



SAFETY DATA SHEET

According to the Hazard Communication Standard, 29 CFR 1910.1200

SDS # : 081922

EDC 170 SE

Date of the previous version: 2016-09-06

Revision Date: 2016-11-22

Version 2.04

1. IDENTIFICATION

Product identifier

Product name EDC 170 SE

Other means of identification

Product Code(s) 081922

Trade name -
Substance/mixture Substance

Recommended use of the chemical and restrictions on use

Identified uses Manufacture of substances. Distribution of substance. Formulation & (re)packing of substances and mixtures. Laboratory activities. Use in Oil and Gas field drilling and production operations.

Uses advised against Do not use for any purpose other than the one for which it is intended

Details of the supplier of the safety data sheet

Supplier Address TOTAL Specialties USA Inc
1201 Louisiana Street, Suite 1800
Houston, TX 77002
Phone: +1 800 323 3198

Contact Point Technical/ HSEQ

E-mail Address specialfluidsusa@total.com

Emergency telephone number

Company Phone Number +1 (713) 483-5039
Company Emergency Phone Number 1-866-GENERA-1 (1-866-436-3721)
Emergency telephone +1 866 928 0789 (24h/24, 7d/7)
+1 215 207 0061 (24h/24, 7d/7)

2. HAZARDS IDENTIFICATION

Classification

Flammable liquids - Category 4
Aspiration toxicity - Category 1

Label elements

Version GNAM



SDS # : 081922

EDC 170 SE

Date of the previous version: 2016-09-06

Revision Date: 2016-11-22

Version 2.04

**DANGER****Hazard Statements**

Combustible liquid

May be fatal if swallowed and enters airways

Precautionary Statements - Prevention

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

Wear protective gloves/protective clothing/eye protection/face protection

Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

Do NOT induce vomiting

Fire

In case of fire: Use CO2, dry chemical, or foam for extinction

Precautionary Statements - Storage

Store locked up

Store in a well-ventilated place

Precautionary Statements - Disposal

Dispose of contents/ container to an approved waste disposal plant

Unknown Acute Toxicity

No information available

Hazards not otherwise classified (HNOC)

Repeated exposure may cause skin dryness or cracking

Other information**Physical-Chemical Properties**

Vapors may form explosive mixtures with air.

The material can accumulate static charge and can therefore cause electrical ignition.

Properties Affecting Health

Repeated exposure may cause skin dryness or cracking.

3. COMPOSITION/INFORMATION ON INGREDIENTS**Substance****Chemical nature**

A complex and variable combination of paraffinic and cyclic hydrocarbons having a carbon number range predominantly of C11 to C14 and boiling in the range of approximately 180°C to 270°C.

Version GNAM



SDS # : 081922

EDC 170 SE

Date of the previous version: 2016-09-06

Revision Date: 2016-11-22

Version 2.04

Chemical Name	CAS-No	Weight %
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	^	100

Additional information Related CAS number: 64742-47-8
 Total aromatic content : < 0.03%

4. FIRST AID MEASURES**First aid measures for different exposure routes**

General advice IN CASE OF SERIOUS OR PERSISTENT CONDITIONS, CALL A DOCTOR OR EMERGENCY MEDICAL CARE.

Eye contact Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing.

Skin contact Remove contaminated clothing and shoes. Wash off with soap and water.

Inhalation In case of exposure to intense concentrations of vapours, fumes or spray, transport the person away from the contaminated zone, keep warm and allow to rest.

Ingestion Do not ingest. If swallowed then seek immediate medical assistance. Risk of product entering the lungs on vomiting after ingestion. In this case, the casualty should be sent immediately to hospital.

Protection of First-aiders Use personal protective equipment.

Most important symptoms/effects, acute and delayed

Skin contact Non-irritating during normal use.

Eye contact Burning feeling and temporary redness.

Inhalation Vapors inhaled in strong concentration have a narcotic effect on the central nervous system.

Ingestion If swallowed accidentally, the product may enter the lungs due to its low viscosity and lead to the rapid development of very serious pulmonary lesions (medical survey during 48 hours).
 Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Version GNAM



SDS # : 081922

EDC 170 SE

Date of the previous version: 2016-09-06

Revision Date: 2016-11-22

Version 2.04

<u>Suitable Extinguishing Media</u>	Foam. Dry powder. Carbon dioxide (CO ₂).
Uniform Fire Code	Combustible Liquid: III-A
<u>Unsuitable Extinguishing Media</u>	Do not use a solid water stream as it may scatter and spread fire.
<u>Special Hazard</u>	Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled in confined spaces or at high concentration.
<u>Explosion Data</u>	
Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	May be ignited by friction, heat, sparks or flames.
<u>Protective Equipment and Precautions for Firefighters</u>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Evacuate non-essential personnel.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

General Information	Use personal protective equipment. Evacuate non-essential personnel. Ensure adequate ventilation, especially in confined areas. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch or walk through spilled material.
Other information	Remove all sources of ignition. Stop all work that requires a naked flame, stop all vehicles, stop all machines and equipment that may cause sparks or flames.

Environmental precautions

General Information	Prevent further leakage or spillage if safe to do so. Dike to collect large liquid spills. The product should not be allowed to enter drains, water courses or the soil. Local authorities should be advised if significant spillages cannot be contained. See Section 12 for additional Ecological Information.
----------------------------	--

Methods and material for containment and cleaning up

Methods for cleaning up	Use non-sparking handtools and explosionproof electrical equipment. 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). Following product recovery, flush area with water.
--------------------------------	--

7. HANDLING AND STORAGE**Precautions for safe handling**

Version GNAM



SDS # : 081922

EDC 170 SE

Date of the previous version: 2016-09-06

Revision Date: 2016-11-22

Version 2.04

Advice on safe handling	For personal protection see section 8. Use only in well-ventilated areas. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing.
Technical measures	Ensure adequate ventilation. Do not spray at high pressure (> 3 bar) unless a full risk assessment has been carried out and suitable protection measures put in place. WHILE MOVING THE PRODUCT:.. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Do not allow splash loading and ensure that the product is poured slowly, particularly at the beginning of the operation.
Prevention of fire and explosion	OPERATE ONLY ON COLD AND DEGASSED TANKS IN VENTILATED PREMISES (TO AVOID RISK OF EXPLOSION). Handle away from any source of ignition (open flame and sparks) and heat (hot manifolds or casings). Do not smoke. Use explosionproof electrical equipment. Take precautionary measures against static discharges. Do not use compressed air for filling, discharging or handling. Design installations (machinery and equipment) to prevent burning product from spreading (tanks, retention systems, interceptors (traps) in drainage systems).
Hygiene measures	Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. When using, do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Do not dry hands with rags that have been contaminated with product. Do not use abrasives, solvents or fuels. Wash hands before breaks and at the end of workday.
<u>Conditions for safe storage, including any incompatibilities</u>	
Technical measures/Storage conditions	Design the installations in order to avoid accidental emissions of product (due to seal breakage, for example) onto hot casings or electrical contacts. Storage installations should be designed with adequate bunds so as to prevent ground or water pollution in case of leaks or spills. Use explosionproof electrical equipment. Keep in a banded area. Keep in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Ground/bond containers, tanks and transfer/receiving equipment. Store at room temperature. Keep containers tightly closed and properly labelled.
Packaging material	Keep only in the original container or in a suitable container for this kind of product: steel , Stainless steel.
Materials to Avoid	Strong acids. Oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters****Exposure limits** Contains no substances with occupational exposure limit values.**Advisory OEL** CEFIC-HSPA : 1200 mg/m³

Version GNAM



SDS # : 081922

EDC 170 SE

Date of the previous version: 2016-09-06

Revision Date: 2016-11-22

Version 2.04

Exposure controls**Engineering Measures**

When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.
Apply technical measures to comply with the occupational exposure limits.

Individual protection measures, such as personal protective equipment**General Information**

Protective engineering solutions should be implemented and in use before personal protective equipment is considered.
These recommendations apply to the product as supplied.
If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers.

Eye/face protection

If splashes are likely to occur, wear: Safety glasses with side-shields.

Skin and body protection

Wear suitable protective clothing. Protective shoes or boots.

Hand Protection

Protective gloves.

Respiratory protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene measures

Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. When using, do not eat, drink or smoke.
Regular cleaning of equipment, work area and clothing is recommended. Do not dry hands with rags that have been contaminated with product. Do not use abrasives, solvents or fuels.
Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES**Physical and chemical properties**

Color	colorless To light yellow
Physical State @20°C	liquid
Odor	Hydrocarbon-like
Odor Threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks</u>	<u>Method</u>
pH		Not applicable	
Melting point/range		No information available	

Version GNAM



SDS # : 081922

EDC 170 SE

Date of the previous version: 2016-09-06

Revision Date: 2016-11-22

Version 2.04

Boiling point/boiling range	190 - 280 °C 374 - 536 °F		ISO 3405
Flash point	> 75 °C > 167 °F		ISO 3405 ISO 2719 ISO 2719.
Evaporation rate	600	EtEt=1	DIN 53170
Flammability Limits in Air			
upper	6 %		
Lower	0.5 %		
Vapor Pressure	0.15 hPa	@ 20 °C	calculated
Vapor density	> 1	(Air = 1)	
Relative density		No information available	
Density	815 kg/m ³	@ 15 °C	ISO 12185
Water solubility		Substance is a UVCB. Standard tests for this endpoint are not appropriate	
Solubility in other solvents		Soluble in many common organic solvents	
logPow		Not applicable	
Autoignition temperature	> 220 °C > 428 °F		ASTM E 659-78 ASTM E 659-78
Decomposition temperature		No information available	
Viscosity, kinematic	< 20.5 mm ² /s	@ 40 °C	ASTM D 445
Explosive properties	Not considered explosive based on chemical structure and oxygen balance considerations		
Oxidizing Properties	This product is not considered oxidising based on chemical structure considerations		
Possibility of hazardous reactions	None under normal processing		
Other information			
Surface tension	0.0257 N/m	@ 25 °C	EN 14370
Freezing Point		No information available	
Pour point	< -50 °C		ISO 3016

10. STABILITY AND REACTIVITY

Reactivity	None under normal processing.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to Avoid	Heat, flames and sparks. Take precautionary measures against static discharges.
Incompatible materials	Strong acids. Oxidizing agents.
Hazardous Decomposition Products	Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot.

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Principle Routes of Exposure Inhalation, Ingestion, Eye contact, Skin contact.

Skin contact Non-irritating during normal use.

Version GNAM



SDS # : 081922

EDC 170 SE

Date of the previous version: 2016-09-06

Revision Date: 2016-11-22

Version 2.04

Eye contact	Burning feeling and temporary redness.
Inhalation	Vapors inhaled in strong concentration have a narcotic effect on the central nervous system.
Ingestion	If swallowed accidentally, the product may enter the lungs due to its low viscosity and lead to the rapid development of very serious pulmonary lesions (medical survey during 48 hours). Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Acute toxicity - Product Information**

Product Information Product does not present an acute toxicity hazard based on known or supplied information.

Oral	Not classified.
Dermal	Not classified
Inhalation	Not classified

Acute toxicity - Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics ^	LD50 > 5000 mg/kg bw (rat - OECD 401)	LD50 (24h) > 5000 mg/kg bw (rabbit - OECD 402)	LC50 (8h) > 5000 mg/m ³ (vapour) (rat - OECD 403)

Skin corrosion/irritation	Not classified.
Serious eye damage/eye irritation	Not classified.
Sensitization	Not classified as a sensitizer.
Carcinogenicity	This product is not classified carcinogenic.

Mutagenicity	The mutagenic potential of the substance has been extensively studied in a range of in-vivo and in-vitro assays.
Germ Cell Mutagenicity	Genetic toxicity : negative.
Reproductive toxicity	Results of guideline developmental toxicity studies on the substance and OECD developmental toxicity screening studies showed no evidence of developmental toxicity in rats.
Developmental Toxicity	Results of guideline developmental toxicity studies on the substance and OECD developmental toxicity screening studies showed no evidence of developmental toxicity in rats.
Target Organ Effects (STOT)	None known.
STOT - single exposure	Not Classified.
STOT - repeated exposure	Not Classified.

Version GNAM

SDS # : 081922

EDC 170 SE

Date of the previous version: 2016-09-06

Revision Date: 2016-11-22

Version 2.04

Other adverse effects Repeated exposure may cause skin dryness or cracking.
Aspiration Hazard May be fatal if swallowed and enters airways.

12. ECOLOGICAL INFORMATION**Ecotoxicity****Acute aquatic toxicity - Product Information**

Not applicable

Acute aquatic toxicity - Component Information

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates	Toxicity to microorganisms
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics ^	ErL50 (72h) > 1000 mg/l (Pseudokirchneriella subcapitata - OECD 201) EbL50 (72h) > 1000 mg/l (Pseudokirchneriella subcapitata - OECD 201)	LL50 (96h) > 1000 mg/l (Oncorhynchus mykiss - OECD 203)	EL50 (48h) > 1000 mg/l (Daphnia magna - OECD 202)	-

Chronic aquatic toxicity - Product Information

Not applicable

Chronic aquatic toxicity - Component Information

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish	Toxicity to microorganisms
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics ^	NOELR (72h) = 1000 mg/l (Pseudokirchneriella subcapitata - biomass - OECD 201) NOELR (72h) = 1000 mg/l (Pseudokirchneriella subcapitata - growth rate - OECD 201)	NOELR (21d) = 1,22 mg/l (Daphnia magna - QSAR Petrotox)	NOELR (28d) = 0,17 mg/l (Oncorhynchus mykiss - QSAR Petrotox)	

Effects on terrestrial organisms No information available.**Persistence and degradability****General Information** Readily biodegradable (69 % after 28 days).

Biodegradation							
Type	Method	Sampling time	Specific effects	Values	Unit	Biodegradability	Source
	OECD 301F	28 days		69	%	Readily biodegradable	

Bioaccumulative potential

Version GNAM



SDS # : 081922

EDC 170 SE

Date of the previous version: 2016-09-06

Revision Date: 2016-11-22

Version 2.04

Product Information	Measured experimental data on hydrocarbon UVCB substances are not meaningful, since each of the constituents is likely to behave differently.
logPow	Not applicable
Component Information	Not applicable.
<u>Mobility</u>	
Soil	Given its physical and chemical characteristics, the product generally shows low soil mobility
Air	Volatilisation is dependent on Henry's Constant which is not applicable to UVCB
Water	The product is insoluble and floats on water
<u>Other adverse effects</u>	
General Information	No information available

13. DISPOSAL CONSIDERATIONS**Waste treatment**

Waste Disposal Methods	This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.
Contaminated packaging	Empty containers may contain flammable or explosive vapors. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

Note	DOT classification for bulk shipments only: This material has been determined to be NOT COMBUSTIBLE according to 49 CFR 173.120; it does not sustain combustion by ASTM D4206
<u>DOT</u>	Not regulated
<u>TDG</u>	Not regulated
<u>MEX</u>	Not regulated
<u>ICAO/IATA</u>	Not regulated

Version GNAM



SDS # : 081922

EDC 170 SE

Date of the previous version: 2016-09-06

Revision Date: 2016-11-22

Version 2.04

IMDG/IMO	Not regulated
ADR/RID	Not regulated
ADN	
UN/ID No	UN9003
Proper shipping name	SUBSTANCES WITH A FLASH-POINT ABOVE 60°C AND NOT MORE THAN 100°C
Hazard class	9
Description	UN9003, SUBSTANCES WITH A FLASH-POINT ABOVE 60°C AND NOT MORE THAN 100°C, 9

15. REGULATORY INFORMATION

Related CAS number 64742-47-8

International Inventories The substance is listed or exempted from listing in the following inventories:

- Europe (EINECS/ELINCS/NLP)
- U.S.A. (TSCA)
- Canada (DSL/NDSL)
- Australia (AICS)
- Korea (KECL)
- China (IECSC)
- Japan (ENCS)
- Philippines (PICCS)
- New Zealand (NZIoC)
- Taiwan (TCSI)

U.S. Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	no
Fire Hazard	Yes
Sudden Release of Pressure Hazard	no
Reactive Hazard	no

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

Version GNAM



SDS # : 081922

EDC 170 SE

Date of the previous version: 2016-09-06

Revision Date: 2016-11-22

Version 2.04

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

No information available

16. OTHER INFORMATION

NFPA	Health Hazard 1	Flammability 2	Instability 0	Physical and chemical hazards -
HMIS	Health Hazard 1	Flammability 2	Physical Hazard 0	Personal protection X

NFPA (National Fire Protection Association)

HMIS (Hazardous Material Information System)

Hazards are split into categories each with a 0 to 4 rating, 0 meaning no hazard and 4 meaning high hazard

Revision Date: 2016-11-22

Revision Note (M)SDS sections updated: 14

Abbreviations, acronyms

ACGIH = American Conference of Governmental Industrial Hygienists

bw = body weight

bw/day = body weight/day

EC x = Effect Concentration associated with x% response

GLP = Good Laboratory Practice

IARC = International Agency for Research of Cancer

LC50 = 50% Lethal concentration - Concentration of a chemical in air or a chemical in water which causes the death of 50% (one half) of a group of test animals

LD50 = 50% Lethal Dose - Chemical amount, given at once, which causes the death of 50% (one half) of a group of test animals

LL = Lethal Loading

NIOSH = National Institute of Occupational Safety and Health

NOAEL = No Observed Adverse Effect Level

NOEC = No Observed Effect Concentration

NOEL = No Observed Effect Level

OECD = Organization for Economic Co-operation and Development

OSHA = Occupational Safety and Health Administration

UVCB = Substance of unknown or Variable composition, Complex reaction products or Biological material

SCBA = Self Contained Breathing Apparatus

Version GNAM



SDS # : 081922

EDC 170 SE

Date of the previous version: 2016-09-06

Revision Date: 2016-11-22

Version 2.04

fw = fresh water
mw = marine water
or = occasional release
dw = dry weight

Legend

Section 8

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH - National Institute for Occupational Safety and Health

TLV - Threshold Limit Values

PEL - Permissible Exposure Limits

IDHL - Immediately Dangerous to Life or Health concentrations

TWA - Time Weight Average

STEL - Short Term Exposure Limits

S* - Skin notation

TSCA - Toxic Substance Control Act

This safety data sheet serves to complete but not to replace the technical product sheets. The information contained herein is given in good faith and is accurate to the best of knowledge at the date indicated above. It is understood by the user that any use of the product for purposes other than those for which it was designed entails potential risk. The information given herein in no way dispenses the user from knowing and applying all provisions regulating his activity. The user bears sole liability for the precautions required when using the product. The regulatory texts indicated herein are intended to aid the user to fulfil his obligations. This list is not to be considered complete and exhaustive. It is the user's responsibility to ensure that he is subject to no other obligations than those mentioned.

End of the Safety Data Sheet

Version GNAM