

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 08.02.2013

Revision: 08.02.2013

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

- **1.1 Product identifier**
- **Trade name:** Uinta Basin Black Wax Crude Oil
- **CAS Number:**
8002-05-9
- **EC number:**
232-298-5
- **Index number:**
649-049-00-5
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the preparation** Crude Petroleum
- **1.3 Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
LINN Operating, Inc.
600 Travis Suite 5100
Houston, TX 77002
Phone: 281-840-4000
- **1.4 Emergency telephone number:** 303-999-4400

2 Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Sol. 2 H228 Flammable solid.



GHS08 health hazard

Muta. 1B H340 May cause genetic defects.

Carc. 1A H350 May cause cancer.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

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



T; Toxic

Carc. Cat. 2

R45-46: May cause cancer. May cause heritable genetic damage.

R10: Flammable.

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· **Information concerning particular hazards for human and environment:** Not applicable.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the CLP regulation.

· **Hazard pictograms**



GHS02 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labelling:**

Petroleum
benzene

· **Hazard statements**

H228 Flammable solid.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H340 May cause genetic defects.
H350 May cause cancer.
H373 May cause damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P281 Use personal protective equipment as required.
P240 Ground/bond container and receiving equipment.
P264 Wash thoroughly after handling.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321 Specific treatment (see on this label).
P362 Take off contaminated clothing and wash before reuse.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P314 Get medical advice/attention if you feel unwell.
P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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- **Additional information:**
Restricted to professional users.
- **Hazard description:**
- **WHMIS-symbols:**
B3 - Combustible liquid
D2A - Very toxic material causing other toxic effects



- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**



* - Indicates a long term health hazard from repeated or prolonged exposures.

- **HMIS Long Term Health Hazard Substances**

Substance is listed.

- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **3.1 Substances**
- **CAS No. Description**
8002-05-9 Petroleum
- **Identification number(s)**
- **EC number:** 232-298-5
- **Index number:** 649-049-00-5

- **Dangerous components:**

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CAS: 71-43-2


EINECS: 200-753-7


Index number: 601-020-00-8


benzene

 T Carc. Cat. 1, Muta. Cat. 2 R45-46-48/23/24/25;  Xn R65;

 Xi R36/38;  F R11

 Flam. Liq. 2, H225

 Muta. 1B, H340; Carc. 1A, H350; STOT RE 1, H372; Asp. Tox. 1, H304

 Skin Irrit. 2, H315; Eye Irrit. 2, H319

≤ 2,5%

4 First aid measures

4.1 Description of first aid measures

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:**

Immediately rinse with water.

If skin irritation continues, consult a doctor.

· **After eye contact:**

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

· **4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

· **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.

· **For safety reasons unsuitable extinguishing agents:** Water with full jet

· **5.2 Special hazards arising from the substance or mixture** No further relevant information available.

· **5.3 Advice for firefighters**

· **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

6 Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Keep away from ignition sources.

Protect from heat.

· **6.2 Environmental precautions:**

Do not allow product to reach sewage system or any water course.

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Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

· **6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Do not flush with water or aqueous cleansing agents

· **6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

· **7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

· **Information about fire - and explosion protection:**

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

· **7.2 Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:**

Avoid storage near extreme heat, ignition sources or open flame.

· **Information about storage in one common storage facility:**

Store away from foodstuffs.

Store away from oxidizing agents.

· **Further information about storage conditions:** Keep container tightly sealed.

· **7.3 Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

8002-05-9 Petroleum

PEL (USA)	2000 mg/m ³ , 500 ppm
REL (USA)	Short-term value: C 1800* mg/m ³ Long-term value: 350 mg/m ³ *15-min.
TLV (USA)	Rubber solvent TLV withdrawn

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71-43-2 benzene

PEL (USA)	Short-term value: 15* mg/m ³ , 5* ppm Long-term value: 3* mg/m ³ , 1* ppm *table Z-2 for exclusions in 29CFR1910,1028(d)
REL (USA)	Short-term value: 1 ppm Long-term value: 0,1 ppm See Pocket Guide App. A
TLV (USA)	Short-term value: 8 mg/m ³ , 2,5 ppm Long-term value: 1,6 mg/m ³ , 0,5 ppm Skin; BEI
EL (Canada)	Short-term value: 2,5 ppm Long-term value: 0,5 ppm Skin; ACGIH A1; IARC 1
EV (Canada)	Short-term value: 2,5 ppm Long-term value: 0,5 ppm Skin

· **Ingredients with biological limit values:**

71-43-2 benzene

BEI (USA)	25 µg/g creatinine Medium: urine Time: end of shift Parameter: S-Phenylmercapturic acid (background)
	500 µg/g creatinine Medium: urine Time: end of shift Parameter: t,t-Muconic acid (background)

· **8.2 Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work.
- Store protective clothing separately.

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**

Contact lenses should not be worn.



Safety glasses

- **Limitation and supervision of exposure into the environment**

No further relevant information available.

- **Risk management measures**

See Section 7 for additional information.

No further relevant information available.

9 Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:	Solid
Colour:	Black
Odour:	Petroleum-like
Odour threshold:	Not determined.

- **pH-value:** Not determined.

- **Change in condition**

Melting point/Melting range:	48 °C (ASTM D97)
Boiling point/Boiling range:	Undetermined.

- **Flash point:** 42 °C

- **Flammability (solid, gaseous):** Not applicable.

- **Ignition temperature:** Not determined.

- **Decomposition temperature:** Not determined.

- **Self-igniting:** Not determined.

- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

- **Explosion limits:**
- Lower:** Not determined.

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Upper:	Not determined.
· Vapour pressure at 20 °C:	<20 hPa
· Density at 15,6 °C:	0,84 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
Organic solvents:	0,0 %
Solids content:	100,0 %
· 9.2 Other information	No further relevant information available.

10 Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**
Reacts with oxidizing agents.
Flammable.
- **10.4 Conditions to avoid**
Keep ignition sources away - Do not smoke.
Store away from oxidizing agents.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**
Hydrocarbons
Carbon monoxide and carbon dioxide

11 Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values relevant for classification:**

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Oral	LD50	4894 mg/kg (rat)
Dermal	LD50	48 mg/kg (mouse)

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Inhalative	LC50/4 h	9980 mg/l (mouse)
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- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Repeated dose toxicity:** May cause damage to organs through prolonged or repeated exposure .
- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):**
Muta. 1B, Carc. 1A

12 Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 3 (German Regulation) (Assessment by list): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

13 Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|---------------------------------------|--------------------------|
| · 14.1 UN-Number | |
| · DOT, ADR, IMDG, IATA | UN1267 |
| · 14.2 UN proper shipping name | |
| · DOT, IMDG, IATA | PETROLEUM CRUDE OIL |
| · ADR | 1267 PETROLEUM CRUDE OIL |

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· 14.3 Transport hazard class(es)

· DOT



· Class 3 Flammable liquids.
· Label 3

· ADR



· Class 3 (F1) Flammable liquids.
· Label 3

· IMDG, IATA



· Class 3 Flammable liquids.
· Label 3

· 14.4 Packing group

· DOT, ADR, IMDG, IATA III

· 14.5 Environmental hazards:

· Marine pollutant: No

· 14.6 Special precautions for user

Warning: Flammable liquids.
· Danger code (Kemler): 30
· EMS Number: F-E,S-E

· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

· Transport/Additional information:

· ADR

· Limited quantities (LQ) 5L
· Transport category 3
· Tunnel restriction code D/E

· UN "Model Regulation":

UN1267, PETROLEUM CRUDE OIL, 3, III

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15 Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **United States (USA)**
- **SARA**

- **Section 355 (extremely hazardous substances):**

Substance is not listed.

- **Section 313 (Specific toxic chemical listings):**

71-43-2 benzene

- **TSCA (Toxic Substances Control Act):**

Substance is listed.

- **Proposition 65 (California):**

- **Chemicals known to cause cancer:**

Warning: This product may contain the following substance, known to the state of California to cause cancer.

71-43-2 benzene

- **Chemicals known to cause reproductive toxicity for females:**

Substance is not listed.

- **Chemicals known to cause reproductive toxicity for males:**

71-43-2 benzene

- **Chemicals known to cause developmental toxicity:**

71-43-2 benzene

- **Carcinogenic Categories**

- **EPA (Environmental Protection Agency)**

71-43-2 benzene

A

- **IARC (International Agency for Research on Cancer)**

8002-05-9 Petroleum

3

71-43-2 benzene

1

- **TLV (Threshold Limit Value established by ACGIH)**

71-43-2 benzene

A1

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**

71-43-2 benzene

- **OSHA-Ca (Occupational Safety & Health Administration)**

71-43-2 benzene

- **Canada**

- **Canadian Domestic Substances List (DSL)**

Substance is listed.

- **Canadian Ingredient Disclosure list (limit 0.1%)**

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· **Canadian Ingredient Disclosure list (limit 1%)**

Substance is not listed.

· **National regulations:**

· **Information about limitation of use:**

Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

- | | |
|--------------|--|
| H225 | Highly flammable liquid and vapour. |
| H304 | May be fatal if swallowed and enters airways. |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H340 | May cause genetic defects. |
| H350 | May cause cancer. |
| H372 | Causes damage to organs through prolonged or repeated exposure. |
| R11 | Highly flammable. |
| R36/38 | Irritating to eyes and skin. |
| R45 | May cause cancer. |
| R46 | May cause heritable genetic damage. |
| R48/23/24/25 | Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. |
| R65 | Harmful: may cause lung damage if swallowed. |

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals
 ACGIH: American Conference of Governmental Industrial Hygienists
 EINECS: European Inventory of Existing Commercial Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 NFPA: National Fire Protection Association (USA)
 HMIS: Hazardous Materials Identification System (USA)
 WHMIS: Workplace Hazardous Materials Information System (Canada)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent

· **Sources**

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