

Orfom® SX 80 Solvent Extraction Diluent

Version 2.0

Revision Date 2024-02-05

According to Regulation (EC) No. 1907/2006, Regulation (EC) No. 2020/878

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier****Product information**

Product Name : Orfom® SX 80 Solvent Extraction Diluent
 Material : 1120073, 1118894, 1118896, 1118808, 1110249, 1108012,
 1103226, 1089896, 1096243, 1089895

EC-No.Registration number

| Chemical name | CAS-No. EC-No. Index No. | Legal Entity Registration number |
|--|--------------------------------|---|
| Hydrocarbons, C12- C16, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) | | Chevron Phillips Chemical Company LP 01-2120787012-59-0000 |

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

Relevant Identified Uses : Use in mining – industrial
 Supported

1.3**Details of the supplier of the safety data sheet**

Company : Chevron Phillips Chemical Company LP
 Mining Chemicals
 10001 Six Pines Drive
 The Woodlands, TX 77380

Local : Chevron Phillips Chemicals International N.V.
 Airport Plaza (Stockholm Building)
 Leonardo Da Vincilaan 19
 1831 Diegem
 Belgium

SDS Requests: (800) 852-5530
 Responsible Party: Product Safety Group
 Email:sds@cpchem.com

Orfom® SX 80 Solvent Extraction Diluent

Version 2.0

Revision Date 2024-02-05

1.4**Emergency telephone:****Health:**

866.442.9628 (North America)

1.832.813.4984 (International)

Transport:

CHEMTREC 800.424.9300 or 703.527.3887(int'l)

Asia: CHEMWATCH (+612 9186 1132) China: 0532 8388 9090

Mexico CHEMTREC 01-800-681-9531 (24 hours)

South America SOS-Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600

Argentina: +(54)-1159839431

EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

Austria: VIZ +43 1 406 43 43 (24 hours/day, 7 days/week)

Belgium: 070 245 245 (24 hours/day, 7 days/week)

Bulgaria: +359 2 9154 233

Croatia: +3851 2348 342 (24 hours/day, 7 days/week)

Cyprus: 1401

Czech Republic: Toxicological Information Center +420 224 919 293, +420 224 915 402

Denmark: Danish Poison Center (Gifflinjen): +45 8212 1212

Estonia: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

Finland: 0800 147 111 09 471 977 (24 hours/day)

France: ORFILA number (INRS): + 33 (0) 1 45 42 59 59 (24 hours/day, 7 days/week)

Germany: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

Greece: (0030) 2107793777 (24 hours/day, 7 days/week)

Hungary: +36-80-201-199 (24 hours/day, 7 days/week)

Iceland: 543 2222 (24 hours/day, 7 days/week)

Ireland: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

Italy: POISON CENTER MILAN – Azienda Ospedaliera Niguarda Ca' Grande Tel. +39 02

66101029; POISON CENTER ROME – Policlinico "Agostino Gemelli", Servizio di tossicologia

clinica Tel. +39 06 3054343; POISON CENTER ROME – Ospedale Pediatrico Bambino Gesù

Tel. +39 06 68593726; POISON CENTER ROME – Policlinico "Umberto I" Tel. +39 06 4997 8000;

POISON CENTER FOGGIA – Azienda Ospedaliera Universitaria Riuniti Tel. +39 0881 732326;

POISON CENTER NAPLES – Azienda Ospedaliera "Antonio Cardarelli" Tel. +39 081 7472870;

POISON CENTER FLORENCE – Azienda Ospedaliera universitaria Careggi Tel. +39 055

7947819; POISON CENTER PAVIA – IRCCS Fondazione Salvatore Maugeri Tel. +39 0382

24444; POISON CENTER BERGAMO – Azienda Ospedaliera "Papa Giovanni XXIII" Tel. 800 883

300; POISON CENTER VERONA – Azienda Ospedaliera Universitaria integrata Tel. 800 011

858;

Latvia: State Fire and Rescue Service, phone number: 112; Toxicology and Sepsis Clinic

Poisoning and Drug Information Center, Hipokrāta 2, Riga, Latvia, LV-1038, phone number +371

67042473. (24 hours.)

Liechtenstein: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

Lithuania: +370 (85) 2362052

Luxembourg: (+352) 8002 5500 (24 hours/day, 7 days/week)

Malta: +356 2395 2000

The Netherlands: NVIC: +31 (0)88 755 8000

Norway: 22 59 13 00 (24 hours/day, 7 days/week)

Poland: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

Portugal: CIAV phone number: +351 800 250 250

Romania: +40213183606

Slovakia: +421 2 5477 4166

Slovenia: Phone number: 112

Spain: National Emergency Telephone Number of Spanish Poison Centre: +34 91 562 04 20 (24 hours/day, 7 days/week)

Sweden: 112 – ask for Poisons Information

Orfom® SX 80 Solvent Extraction Diluent

Version 2.0

Revision Date 2024-02-05

Responsible Department : Product Safety and Toxicology Group
 E-mail address : SDS@CPChem.com
 Website : www.CPChem.com

SECTION 2: Hazards identification**2.1****Classification of the substance or mixture
REGULATION (EC) No 1272/2008**

| | |
|--|--|
| Specific target organ toxicity - single exposure, Category 3, Central nervous system | H336: May cause drowsiness or dizziness. |
| Specific target organ toxicity - repeated exposure, Category 1 | H372: Causes damage to organs through prolonged or repeated exposure. |
| Aspiration hazard, Category 1 | H304: May be fatal if swallowed and enters airways. |
| Long-term (chronic) aquatic hazard, Category 2 | H411: Toxic to aquatic life with long lasting effects. |

2.2**Labeling (REGULATION (EC) No 1272/2008)**

Hazard pictograms :



Signal Word : Danger

| | | |
|-------------------|------|---|
| Hazard Statements | H304 | May be fatal if swallowed and enters airways. |
| | H336 | May cause drowsiness or dizziness. |
| | H372 | Causes damage to organs through prolonged or repeated exposure. |
| | H411 | Toxic to aquatic life with long lasting effects. |

| | | |
|--------------------------|-------------------------|---|
| Precautionary Statements | Prevention: | |
| | P260 | Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. |
| | P273 | Avoid release to the environment. |
| | Response: | |
| | P301 + P310 | IF SWALLOWED: Immediately call a POISON CENTER/ doctor. |
| | P304 + P340 + P312 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell. |
| P331 | Do NOT induce vomiting. | |
| P391 | Collect spillage. | |

Hazardous ingredients which must be listed on the label:

- 64742-47-8 Distillates (petroleum), Hydrotreated light

2.3**Other hazards**

Orfom® SX 80 Solvent Extraction Diluent

Version 2.0

Revision Date 2024-02-05

Results of PBT and vPvB assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Endocrine disrupting properties : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients**3.1 - 3.2****Substance or Mixture**

Synonyms : Low Aromatic Solvent
Solvent
Solvent Extraction Diluent

Molecular formula : UVCB

Hazardous ingredients

| Chemical name | CAS-No. EC-No. Index No. | Classification (REGULATION (EC) No 1272/2008) | Concentration [wt%] | Specific Conc. Limits, M-factors and ATEs |
|--|--------------------------------|---|------------------------|---|
| Hydrocarbons, C12-C16, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) | | STOT SE 3; H336 STOT RE 1; H372 Asp. Tox. 1; H304 Aquatic Chronic 2; H411 | 100 | |

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures**4.1****Description of first-aid measures**

General advice : Move out of dangerous area. Show this material safety data sheet to the doctor in attendance. Material may produce a serious, potentially fatal pneumonia if swallowed or vomited.

If inhaled : Consult a physician after significant exposure. If unconscious, place in recovery position and seek medical advice.

In case of skin contact : If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.

In case of eye contact : Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.

Orfom® SX 80 Solvent Extraction Diluent

Version 2.0

Revision Date 2024-02-05

4.2 Most important symptoms and effects, both acute and delayed**Notes to physician**

Symptoms : No data available.

Risks : No data available.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : No data available.

SECTION 5: Firefighting measures

Flash point : 79-80°C (174-176°F)

Autoignition temperature : 227°C (441°F)

5.1**Extinguishing media**

| | | | |
|--|------------------------------|---|--|
| | Suitable extinguishing media | : | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. |
|--|------------------------------|---|--|

| | | | |
|--|--------------------------------|---|----------------------------|
| | Unsuitable extinguishing media | : | Straight streams of water. |
|--|--------------------------------|---|----------------------------|

5.2**Special hazards arising from the substance or mixture**

| | | |
|---------------------------------------|---|---|
| Specific hazards during fire fighting | : | Do not allow run-off from fire fighting to enter drains or water courses. |
|---------------------------------------|---|---|

5.3**Advice for firefighters**

| | | |
|--|---|--|
| Special protective equipment for fire-fighters | : | Wear self-contained breathing apparatus for firefighting if necessary. |
|--|---|--|

| | | |
|---------------------|---|--|
| Further information | : | Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers. |
|---------------------|---|--|

| | | |
|-------------------------------|---|---|
| Fire and explosion protection | : | Do not spray on a naked flame or any incandescent material. Keep away from open flames, hot surfaces and sources of ignition. |
|-------------------------------|---|---|

| | | |
|----------------------------------|---|------------------------------|
| Hazardous decomposition products | : | Hydrocarbons. Carbon oxides. |
|----------------------------------|---|------------------------------|

SECTION 6: Accidental release measures**6.1****Personal precautions, protective equipment and emergency procedures**

| | | |
|----------------------|---|---|
| Personal precautions | : | Use personal protective equipment. Ensure adequate ventilation. |
|----------------------|---|---|

6.2

Orfom® SX 80 Solvent Extraction Diluent

Version 2.0

Revision Date 2024-02-05

Environmental precautions

Environmental precautions : Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3**Methods and materials for containment and cleaning up**

Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.

6.4**Reference to other sections**

Reference to other sections : For personal protection see section 8. For disposal considerations see section 13.

SECTION 7: Handling and storage**7.1****Precautions for safe handling
Handling**

Advice on safe handling : Avoid formation of aerosol. Do not breathe vapors/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion : Do not spray on a naked flame or any incandescent material. Keep away from open flames, hot surfaces and sources of ignition.

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

Requirements for storage areas and containers : No smoking. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

7.3**Specific End Use**

Use : For additional details, see the Exposure Scenario in the Annex portion

SECTION 8: Exposure controls/personal protection**8.1****Control parameters**

Orfom® SX 80 Solvent Extraction Diluent

Version 2.0

Revision Date 2024-02-05

Ingredients with workplace control parameters

SK

| Zložky | Podstata | Hodnota | Kontrolné parametre | Poznámka |
|------------|----------|-----------------|---------------------|------------------|
| 64742-47-8 | SK OEL | NPEL priemerný | 50 ppm, 300 mg/m3 | |
| | SK OEL | NPEL krátkodobý | 100 ppm, 600 mg/m3 | |
| | SK OEL | NPEL priemerný | 5 ppm, 1 mg/m3 | 13, |
| | SK OEL | NPEL krátkodobý | 15 ppm, 3 mg/m3 | 13, |
| | SK OEL | NPEL krátkodobý | 15 ppm, 3 mg/m3 | kvapalný aerosól |
| | SK OEL | NPEL priemerný | 5 ppm, 1 mg/m3 | kvapalný aerosól |
| | SK OEL | NPEL priemerný | 5 ppm, 1 mg/m3 | Dymy |
| | SK OEL | NPEL krátkodobý | 15 ppm, 3 mg/m3 | Dymy |

13 Limit sa vzťahuje na hydraulické a obrábacie kvapaliny a mazivá. Niektoré oleje môžu obsahovať polycyklické aromatické uhľovodíky a pri zahrievaní ich môžu uvoľňovať. Treba to brať do úvahy pri meraní a hodnotení rizika.

SI

| Sestavine | Osnova | Vrednost | Parametri nadzora | Pripomba |
|------------|--------|----------|-------------------|----------|
| 64742-47-8 | SI OEL | MV | 300 mg/m3 | |

SE

| Beståndsdelar | Grundval | Värde | Kontrollparametrar | Anmärkning |
|---------------|----------|-------|--------------------|------------|
| 64742-47-8 | SE AFS | NGV | 350 mg/m3 | 19, |
| | SE AFS | KGV | 500 mg/m3 | 19, |
| | SE AFS | NGV | 30 ppm, 175 mg/m3 | H, |
| | SE AFS | KGV | 60 ppm, 350 mg/m3 | V, H, |
| | SE AFS | NGV | 1 mg/m3 | Dimma |
| | SE AFS | KGV | 3 mg/m3 | V, Dimma |

19 Gränsvärdet avser kolväten i ångform dvs. upp till 12 kolatomer. Vid exponering för kolväten med mer än 12 kolatomer som förekommer i form av aerosol, partiklar eller vätskedroppar, tillämpas gränsvärdet för organiskt damm och dimma, 5 mg/m3. Gränsvärdet gäller inte för aromatri lacknфта (< 2 viktsprocent) som har eget gränsvärde.

H Ämnet kan lätt upptas genom huden.

V Vägledande korttidsgränsvärde ska användas som ett rekommenderat högsta värde som inte bör överskridas

RO

| Componente | Sursă | Valoare | Parametri de control | Notă |
|------------|--------|---------|----------------------|------|
| 64742-47-8 | RO OEL | TWA | 5 mg/m3 | |
| | RO OEL | STEL | 10 mg/m3 | |

PT

| Componentes | Bases | Valor | Parâmetros de controlo | Nota |
|-------------|--------|--------|------------------------|--|
| 64742-47-8 | PT OEL | VLE-MP | 200 mg/m3 | P, A3, (P), irritação do TRS, afeção do SNC, |
| | PT OEL | VLE-MP | 5 mg/m3 | (O), (), |
| | PT OEL | VLE_CD | 10 mg/m3 | (), |

() Os valores ou características encontram-se propostos para alteração

(O) A amostragem deve ser realizada com um método que não recolha vapor.

(P) Aplicação restrita às condições nas quais são negligenciáveis as exposições a aerossóis

A3 Agente carcinogénico confirmado nos animais de laboratório com relevância desconhecida no Homem.

afeção do SNC afeção do sistema nervoso central

irritação do irritação do trato respiratório superior

TRS

P Perigo de absorção cutânea

PL

| Składniki | Podstawa | Wartość | Parametry dotyczące kontroli | Uwaga |
|------------|----------|---------|------------------------------|---------|
| 64742-47-8 | PL NDS | NDS | 5 mg/m3 | Aerazol |
| | PL NDS | NDSch | 10 mg/m3 | Aerazol |
| | PL NDS | NDS | 300 mg/m3 | |
| | PL NDS | NDSch | 900 mg/m3 | |

NO

| Komponenter | Grunnlag | Verdi | Kontrollparametrer | Nota |
|-------------|---------------------|-------|--------------------|------------------|
| 64742-47-8 | FOR-2011-12-06-1358 | GV | 50 ppm, 275 mg/m3 | |
| | FOR-2011-12-06-1358 | GV | 40 ppm, 275 mg/m3 | |
| | FOR-2011-12-06-1358 | GV | 50 mg/m3 | Damp |
| | FOR-2011-12-06-1358 | GV | 1 mg/m3 | Tåke - partikler |

NL

| Bestanddelen | Basis | Waarde | Controleparameters | Opmerking |
|--------------|-------|-----------|--------------------|-----------|
| 64742-47-8 | NL WG | TGG-8 uur | 5 mg/m3 | |
| | NL WG | TGG-8 uur | 5 mg/m3 | Nevels |

Orfom® SX 80 Solvent Extraction Diluent

Version 2.0

Revision Date 2024-02-05

LV

| Sastāvdaļas | Bāze | Vērtība | Pārvaldības parametri | Piezīme |
|-------------|--------|----------|-----------------------|---------|
| 64742-47-8 | LV OEL | AER 8 st | 5 mg/m ³ | |

LT

| Komponentai | Šaltinis | Vertė | Kontrolės parametrai | Pastaba |
|-------------|----------|-------|-----------------------|---------|
| 64742-47-8 | LT OEL | IPRD | 350 mg/m ³ | |
| | LT OEL | TPRD | 500 mg/m ³ | |

IS

| Komponenter | Grunnlag | Verdi | Kontrollparametrer | Nota |
|-------------|----------|-------|---------------------|------------------|
| 64742-47-8 | IS OEL | TWA | 1 mg/m ³ | Particles (mist) |

HU

| Komponensek | Bázis | Érték | Ellenőrzési paraméterek | Megjegyzés |
|-------------|--------|----------|-------------------------|----------------------------|
| 64742-47-8 | HU OEL | AK-érték | 5 mg/m ³ | SCOEL/SUM/163/2011, T, Kód |

SCOEL/SUM/1 63/2011 SCOEL/SUM/163/2011

T Azok az anyagok, amelyek egészségkárosító hatása TARTÓS expozíciót követően jelentkezik. Korrigált ÁK = ÁK x 40/a heti óraszám

HR

| Sastojci | Temelj | Vrijednost | Nadzorni parametri | Bilješka |
|------------|--------|------------|--------------------------------|----------|
| 64742-47-8 | HR OEL | GVI | 100 ppm, 400 mg/m ³ | |

GR

| Συστατικά | Βάση | Τιμή | Παράμετροι ελέγχου | Σημείωση |
|------------|--------|------|---------------------|----------|
| 64742-47-8 | GR OEL | TWA | 5 mg/m ³ | Ομίχλη |

FI

| Aineosat | Peruste | Arvo | Valvontaa koskevat muuttujat | Huomautus |
|------------|---------|--------------|------------------------------|-----------|
| 64742-47-8 | FI OEL | HTP-arvot 8h | 5 mg/m ³ | Sumu |

ES

| Componentes | Base | Valor | Parámetros de control | Nota |
|-------------|--------|--------|-----------------------|--------|
| 64742-47-8 | ES VLA | VLA-ED | 5 mg/m ³ | Niebla |
| | ES VLA | VLA-EC | 10 mg/m ³ | Niebla |

EE

| Komponendid, osad | Alused | Väärtus | Kontrolliparameetrid | Märkused |
|-------------------|--------|---------------------------------|-----------------------|----------|
| 64742-47-8 | EE OEL | Piirnorm | 350 mg/m ³ | 11, |
| | EE OEL | Lühiajalise kokkupuute piirnorm | 500 mg/m ³ | 11, |
| | EE OEL | Piirnorm | 5 mg/m ³ | |
| | EE OEL | Piirnorm | 1 mg/m ³ | Aur |

11 Süsivesinike piirnormid on arvutatud auru faasile. Üle 12 süsinikuaatomiga alifaatsetel süsivesinikel (tridekaanid ja kõrgemad) on 20 °C juures küllastussisaldus < 350 mg/m³. Aerosoolsete süsivesinike piirnorm on 5 mg/m³.

DK

| Komponenter | Basis | Værdi | Kontrolparametre | Note |
|-------------|--------|-------|---------------------|-------------------|
| 64742-47-8 | DK OEL | GV | 1 mg/m ³ | tåge og partikler |

CZ

| Složky | Základ | Hodnota | Kontrolní parametry | Poznámka |
|------------|--------|---------|----------------------|----------|
| 64742-47-8 | CZ OEL | PEL | 5 mg/m ³ | Aerosol |
| | CZ OEL | NPK-P | 10 mg/m ³ | Aerosol |

CY

| Συστατικά | Βάση | Τιμή | Παράμετροι ελέγχου | Σημείωση |
|------------|----------|--------|---------------------|----------|
| 64742-47-8 | CY OEL 2 | M.E.Σ. | 5 mg/m ³ | |

CH

| Inhaltsstoffe | Grundlage | Wert | Zu überwachende Parameter | Bemerkung |
|---------------|-----------|----------|--------------------------------|---------------------------------|
| 64742-47-8 | CH SUVA | MAK-Wert | 100 ppm, 525 mg/m ³ | OSHA, |
| | CH SUVA | MAK-Wert | 5 mg/m ³ | OSHA, SSc, einatembare Aerosole |
| | CH SUVA | KZGW | 100 ppm, 700 mg/m ³ | OSHA, SSc, Dampf |
| | CH SUVA | MAK-Wert | 50 ppm, 350 mg/m ³ | OSHA, SSc, Dampf |

OSHA Occupational Safety and Health Administration

SSc Eine Schädigung der Leibesfrucht braucht bei Einhaltung des MAK-Wertes nicht befürchtet zu werden.

BG

| Съставки | Основа | Стойност | Параметри на | Бележка |
|----------|--------|----------|--------------|---------|
| | | | | |

SDS Number:100000067977

8/20

Orfom® SX 80 Solvent Extraction Diluent

Version 2.0

Revision Date 2024-02-05

| | | | | |
|------------|--------|-----|---------|--|
| | | | контрол | |
| 64742-47-8 | BG OEL | TWA | 5 mg/m3 | |

BE

| Bestanddelen | Basis | Waarde | Controleparameters | Opmerking |
|--------------|--------|----------|--------------------|-----------|
| 64742-47-8 | BE OEL | TGG 8 hr | 200 mg/m3 | D. |

D Opname van het agens via de huid, de slijmvliezen of de ogen vormt een belangrijk deel van de totale blootstelling. Deze opname kan het gevolg zijn van zowel direct contact als zijn aanwezigheid in de lucht.

8.2**Exposure controls****Engineering measures**

Adequate ventilation to control airborne concentrations below the exposure guidelines/limits. Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

Personal protective equipment

- Respiratory protection : If ventilation or other engineering controls are not adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure, a supplied-air NIOSH approved respirator may be appropriate. If exposure to harmful levels of airborne material may occur, a NIOSH approved respirator that provides protection may be appropriate, such as:. A positive pressure, air-supplying respirator may be appropriate if there is potential for uncontrolled release, aerosolization, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection.
- Hand protection : The suitability for a specific workplace should be discussed with the producers of the protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
- Eye protection : Eye wash bottle with pure water. Tightly fitting safety goggles.
- Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Wear as appropriate:. Flame retardant protective clothing. Footwear protecting against chemicals.
- Hygiene measures : When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday. General industrial hygiene practice.

SECTION 9: Physical and chemical properties**9.1****Information on basic physical and chemical properties****Appearance**

SDS Number:100000067977

9/20

Orfom® SX 80 Solvent Extraction Diluent

Version 2.0

Revision Date 2024-02-05

Physical state : liquid
 Color : Clear, Colorless
 Odor : characteristic

Safety data

Flash point : 79-80°C (174-176°F)
 Lower explosion limit : Not applicable
 Upper explosion limit : Not applicable
 Autoignition temperature : 227°C (441°F)
 Molecular formula : UVCB
 Molecular weight : Not applicable
 pH : Not applicable
 Pour point : -21°C (-6°F)
 Boiling point/boiling range : 207-274°C (405-526°F)
 Method: ASTM D 86
 Vapor pressure : 0,01 PSI
 at 25°C (77°F)
 Method: ASTM D5191
 Relative density : 0,810 - 0,850
 at 15 °C (59 °F)
 Density : 6,8 - 7,1 L/G
 Water solubility : negligible
 Partition coefficient: n-
 octanol/water : No data available
 Viscosity, kinematic : 2,12 cSt
 at 40°C (104°F)
 Method: ASTM D 445
 Relative vapor density : Not applicable
 Evaporation rate : No data available

9.2**Other information**

Conductivity : No data available

SECTION 10: Stability and reactivity**10.1**

Reactivity : Stable under recommended storage conditions.

Orfom® SX 80 Solvent Extraction Diluent

Version 2.0

Revision Date 2024-02-05

10.2

Chemical stability : This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3**Possibility of hazardous reactions**

Hazardous reactions : Hazardous reactions: Hazardous polymerization does not occur.

Further information: No hazards to be specially mentioned.

Hazardous reactions: Vapors may form explosive mixture with air.

10.4

Conditions to avoid : Heat, flames and sparks.

10.5

Materials to avoid : Strong oxidizing agents.

10.6

Hazardous decomposition products : Hydrocarbons
Carbon oxides

Other data : No decomposition if stored and applied as directed.

SECTION 11: Toxicological information**11.1****Information on toxicological effects****Orfom® SX 80 Solvent Extraction Diluent**

Acute oral toxicity : LD50 Oral: > 5.000 mg/kg
Species: Rat
Method: Acute toxicity estimate

Orfom® SX 80 Solvent Extraction Diluent

Acute inhalation toxicity : LC50: > 20 mg/l
Species: Rat
Test atmosphere: vapor
Method: Acute toxicity estimate

Orfom® SX 80 Solvent Extraction Diluent

Acute dermal toxicity : LD50 Dermal: > 5.000 mg/kg
Species: Rabbit
Method: Acute toxicity estimate

Orfom® SX 80 Solvent Extraction Diluent

Skin irritation : Irritating to skin.
May cause skin irritation in susceptible persons.

Orfom® SX 80 Solvent Extraction Diluent

Version 2.0

Revision Date 2024-02-05

Orfom® SX 80 Solvent Extraction Diluent**Eye irritation**

: May irritate eyes.
Vapors may cause irritation to the eyes, respiratory system and the skin.

Orfom® SX 80 Solvent Extraction Diluent**Sensitization**

: Did not cause sensitization on laboratory animals.
Information refers to the main ingredient.

Repeated dose toxicity

Hydrocarbons, C12-C16, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)

: Species: Rat, male
Sex: male
Application Route: inhalation (vapor)
Exposure time: 13 wks
Number of exposures: 6 h/d
NOEL: 10504 mg/m³
Lowest observable effect level: 31652 mg/m³
Method: OECD Guideline 413
Target Organs: Kidney, Liver
Information given is based on data obtained from similar substances.

Orfom® SX 80 Solvent Extraction Diluent

Version 2.0

Revision Date 2024-02-05

Species: Rat, female
 Sex: female
 Application Route: inhalation (vapor)
 Exposure time: 13 wks
 Number of exposures: 24 h/d
 NOEL: 31652 mg/m³
 Method: OECD Guideline 413
 Information given is based on data obtained from similar substances.

Species: Rat, male
 Sex: male
 Application Route: oral gavage
 Dose: 116, 347, 1056 mg/kg
 Exposure time: 13 wks
 Number of exposures: daily
 Lowest observable effect level: 347 mg/kg
 Method: OECD Test Guideline 408
 Target Organs: Kidney
 Information given is based on data obtained from similar substances.

Species: Rat, female
 Sex: female
 Application Route: oral gavage
 Dose: 116, 347, 1056 mg/kg
 Exposure time: 13 wks
 Number of exposures: daily
 NOEL: 1.056 mg/kg
 Method: OECD Test Guideline 408
 Information given is based on data obtained from similar substances.

Species: Rat, male and female
 Sex: male and female
 Application Route: Dermal
 Dose: 165, 330, 495 mg/kg/d
 Exposure time: 13 wks
 Number of exposures: 5 d/wk
 NOEL: > 495 mg/kg
 Method: OECD Test Guideline 411
 Information given is based on data obtained from similar substances.

Genotoxicity in vitro

Hydrocarbons, C12-C16, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)

: Test Type: reverse mutation assay
 Metabolic activation: with and without metabolic activation
 Method: OECD Test Guideline 471
 Result: negative
 Remarks: Information given is based on data obtained from similar substances.

Orfom® SX 80 Solvent Extraction Diluent

Version 2.0

Revision Date 2024-02-05

Test Type: Cytogenetic assay
 Metabolic activation: with and without metabolic activation
 Method: OECD Guideline 473
 Result: negative
 Remarks: Information given is based on data obtained from similar substances.

Test Type: Mouse lymphoma assay
 Metabolic activation: with and without metabolic activation
 Method: OECD Guideline 476
 Result: negative
 Remarks: Information given is based on data obtained from similar substances.

Genotoxicity in vivo

Hydrocarbons, C12-C16, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) : Test Type: Micronucleus test
 Species: Mouse
 Route of Application: Intraperitoneal injection
 Method: OECD Test Guideline 474
 Result: negative

Orfom® SX 80 Solvent Extraction Diluent

Carcinogenicity : Method: Estimated based on individual component values.
 Remarks: Not expected to be carcinogenic based on individual component data.

Reproductive toxicity

Hydrocarbons, C12-C16, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) : Species: Rat
 Sex: male and female
 Application Route: oral gavage
 Dose: 50, 200, 750 mg/kg/d
 Method: OECD Test Guideline 416
 NOAEL Parent: ≥ 750 mg/kg
 NOAEL F1: ≥ 750 mg/kg
 No adverse effects expected
 Information given is based on data obtained from similar substances.

Developmental Toxicity

Hydrocarbons, C12-C16, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) : Species: Rat
 Application Route: oral gavage
 Dose: 0, 400, 800, 1000 mg/kg/bw
 Number of exposures: Daily
 Test period: GD 6 - 15
 Method: OECD Guideline 414
 NOAEL Teratogenicity: > 1.000 mg/kg
 NOAEL Maternal: > 1.000 mg/kg

Orfom® SX 80 Solvent Extraction Diluent

Aspiration toxicity : May be fatal if swallowed and enters airways.

Specific Target Organ Toxicity (Single Exposure)

Hydrocarbons, C12-C16, n- : Route of Exposure: Inhalation

Orfom® SX 80 Solvent Extraction Diluent

Version 2.0

Revision Date 2024-02-05

alkanes, isoalkanes, cyclics,
aromatics (2-25%)

Target Organs: Central nervous system
Assessment: May cause drowsiness or dizziness.

Specific Target Organ Toxicity (Repeated Exposure)

Hydrocarbons, C12-C16, n-
alkanes, isoalkanes, cyclics,
aromatics (2-25%)

: Route of Exposure: Inhalation
Target Organs: Central nervous system
Assessment: Causes damage to organs through prolonged or repeated exposure.

11.2**Information on other hazards****Orfom® SX 80 Solvent Extraction Diluent****Further information**

: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Concentrations substantially above the TLV value may cause narcotic effects. Solvents may degrease the skin.

Endocrine disrupting properties

: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 12: Ecological information**12.1****Toxicity****Toxicity to fish**

Hydrocarbons, C12-C16, n-
alkanes, isoalkanes, cyclics,
aromatics (2-25%)

: LL50: 10 - 30 mg/l
Exposure time: 96 h
Species: Fish
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates

Hydrocarbons, C12-C16, n-
alkanes, isoalkanes, cyclics,
aromatics (2-25%)

: EL50: 10 - 22 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)
static test Method: OECD Test Guideline 202

Toxicity to algae

Hydrocarbons, C12-C16, n-
alkanes, isoalkanes, cyclics,
aromatics (2-25%)

: EL50: 1 - 3 mg/l
Exposure time: 72 h
Species: Pseudokirchneriella subcapitata (green algae)
Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

Hydrocarbons, C12-C16, n-
alkanes, isoalkanes, cyclics,

: NOEC: 0,48 mg/l
Exposure time: 21 Days

Orfom® SX 80 Solvent Extraction Diluent

Version 2.0

Revision Date 2024-02-05

aromatics (2-25%)

Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211**12.2****Persistence and degradability**

Biodegradability : Taking into consideration the properties of several ingredients, the product is estimated to be biodegradable according to OECD classification.

12.3**Bioaccumulative potential**

Elimination information (persistence and degradability)

Bioaccumulation

Hydrocarbons, C12-C16, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) : This material is not expected to bioaccumulate.

12.4**Mobility in soil**

Mobility

Hydrocarbons, C12-C16, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) : Medium: Air
Method: Calculation, Mackay Level III Fugacity Model
Content: 96 %

: Medium: Water
Method: Calculation, Mackay Level III Fugacity Model
Content: 1,4 %

: Medium: Soil
Method: Calculation, Mackay Level III Fugacity Model
Content: 0,07 %

: Medium: Sediment
Method: Calculation, Mackay Level III Fugacity Model
Content: 1,3 %

12.5**Results of PBT and vPvB assessment**

Results of PBT assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6**Endocrine disrupting properties**

Endocrine disrupting properties : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7**Other adverse effects**

Orfom® SX 80 Solvent Extraction Diluent

Version 2.0

Revision Date 2024-02-05

Additional ecological information

: Toxic to aquatic life with long lasting effects.

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Toxic to aquatic life with long lasting effects.

12.8**Additional Information****Ecotoxicology Assessment**

Short-term (acute) aquatic hazard : Toxic to aquatic life.

Long-term (chronic) aquatic hazard : Toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations**13.1****Waste treatment methods**

The information in this SDS pertains only to the product as shipped.

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

Product : The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

SECTION 14: Transport information**14.1 - 14.7****Transport information**

The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition).

Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.) Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the SDS and the bill of lading.

US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

Testing (ASTM D4206) has shown product does not sustain combustion.

Orfom® SX 80 Solvent Extraction Diluent

Version 2.0

Revision Date 2024-02-05

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (DISTILLATES (PETROLEUM), HYDROTREATED LIGHT), 9, III, (79 - 80 °C c.c.), MARINE POLLUTANT, (DISTILLATES (PETROLEUM), HYDROTREATED LIGHT)

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (DISTILLATES (PETROLEUM), HYDROTREATED LIGHT), 9, III

ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (DISTILLATES (PETROLEUM), HYDROTREATED LIGHT), 9, III, (-)

RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))

90, UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (DISTILLATES (PETROLEUM), HYDROTREATED LIGHT), 9, III

ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (DISTILLATES (PETROLEUM), HYDROTREATED LIGHT), 9, III
TANK VESSELS: ID9003, SUBSTANCES WITH A FLASH-POINT ABOVE 60°C AND NOT MORE THAN 100°C, 9

| | | |
|--------------------------|----------|--|
| Other information | : | This product is being carried under the scope of MARPOL Annex I |
|--------------------------|----------|--|

Maritime transport in bulk according to IMO instruments

SECTION 15: Regulatory information**15.1****Safety, health and environmental regulations/legislation specific for the substance or mixture
National legislation**

Commission Regulation (EU) 2020/878 of 18 June 2020 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

Water hazard class (Germany) : WGK 1 slightly water endangering
VwVwS
Not classified as carcinogenic (H350)

15.2

Major Accident Hazard Legislation : 96/82/EC Update:
Not applicable

Orfom® SX 80 Solvent Extraction Diluent

Version 2.0

Revision Date 2024-02-05

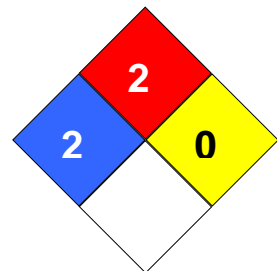
- : ZEU_SEVES3 Update:
ENVIRONMENTAL HAZARDS
E2
Quantity 1: 200 t
Quantity 2: 500 t
- : ZEU_SEVES3 Update:
Petroleum products: (a) gasolines and naphthas, (b) kerosenes (including jet fuels), (c) gas oils (including diesel fuels, home heating oils and gas oil blending streams),(d) heavy fuel oils (e) alternative fuels serving the same purposes and with similar properties as regards flammability and environmental hazards as the products referred to in points (a) to (d)
34
Quantity 1: 2.500 t
Quantity 2: 25.000 t

Notification status

- Europe REACH : This product is in full compliance according to REACH regulation 1907/2006/EC.
- Switzerland CH INV : On the inventory, or in compliance with the inventory
- United States of America (USA) TSCA : On or in compliance with the active portion of the TSCA inventory
- Canada DSL : All components of this product are on the Canadian DSL
- Australia AIIC : On the inventory, or in compliance with the inventory
- New Zealand NZIoC : Not in compliance with the inventory
- Japan ENCS : On the inventory, or in compliance with the inventory
- Korea KECI : Not in compliance with the inventory
- Philippines PICCS : On the inventory, or in compliance with the inventory
- Taiwan TCSI : On the inventory, or in compliance with the inventory
- China IECSC : On the inventory, or in compliance with the inventory

SECTION 16: Other information

- NFPA Classification** : Health Hazard: 2
Fire Hazard: 2
Reactivity Hazard: 0

**Further information**

- Legacy SDS Number : CPC00250

Significant changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information in this SDS pertains only to the product as shipped.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a

Orfom® SX 80 Solvent Extraction Diluent

Version 2.0

Revision Date 2024-02-05

guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Key or legend to abbreviations and acronyms used in the safety data sheet

| | | | |
|--------|--|-------|--|
| ACGIH | American Conference of Government Industrial Hygienists | LD50 | Lethal Dose 50% |
| AIIC | Australian Inventory of Industrial Chemicals | LOAEL | Lowest Observed Adverse Effect Level |
| DSL | Canada, Domestic Substances List | NFPA | National Fire Protection Agency |
| NDSL | Canada, Non-Domestic Substances List | NIOSH | National Institute for Occupational Safety & Health |
| CNS | Central Nervous System | NTP | National Toxicology Program |
| CAS | Chemical Abstract Service | NZIoC | New Zealand Inventory of Chemicals |
| EC50 | Effective Concentration | NOAEL | No Observable Adverse Effect Level |
| EC50 | Effective Concentration 50% | NOEC | No Observed Effect Concentration |
| EGEST | EOSCA Generic Exposure Scenario Tool | OSHA | Occupational Safety & Health Administration |
| EOSCA | European Oilfield Specialty Chemicals Association | PEL | Permissible Exposure Limit |
| EINECS | European Inventory of Existing Chemical Substances | PICCS | Philippines Inventory of Commercial Chemical Substances |
| MAK | Germany Maximum Concentration Values | PRNT | Presumed Not Toxic |
| GHS | Globally Harmonized System | RCRA | Resource Conservation Recovery Act |
| >= | Greater Than or Equal To | STEL | Short-term Exposure Limit |
| IC50 | Inhibition Concentration 50% | SARA | Superfund Amendments and Reauthorization Act. |
| IARC | International Agency for Research on Cancer | TLV | Threshold Limit Value |
| IECSC | Inventory of Existing Chemical Substances in China | TWA | Time Weighted Average |
| ENCS | Japan, Inventory of Existing and New Chemical Substances | TSCA | Toxic Substance Control Act |
| KECI | Korea, Existing Chemical Inventory | UVCB | Unknown or Variable Composition, Complex Reaction Products, and Biological Materials |
| <= | Less Than or Equal To | WHMIS | Workplace Hazardous Materials Information System |
| LC50 | Lethal Concentration 50% | ATE | Acute toxicity estimate |

Full text of H-Statements referred to under sections 2 and 3.

| | |
|------|---|
| H304 | May be fatal if swallowed and enters airways. |
| H336 | May cause drowsiness or dizziness. |
| H372 | Causes damage to organs through prolonged or repeated exposure. |
| H411 | Toxic to aquatic life with long lasting effects. |