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002. No. 1689. Workplace Exposure Limits 2005 (EH40).

The Carriage of Dangerous Goods and use of transportable pressure equipment regulations 2004. Control of Substances hazardous to health regulations 2002 (as amended).

NATIONAL REGULATIONS (GERMANY)

Major Accident Hazard Legislation 82/501/EWG.

16. OTHER INFORMATION**16.1 Indication of changes**

| VERSION | Date of change | Section | Description of changes |
|----------------|-----------------------|----------------|--|
| Version: 1 | 17/03/2010 | | HS&E Manager |
| Version: 2.1 | 08/02/2011 | | Version was created according to Regulation (EC) No 1272/2008 (Regulation CLP) & 453/2010. |
| Version: 2.2 | 17/05/2016 | Title, 1.3 | 1. Company name of the Supplier was changed from «Tobolsk-Neftekhim» on «SIBUR Tobolsk». |

DISCLAIMER

This information is based on our current level of knowledge. This information may be subject to revision as new knowledge and experience becomes available, and SIBUR makes no warranties and assumes no liability in connection with any use of this information. Since SIBUR cannot be aware of all aspects of your business and the impact the REACH Regulation has for your company, SIBUR strongly encourages you to get familiar with the REACH Regulation in order to comply with its requirements and timelines.

Annex I

Relevant identified uses of the substance

Table 1. Uses by workers in industrial settings

| Identified use name | Process category | Sector of end use | Exposure scenario reference in the CSR |
|---|---|--|--|
| 01 – Manufacture of Substances (classified as R45 and/or R46 and/or R62 and/or R63; (containing equal to or greater than 1% to 5% benzene)) | 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) 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 PROC 15: Use as laboratory reagent | SU 8: Manufacture of bulk, large scale chemicals (including petroleum products) SU 9: Manufacture of fine chemicals | ES 9.1.1c |
| 01b – Use of substance as intermediate (classified as R45 and/or R46 and/or R62 and/or R63; (containing equal to or greater than 1% to 5% benzene)) | 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) 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 PROC 15: Use as laboratory reagent | SU 8: Manufacture of bulk, large scale chemicals (including petroleum products) SU 9: Manufacture of fine chemicals | ES 9.2.1c |
| 01a – Distribution of | PROC 1: Use in closed process, | | ES 9.3.1c |

| | | | |
|---|--|---|------------------|
| <p>substance (classified as R45 and/or R46 and/or R62 and/or R63; (containing equal to or greater than 1% to 5% benzene))</p> | <p>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) 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 PROC 15: Use as laboratory reagent</p> | | |
| <p>02 – Formulation & (re)packing of substances and mixtures (classified as R45 and/or R46 and/or R62 and/or R63; (containing equal to or greater than 1% to 5% benzene))</p> | <p>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) 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 PROC 15: Use as laboratory reagent</p> | <p>SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys)</p> | <p>ES 9.4.1c</p> |

END OF SDS