Braskem Ezolem™ 6-7

Safety Data Sheet

According to ABNT NBR 14725: 2023
Issue date: 08 June 2021 Revision date: 25 June 2024 Version: 2.0

SECTION 1: Identification

1.1. GHS Product identifier

Product form	:	Substance
Substance type	:	UVCB
Trade name	:	Braskem Ezolem™ 6-7
CAS-No.	:	93165-19-6
Product code	:	P802, P802E

1.2. Other means of identification

Synonyms	:	Distillates, petroleum, C6-rich / Distillate (petroleum), C6-rich / Distillates (petroleum), C6-rich
EC Index-No.	:	649-388-00-9
EC-No.	:	296-903-4

1.3. Recommended use of the chemical and restrictions on use

Recommended use	:	Use in production of formulations: Adhesives, Paint, Thinners, Extraction of vegetable oils Product for industrial use only
Restrictions on use	:	No additional information available

1.4. Supplier's details

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1.5. Emergency phone number

Emergency number	:	CHEMTREC Brazil (Rio De Janeiro): +(55)-2139581449 Portuguese CHEMTREC Brazil (São Paulo): +(55)-1143491359 Portuguese CHEMTREC Brazil: 0800 892 0479 Portuguese CHEMTREC International: +1 703-741-5970

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Classification according to GHS BR (ABNT NBR 14725: 2023)

Flammable liquids, Category 2
Acute toxicity (dermal), Category 5
Skin corrosion/irritation, Category 2
Reproductive toxicity, Category 2
Specific target organ toxicity — Single exposure, Category 3, Narcosis
Specific target organ toxicity — Repeated exposure, Category 2
Aspiration hazard, Category 1
Hazardous to the aquatic environment - Acute Hazard, Category 2
Hazardous to the aquatic environment - Chronic Hazard, Category 2

2.2. GHS Label elements, including precautionary statements

GHS BR labelling

Hazard pictograms (GHS BR) :

Signal word (GHS BR) : Danger

Hazard statements (GHS BR) : H225 - Highly flammable liquid and vapour
H304 - May be fatal if swallowed and enters airways
H313 - May be harmful in contact with skin
H315 - Causes skin irritation

		H336 - May cause drowsiness or dizziness H361 - Suspected of damaging fertility or the unborn child. H373 - May cause damage to organs through prolonged or repeated exposure. H411 - Toxic to aquatic life with long lasting effects
Precautionary statements (GHS BR)	:	P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233 - Keep container tightly closed. P240 - Ground and bond container and receiving equipment. P241 - Use explosion-proof equipment. P242 - Use non-sparking tools. P243 - Take action to prevent static discharges. P260 - Do not breathe mist, vapours. P264 - Wash hands, forearms and face thoroughly after handling. P271 - Use only outdoors or in a well-ventilated area. P273 - Avoid release to the environment. P280 - Wear eye protection, protective gloves, protective clothing. P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or a doctor. P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water . P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P308+P313 - IF exposed or concerned: Get medical attention. P312 - Call a POISON CENTER or a doctor if you feel unwell. P331 - Do NOT induce vomiting. P332+P313 - If skin irritation occurs: Get medical attention. P362+P364 - Take off contaminated clothing and wash it before reuse. P370+P378 - In case of fire: Use foam, carbon dioxide (CO2), water, sand, dry extinguishing powder to extinguish. P391 - Collect spillage. P403+P233 - Store in a well-ventilated place. Keep container tightly closed. P403+P235 - Store in a well-ventilated place. Keep cool. P405 - Store locked up. P501 - Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Other hazards which do not result in classification

Handling this product may result in electrostatic accumulation. Use proper grounding procedures

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type	:	UVCB
Name	:	Distillates (petroleum), C6-rich
CAS-No.	:	93165-19-6
EC-No.	:	296-903-4
EC Index-No.	:	649-388-00-9
Synonyms	:	Distillates, petroleum, C6-rich / Distillate (petroleum), C6-rich / Distillates (petroleum), C6-rich

Name	GHS Product identifier	%
Distillates (petroleum), C6-rich	CAS-No.: 93165-19-6	100
Methylcyclopentane	CAS-No.: 96-37-7	37 – 52
n-hexane	CAS-No.: 110-54-3	20 – 32
Hexane isomers, other than n-Hexane	CAS-No.: Not applicable	14 – 25
cyclopentane	CAS-No.: 287-92-3	1 – 8

Name	GHS Product identifier	%
Pentane, isomers	CAS-No.: Not applicable	1 – 7
cyclohexane	CAS-No.: 110-82-7	0 – 2

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). Call a physician immediately.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration. Do not apply mouth-to-mouth resuscitation. Get medical advice/attention if you feel unwell.

First-aid measures after skin contact : After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water and soap. Immediately rinse with plenty of water (for at least 15 minutes). Wash contaminated clothing before reuse. Get medical advice if skin irritation persists.

First-aid measures after eye contact : Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persists.

First-aid measures after ingestion : Do not induce vomiting. Rinse mouth. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Immediately call a POISON CENTER/doctor.

4.2. Most important symptoms and effects, acute and delayed

Symptoms/effects : Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.

Symptoms/effects after inhalation : May cause drowsiness or dizziness.

Symptoms/effects after skin contact : Causes skin irritation. May be harmful in contact with skin.

Symptoms/effects after ingestion : May be fatal if swallowed and enters airways. Swallowing the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis.

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

Note to physician : Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Suitable extinguishing media : Foam. dry extinguishing powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : Highly flammable liquid and vapour. Incomplete combustion releases dangerous carbon monoxide, carbon dioxide and other toxic gases.

Explosion hazard : Vapour heavier than air may travel considerable distance to a source of ignition and flash back. May explode or ignite

Hazardous decomposition products in case of fire : Thermal decomposition can lead to the release of irritating gases and vapours.

5.3. Special protective actions for fire-fighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.

Protective equipment for firefighters : Do not enter fire area without proper protective equipment, including respiratory protection. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid contact with spilled material. Spilled material may present a slipping hazard. Remove ignition sources. Do not contaminate ground and surface water.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Ventilate spillage area. Evacuate unnecessary personnel. No open flames, no sparks, and no smoking. Avoid contact with skin, eyes and clothing. Do not breathe mist, vapours.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Ventilate area. Stop leak if safe to do so. No open flames, no sparks, and no smoking. Evacuate unnecessary personnel. Prevent runoff from entering water courses, sewers and basements.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and materials for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leaks if it can be done without personal risk. Control the vapours with a fine water spray. Prevent runoff from entering water courses, sewers and basements.

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Store away from other materials. Collect all waste in suitable and labelled containers and dispose according to local legislation. Notify authorities if product enters sewers or public waters.

Other information : Dispose of in a safe manner in accordance with local/national regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handling this product may result in electrostatic accumulation. Use proper grounding procedures. Handle empty containers with care because residual vapours are flammable.

Precautions for safe handling : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Ensure good ventilation of the work station. Avoid ignition sources. Product can accumulate electrostatic charges that may cause fire by electrical discharges. Use only non-sparking tools. Use grounded electrical/mechanical equipment. Spilled product must never be returned to the original container for recycling. No open flames. No smoking. Wash contaminated clothing before reuse. Do not breathe mist, vapours. Avoid contact with skin, eyes and clothing.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Separate working clothes from town clothes. Launder separately. Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep away from sources of ignition. Use only in well ventilated areas. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools.

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : heat. Keep container closed when not in use. Keep away from ignition sources. Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up.

Incompatible materials : Strong oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

n-hexane (110-54-3)	
Brazil - Occupational Exposure Limits	
OEL TWA	50 ppm
Brazil - Biological limit values	
Local name	n-hexano
BEI	0.5 mg/l Parâmetro: 2,5 hexanodiona (2,5HD) - Meio: Urina - Momento de amostragem: Final de jornada de trabalho - Observações: O método analítico deve ser realizado sem hidrólise para este IBE/EE.
Remark	Interpretação: IBE/EE - Indicadores Biológicos de Exposição Excessiva.
Regulatory reference	NR 7 - PCMSO
USA - ACGIH - Occupational Exposure Limits	
Local name	n-Hexane
ACGIH OEL TWA	50 ppm
Remark (ACGIH)	TLV® Basis: CNS impair; peripheral neuropathy; eye irr. Notations: Skin; BEI
ACGIH chemical category	Skin - potential significant contribution to overall exposure by the cutaneous route
Regulatory reference	ACGIH 2024
USA - ACGIH - Biological Exposure Indices	
Local name	n-Hexane
BEI	0.5 mg/l Parameter: 2,5-Hexanedione (without hydrolysis) - Medium: urine - Sampling time: End of shift
Regulatory reference	ACGIH 2024

cyclopentane (287-92-3)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Cyclopentane
ACGIH OEL TWA	1720 mg/m³
ACGIH OEL TWA	1000 ppm (EX - Explosion hazard)
Remark (ACGIH)	TLV® Basis: CNS impair
Regulatory reference	ACGIH 2024

cyclohexane (110-82-7)	
Brazil - Occupational Exposure Limits	
Local name	Ciclohexano
OEL TWA	820 mg/m³
OEL TWA	235 ppm
Regulatory reference	Norma Regulamentadora Nº 15 - Atividades e Operações Insalubres
USA - ACGIH - Occupational Exposure Limits	
Local name	Cyclohexane
ACGIH OEL TWA	100 ppm
Remark (ACGIH)	TLV® Basis: CNS impair

cyclohexane (110-82-7)	
Regulatory reference	ACGIH 2024
USA - ACGIH - Biological Exposure Indices	
Local name	Cyclohexane
BEI	50 mg/g creatinine Parameter: 1,2-Cyclohexanediol - Medium: urine - Sampling time: End of shift, end of workweek - Notations: Ns
Regulatory reference	ACGIH 2024

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station. Proper grounding procedures to avoid static electricity should be followed. Use only non-sparking tools.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures

Hand protection:

Chemically resistant protective gloves. Nitrile rubber/PVC. Polyvinylalcohol (PVA). It is recommended that the glove supplier be consulted to ensure the protective gloves are resistant to chemicals in this product. ISO 374-1

Eye protection:

Chemical goggles or safety glasses. ISO 16321-1

Skin and body protection:

Long sleeved protective clothing

Respiratory protection:

An approved organic vapour respirator/supplied air or self-contained breathing apparatus must be used when vapour concentration exceeds applicable exposure limits. Approved organic vapour respirator

SECTION 9: Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Liquid
Colour	:	Colourless liquid
Odour	:	Not available
Odour threshold	:	Not available
pH	:	Not available
Melting point	:	Not available
Freezing point	:	Not available
Boiling point	:	58 °C
Flash point	:	-22 °C
Relative evaporation rate (butylacetate=1)	:	Not available
Flammability	:	Not available
Explosive limits	:	Not available
Vapour pressure	:	40.8 kPa (37.8°C)
Relative vapour density at 20°C	:	Not available
Relative density	:	Not available
Density	:	0.69 – 0.71
Solubility	:	Insoluble in water. Soluble in organic solvents.
Partition coefficient n-octanol/water (Log Pow)	:	3.9 (n-hexane)
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Auto-ignition temperature	:	Not available
Decomposition temperature	:	Not available
Viscosity, kinematic	:	0.25 – 0.45 mm²/s (40 °C)

Particle size	:	Not applicable
Particle size distribution	:	Not applicable
Particle shape	:	Not applicable
Particle aspect ratio	:	Not applicable
Particle specific surface area	:	Not applicable

9.2. Data relevant with regard to physical hazard classes

Additional information : Upper / lower flammability or explosive limits: 6.9 / 1.2 vol %

9.3. Further safety characteristics

No additional information available

SECTION 10: Stability and reactivity

Chemical stability	:	The product is stable at normal handling and storage conditions.
Conditions to avoid	:	Keep away from open flames, hot surfaces and sources of ignition. Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition can lead to the release of irritating gases and vapours.
Incompatible materials	:	Strong oxidizing agents.
Possibility of hazardous reactions	:	No dangerous reactions known under normal conditions of use.
Reactivity	:	Highly flammable liquid and vapour. May explode or ignite
Handling temperature	:	No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	:	Not available
Acute toxicity (dermal)	:	May be harmful in contact with skin.
Acute toxicity (inhalation)	:	Not available

n-hexane (110-54-3)	
LD50 oral rat	25 g/kg (Source: NLM_CIP)
LD50 dermal rabbit	3000 mg/kg (Source: NLM_CIP)
LC50 Inhalation - Rat [ppm]	48000 ppm/4h
ATE BR (oral)	25000 mg/kg bodyweight
ATE BR (dermal)	3000 mg/kg bodyweight
ATE BR (gases)	48000 ppmv/4h

cyclopentane (287-92-3)	
LC50 Inhalation - Rat	> 25.3 mg/l/4h

cyclohexane (110-82-7)	
LD50 oral rat	12705 mg/kg (Source: NLM_CIP)
LD50 oral	> 5000 mg/kg bodyweight
LD50 dermal rabbit	> 2000 mg/kg (Source: EU_RAR)
LD50 dermal	> 2000 mg/kg bodyweight
LC50 Inhalation - Rat	> 32.88 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)
LC50 Inhalation - Rat [ppm]	> 5540 ppm Source: ECHA
ATE BR (oral)	12705 mg/kg bodyweight

Pentane, isomers (CAS-No.: Not applicable)	
ATE BR (dermal)	2500 mg/kg bodyweight

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Not available
Respiratory or skin sensitisation : Not available
Germ cell mutagenicity : Not available
Carcinogenicity : Not available
Reproductive toxicity : Suspected of damaging fertility or the unborn child.
STOT-single exposure : May cause drowsiness or dizziness.

Methylcyclopentane (96-37-7)	
STOT-single exposure	May cause drowsiness or dizziness.

n-hexane (110-54-3)	
STOT-single exposure	May cause drowsiness or dizziness.

cyclohexane (110-82-7)	
STOT-single exposure	May cause drowsiness or dizziness.

Pentane, isomers (CAS-No.: Not applicable)	
STOT-single exposure	May cause drowsiness or dizziness.

Hexane isomers, other than n-Hexane (CAS-No.: Not applicable)	
STOT-single exposure	May cause drowsiness or dizziness.

STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.

n-hexane (110-54-3)	
STOT-repeated exposure	May cause damage to organs (central nervous system) through prolonged or repeated exposure (if inhaled).

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

Distillates (petroleum), C6-rich (93165-19-6)	
Viscosity, kinematic	0.25 – 0.45 mm²/s (40 °C)

n-hexane (110-54-3)	
Viscosity, kinematic	0.446 mm²/s

11.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects : Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.
Symptoms/effects after inhalation : May cause drowsiness or dizziness.
Symptoms/effects after skin contact : Causes skin irritation. May be harmful in contact with skin.
Symptoms/effects after ingestion : May be fatal if swallowed and enters airways. Swallowing the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis.

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short–term (acute) : Toxic to aquatic life.
Hazardous to the aquatic environment, long–term (chronic) : Toxic to aquatic life with long lasting effects.
Other information : Avoid release to the environment.

Distillates (petroleum), C6-rich (93165-19-6)	
LC50 - Fish [1]	4.4 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [semi-static] Source: ECHA)
EC50 - Crustacea [1]	9.74 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 - Fish [2]	8.41 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [semi-static, closed] Source: ECHA)

n-hexane (110-54-3)	
LC50 - Fish [1]	2.5 mg/l
EC50 - Other aquatic organisms [1]	50 mg/l waterflea

cyclohexane (110-82-7)	
LC50 - Fish [1]	3.96 – 5.18 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: EPA)
LC50 - Fish [2]	23.03 – 42.07 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static] Source: EPA)
EC50 72h - Algae [1]	> 500 mg/l (Species: Desmodesmus subspicatus)
EC50 72h - Algae [2]	9.317 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

12.2. Persistence and degradability

Distillates (petroleum), C6-rich (93165-19-6)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Distillates (petroleum), C6-rich (93165-19-6)	
Partition coefficient n-octanol/water (Log Pow)	3.9 (n-hexane)
Bioaccumulative potential	Not established.

n-hexane (110-54-3)	
Partition coefficient n-octanol/water (Log Pow)	3.9

cyclohexane (110-82-7)	
Partition coefficient n-octanol/water (Log Pow)	3.44 (at 25 °C (at pH 7)

12.4. Mobility in soil

n-hexane (110-54-3)	
Mobility in soil	2187.76 Source: ECHA

12.5. Other adverse effects

Hazardous to the ozone layer : Not available
Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations : Dispose of in a safe manner in accordance with local/national regulations.
Additional information : Handle empty containers with care because residual vapours are flammable.
Ecological information : Avoid release to the environment.

SECTION 14: Transport information

14.1 National and international Regulations

In accordance with IMDG / IATA / ANTT

ANTT	IMDG	IATA
UN number		
1268	1268	1268

UN Proper Shipping Name		
DESTILADOS DE PETRÓLEO, N.E. (Destilados (petróleo), ricos em C6)	PETROLEUM DISTILLATES, N.O.S. (Distillates (petroleum), C6-rich)	Petroleum distillates, n.o.s. (distillates (petroleum), C6-rich)
Primary risk class/subclass		
3	3	3
Subsidiary risk class/subclass		
Not applicable	Not applicable	Not applicable
Danger labels		
3	3	3
		
Risk Number		
33	Not applicable	Not applicable
Packing group		
II	II	II
Environmental hazard		
Yes	Yes Marine pollutant: Yes	Yes
Transport em bulk in accordance with MARPOL 73/78 and IBC Code:		
Not applicable	Product name: Not applicable	Not applicable

14.2 Other informations

This information does not intend to convey all specific regulatory or operational requirements/information relating to the product, therefore it cannot be considered exhaustive. Consult ANTT, IMO and ICAO regulations before transporting the product. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

SECTION 15: Regulatory information

15.1. National regulations

Regulatory reference : Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed on KECL/KECI (Korean Existing Chemicals Inventory)

SECTION 16: Other information

No additional information available

Safety Data Sheet (SDS), Brazil - Braskem

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. It warns that the handling of any chemical substance requires the previous knowledge of its hazards for the user. It is up to the user of the product company providing this SDS to and promote the training of its employees about possible risks come upon of the product. The information contained herein is not absolute, but only general information on the use of the chemical and indication of safety and security measures.