

ORFOM® SX-11 (Solvent Extraction Diluent)

Version 1.6

Revision Date 2022-07-15

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

Product Name : ORFOM® SX-11 (Solvent Extraction Diluent)
 Material : 1116964, 1103227, 1098695, 1036313, 1016873, 1016874

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

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

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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

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

SECTION 2: Hazards identification**Classification of the substance or mixture**

This product has been classified in accordance with the hazard communication standard 29 CFR 1910.1200; the SDS and labels contain all the information as required by the standard.

Classification

: Aspiration hazard, Category 1

Labeling

Symbol(s) :



Signal Word : Danger

Hazard Statements : H304: May be fatal if swallowed and enters airways.

Precautionary Statements : **Response:**
 P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
 P331 Do NOT induce vomiting.
Storage:
 P405 Store locked up.
Disposal:
 P501 Dispose of contents/ container to an approved waste disposal plant.

Carcinogenicity:**IARC**

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP

No ingredient of this product present at levels greater than or

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equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 3: Composition/information on ingredients

Molecular formula : UVCB

Component	CAS-No.	Weight %
C13-C16 Isoalkanes	68551-20-2	99 - 100

SECTION 4: 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 : If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
- 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.

SECTION 5: Firefighting measures

- Flash point : 100.6°C (213.1°F)
Method: ASTM D 93
- Autoignition temperature : No data available
- Unsuitable extinguishing media : High volume water jet.
- Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.
- Further information : Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Fire and explosion protection : Normal measures for preventive fire protection.
- Hazardous decomposition products : Carbon oxides.

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SECTION 6: Accidental release measures

- Personal precautions : Use personal protective equipment. Ensure adequate ventilation.
- 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.
- Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

SECTION 7: Handling and storage**Handling**

- Advice on safe handling : Do not breathe vapors/dust. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations.
- Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Storage

- Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

SECTION 8: Exposure controls/personal protection**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 : Wear a supplied-air NIOSH approved respirator unless ventilation or other engineering controls are adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure. Wear a NIOSH approved respirator that provides protection when working with this material if exposure to harmful levels of airborne material may occur, such as: Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, aerosolization, exposure levels are not known, or other

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circumstances where air-purifying respirators may not provide adequate protection.

- Hand protection : If repeated and/or prolonged skin exposure to the substance is likely, then wear suitable gloves tested to EN374 and provide employee skin care programmes.
- 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:. Protective suit. Safety shoes.
- Hygiene measures : When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

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

- Form : liquid
- Physical state : liquid
- Color : Colorless
- Odor : Mild

Safety data

- Flash point : 100.6°C (213.1°F)
Method: ASTM D 93
- Lower explosion limit : No data available
- Upper explosion limit : No data available
- Oxidizing properties : No
- Autoignition temperature : No data available
- Molecular formula : UVCB
- Molecular weight : Not applicable
- pH : 7
- Pour point : No data available
- Boiling point/boiling range : 214.4-316°C (417.9-601°F)
- Vapor pressure : 0.36 MMHG
at 37.8°C (100.0°F)
- Relative density : 0.79
at 15.6 °C (60.1 °F)
- Density : 794.5 g/l

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Water solubility	: negligible
Partition coefficient: n-octanol/water	: No data available
Viscosity, kinematic	: 3.3 cSt at 38°C (100°F)
Relative vapor density	: 1 (Air = 1.0)
Evaporation rate	: < 1

SECTION 10: Stability and reactivity

Reactivity	: Stable under recommended storage conditions.
Chemical stability	: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Possibility of hazardous reactions	
Hazardous reactions	: Hazardous reactions: Hazardous polymerization does not occur.
Conditions to avoid	: No data available.
Materials to avoid	: May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Hazardous decomposition products	: Carbon oxides
Other data	: No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

Acute oral toxicity	
C13-C16 Isoalkanes	: LD50: > 5,000 mg/kg Species: Rat Sex: male and female Method: OECD Test Guideline 401 Information given is based on data obtained from similar substances.
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Acute inhalation toxicity	: Acute toxicity estimate: 5.3 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method

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Acute dermal toxicity : Acute toxicity estimate: 2,525 mg/kg
Method: Calculation method

Skin irritation

C13-C16 Isoalkanes : Repeated exposure may cause skin dryness or cracking.
May irritate skin. Information given is based on data obtained from similar substances.

Eye irritation

C13-C16 Isoalkanes : No eye irritation
Information given is based on data obtained from similar substances.

Sensitization

C13-C16 Isoalkanes : Classification: Did not cause sensitization on laboratory animals.
Information given is based on data obtained from similar substances.

Repeated dose toxicity

C13-C16 Isoalkanes : Species: Rat, male and female
Sex: male and female
Application Route: oral gavage
Exposure time: 13 wk
Number of exposures: 7 d/wk
NOEL: > 5,000 mg/kg
Method: OECD Test Guideline 408
No significant adverse effects were reported
Information given is based on data obtained from similar substances.

Species: Rat, male and female
Sex: male and female
Application Route: Inhalation
Exposure time: 13 wk
Number of exposures: 6 h/d
NOEL: 30 mg/l
Method: OECD Test Guideline 413
No significant adverse effects were reported
Information given is based on data obtained from similar substances.

Species: Rat, male and female
Sex: male and female
Application Route: Dermal
Exposure time: 13 wk
Number of exposures: 5 d/wk
NOEL: > 495 mg/kg
Method: OECD Test Guideline 411
No significant adverse effects were reported
Information given is based on data obtained from similar substances.

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Genotoxicity in vitro

- C13-C16 Isoalkanes : 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.
- Test Type: Cytogenetic assay
 Test system: Chinese hamster cells
 Metabolic activation: with and without metabolic activation
 Method: OECD Test 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 Test Guideline 476
 Result: negative
 Remarks: Information given is based on data obtained from similar substances.

Reproductive toxicity

- C13-C16 Isoalkanes : Species: Rat
 Sex: male and female
 Application Route: oral gavage
 Dose: 50, 100, 750 mg/kd/d
 Exposure time: 70 d
 Number of exposures: Daily
 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.

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

CMR effects

- C13-C16 Isoalkanes : Carcinogenicity: Not available
 Mutagenicity: In vitro tests did not show mutagenic effects
 Reproductive toxicity: No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

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- Further information** : Solvents may degrease the skin.

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

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C13-C16 Isoalkanes : LL50: > 1,028 mg/l
 Exposure time: 96 h
 Species: Scophthalmus maximus (Flatfish, Flounder)
 Method: OECD Test Guideline 203
 Information given is based on data obtained from similar substances.

Toxicity to daphnia and other aquatic invertebrates

C13-C16 Isoalkanes : LL50: > 3,193 mg/l
 Exposure time: 48 h
 Species: Acartia tonsa (Marine Copepod)
 static test Method: ISO 14669 and PARCOM method

Toxicity to algae

C13-C16 Isoalkanes : EL50: > 3,200 mg/l
 Exposure time: 72 h
 Species: Skeletonema costatum (Marine Algae)
 Growth inhibition Method: ISO 10253

Toxicity to bacteria

C13-C16 Isoalkanes : > 100 mg/l
 Exposure time: 3 h
 Respiration inhibition
 Method: OECD Test Guideline 209
 Information given is based on data obtained from similar substances.

Biodegradability

C13-C16 Isoalkanes : aerobic
 Result: Inherently biodegradable.
 18 %
 Testing period: 28 d
 Method: OECD Test Guideline 306
 Information given is based on data obtained from similar substances.

Bioaccumulation

C13-C16 Isoalkanes : The product may be accumulated in organisms.

Mobility

C13-C16 Isoalkanes : immobile

Results of PBT assessment

C13-C16 Isoalkanes : Non-classified PBT substance, Non-classified vPvB substance

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Additional ecological information : This material is not expected to be harmful to aquatic organisms.

Ecotoxicology Assessment

Short-term (acute) aquatic hazard
C13-C16 Isoalkanes : This material is not expected to be harmful to aquatic organisms.

Long-term (chronic) aquatic hazard
C13-C16 Isoalkanes : This material is not expected to be harmful to aquatic organisms.

SECTION 13: Disposal considerations

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 : Do not dispose of waste into sewer. 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.

SECTION 14: 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.

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)

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

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)

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

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

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

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

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

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

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

Maritime transport in bulk according to IMO instruments

SECTION 15: Regulatory information**National legislation**

SARA 311/312 Hazards : Aspiration hazard

CERCLA Reportable Quantity : This material does not contain any components with a CERCLA RQ.

SARA 302 Reportable Quantity : This material does not contain any components with a SARA 302 RQ.

SARA 302 Threshold Planning Quantity : This material does not contain any components with a section 302 EHS TPQ.

SARA 304 Reportable Quantity : This material does not contain any components with a section 304 EHS RQ.

SARA 313 Components : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

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Clean Air Act

Ozone-Depletion Potential : This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489).

US State Regulations

Pennsylvania Right To Know : C13-C16 Isoalkanes - 68551-20-2

California Prop. 65 Components : This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

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

Other AIIIC : 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 : A substance(s) in this product was not registered, notified to be registered, or exempted from registration by CPChem according to K-REACH regulations. Importation or manufacture of this product is still permitted provided the Korean Importer of Record has themselves notified the substance or the exported amount does not exceed the minimum threshold quantity of the non-registered substance(s).

Philippines PICCS : On the inventory, or in compliance with the inventory

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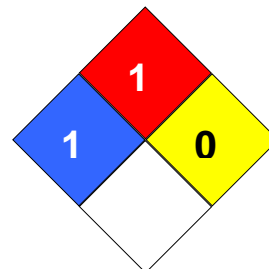
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Taiwan TCSI : On the inventory, or in compliance with the inventory
 China IECSC : On the inventory, or in compliance with the inventory

SECTION 16: Other information

NFPA Classification : Health Hazard: 1
 Fire Hazard: 1
 Reactivity Hazard: 0

**Further information**

Legacy SDS Number : 98110

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 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%
AICS	Australia, Inventory of Chemical Substances	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

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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%		