Tetramer fraction

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Date of issue: 14 April 2016 Revision date: 23/05/2017 Replace: 29/04/2016 Version: 2

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

1.1. Product identifier

Product form : Mixture

Trade name : Tetramer fraction

Product group : Trade product

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Intermediate
Industrial use
For professional use only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier (Only Representative):
Braskem Netherland BV
Weena 238-240, 9th Floor, Tower C
NL - 3012 NJ – Rotterdam

Manufacturer:
Braskem S/A
Rua da União, 765
Jardim Sonia Maria - Mauá, SP
Zip Code: 09380-900 - Brazil

productsafety@braskem.com

1.4. Emergency telephone number

Emergency number : +31 10 205 2945

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 3	H226
Eye Irrit. 2	H319
Asp. Tox. 1	H304
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

Full text of hazard classes and H-statements: see section 16

Adverse physicochemical, human health and environmental effects

Flammable liquid and vapour. Causes serious eye irritation. May be fatal if swallowed and enters airways. Very toxic to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :

GHS02 GHS07 GHS08 GHS09

Signal word (CLP) : Danger

Hazard statements (CLP) : H226 - Flammable liquid and vapour
H304 - May be fatal if swallowed and enters airways
H319 - Causes serious eye irritation
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (CLP) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

P233 - Keep container tightly closed
P240 - Ground/bond container and receiving equipment
P241 - Use explosion-proof electrical, lighting, ventilating equipment
P264 - Wash hands thoroughly after handling
P273 - Avoid release to the environment

2.3. Other hazards

other hazards which do not result in classification : This material can accumulate static charge by flow or agitation and can be ignited by static discharge. Repeated exposure may cause skin dryness or cracking.

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
n-Nonenes	(CAS No) 27215-95-8 (EC no) 248-339-5	55	Flam. Liq. 3, H226 Eye Irrit. 2, H319 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Propylene tetramer	(CAS No) 6842-15-5 (EC no) 614-466-3	45	Flam. Liq. 3, H226 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of 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. Assure fresh air breathing. Allow the victim to rest. In case of irregular breathing or respiratory arrest provide artificial respiration. Immediately get medical attention.

First-aid measures after skin contact : Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. Repeated exposure may cause skin dryness or cracking. If skin irritation persists, seek medical attention.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: get medical advice/attention.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. May result in aspiration into the lungs, causing chemical pneumonia. Immediately call a POISON CENTRE or doctor/physician.

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

Symptoms/injuries after inhalation : Aspiration of this material may cause chemical pneumonia. Overexposure to vapours may result in cough.

Symptoms/injuries after skin contact : Prolonged or repeated contact with the skin may cause dermatitis.

Symptoms/injuries after eye contact : Eye irritation.

Symptoms/injuries after ingestion : May be harmful if swallowed. Ingestion may cause nausea and vomiting. May be fatal if swallowed and enters airways. Risk of lung oedema.

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

May result in aspiration into the lungs. Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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

Unsuitable extinguishing media : Do not use a water jet since it may cause the fire to spread. Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Flammable liquid and vapour. Material can accumulate some static charge during transfer. Incomplete combustion releases dangerous carbon monoxide, carbon dioxide and other toxic gases.

Explosion hazard : May form flammable/explosive vapour-air mixture. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

Hazardous decomposition products in case of fire : Hazardous decomposition products may be released during prolonged heating like smokes, carbon monoxide and dioxide.

5.3. Advice for firefighters

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

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources. Use special care to avoid static electric charges. Use only antistatic equipped (spark-free) tools. No open flames. No smoking.

6.1.1. For non-emergency personnel

Protective equipment : Wear suitable protective clothing, gloves and eye/face protection. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Ventilate spillage area. Use only antistatic equipped (spark-free) tools. Eliminate every possible source of ignition. Evacuate unnecessary personnel. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes.

6.1.2. For emergency responders

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

Emergency procedures : Evacuate unnecessary personnel. Spill should be handled by trained cleaning personnel properly equipped with respiratory and eye protection. Ventilate area.

6.2. Environmental precautions

Prevent contamination of soil, drains and surface waters. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for cleaning up : Take up liquid spill into absorbent material. Take up large spills with pump or vacuum. Use only antistatic equipped (spark-free) tools. Absorb remaining liquid with sand or inert absorbent and remove to safe place. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Store away from other materials. Notify authorities if product enters sewers or public waters. Consult the appropriate authorities about waste disposal.

6.4. Reference to other sections

For further information refer to section 8: Exposure-controls/personal protection. For disposal of residues refer to section 13: Disposal considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.

Precautions for safe handling : Ensure good ventilation of the work station. Carry out operations in the open/under local exhaust/ventilation or with respiratory protection. Take precautionary measures against static discharge. Ground/bond container and receiving equipment. Handling this product may result in electrostatic accumulation. Use proper grounding procedures. Use explosion-proof equipment. Use only non-sparking tools. No open flames. No smoking. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Flammable vapours may accumulate in the container. Wear personal protective equipment. Avoid contact with skin and eyes. Never use pressure to empty container.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practices. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment. Avoid static electricity discharges. Use explosion-proof electrical, ventilating, lighting equipment. Keep away from sources of ignition - No smoking.

Storage conditions : Store tightly closed in a dry, cool and well-ventilated place. Keep only in the original container in a cool, well ventilated place away from: Incompatible materials. Keep away from ignition sources (including static discharges). Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up.

Incompatible materials : Strong oxidizing agents.

7.3. Specific end use(s)

Refer to section 1.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls	:	Ensure good ventilation of the work station. Use explosion-proof equipment. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
Hand protection	:	Wear suitable gloves resistant to chemical penetration. Chemical resistant gloves (according to European standard EN 374 or equivalent). Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer
Eye protection	:	Chemical goggles or face shield with safety glasses
Respiratory protection	:	Where excessive vapour, mist, or dust may result, use approved respiratory protection equipment
Environmental exposure controls	:	Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	:	Liquid
Colour	:	Colourless.
Odour	:	Characteristic.
Odour threshold	:	No data available
pH	:	Not applicable
Relative evaporation rate (butyl acetate=1)	:	Not available
Melting point / Freezing point	:	< 20°C
Boiling point	:	171 - 208 °C
Flash point	:	52 °C (closed cup)
Auto-ignition temperature	:	Not available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	Flammable
Vapour pressure	:	20 mmHg @ 19°C
Relative vapour density	:	5,81 (air=1)
Relative density	:	0,77 – 0,785 @ 20°C
Density	:	No data available
Solubility	:	Water: Insoluble Soluble in ethanol and benzene
Log Pow	:	Not available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Explosive limits	:	0,8 – 5,4 vol %

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapour. No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable at room temperature.

10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur.

10.4. Conditions to avoid

No flames, no sparks. Eliminate all sources of ignition. Overheating. Avoid contact with hot surfaces. Direct sunlight. Avoid static electricity discharges. Open flame. Extremely high or low temperatures.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Incomplete combustion releases dangerous carbon monoxide, carbon dioxide and other toxic gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

n-Nonenes (27215-95-8)	
LD50 oral rat	2100 mg/kg
LD50 dermal rabbit	5000 mg/kg

Propylene tetramer (6842-15-5)	
LD50 oral rat	> 5 g/kg
LC50 inhalation rat (mg/l)	> 5060 mg/m³ (Exposure time: 4 h)

Skin corrosion/irritation : Not classified
pH: Not applicable

Serious eye damage/irritation : Causes serious eye irritation.
pH: Not applicable

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

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

Potential Adverse human health effects and symptoms : Risk of aspiration pneumonia.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : This material has not been tested for environmental effects. Very toxic to aquatic life with long lasting effects.

Ecology - water : Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

Tetramer fraction	
Persistence and degradability	May cause long-term adverse effects in the environment.

12.3. Bioaccumulative potential

Tetramer fraction	
Log Pow	Not available
Bioaccumulative potential	Not established.

n-Nonenes (27215-95-8)	
BCF fish 1	(low potential to bioaccumulate)

12.4. Mobility in soil

If product enters soil, it will be mobile and may contaminate groundwater.

12.5. Results of PBT and vPvB assessment

Tetramer fraction	
Results of PBT assessment	This substance does not meet the criteria for classification as PBT or vPvB.

12.6. Other adverse effects

Additional information : Avoid release to the environment

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) : Dispose of this material and its container to hazardous or special waste collection point. Disposal must be done according to official regulations.

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Waste disposal recommendations : Dispose of this material and its container to hazardous or special waste collection point. Do not allow to enter into surface water or drains. Do not re-use empty containers. Dispose in a safe manner in accordance with local/national regulations.

Additional information : Handle empty containers with care because residual vapours are flammable. Flammable vapours may accumulate in the container.

Ecology - waste materials	:	Avoid release to the environment. Hazardous waste due to toxicity.

SECTION 14: Transport information

Classification for ROAD and RAIL transport: ADR/RID

14.1 UN Number	:	UN3295
14.2 Proper Shipping Name	:	HYDROCARBONS, LIQUID, N.O.S. (Nonene, Propylene Tetramer)
14.3 Class / Division	:	3
14.4 Packing group	:	III
14.5 Environmental hazards	:	Product considered environmentally hazardous based on available data
14.6 Special precautions for user	:	Hazard identification number: 30

Classification for SEA transport: IMO - IMDG

14.1 UN Number	:	UN3295
14.2 Proper Shipping Name	:	HYDROCARBONS, LIQUID, N.O.S. (Nonene, Propylene Tetramer)
14.3 Class / Division	:	3
14.4 Packing group	:	III
14.5 Environmental hazards	:	Product considered marine pollutant based on available data
14.6 Special precautions for user	:	No additional information available
14.7 Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code		
Product name	:	Consult IMO regulations before transporting in bulk

Classification for AIR transport: IATA - ICAO

14.1 UN Number	:	UN3295
14.2 Proper Shipping Name	:	Hydrocarbons, liquid, n.o.s. (Nonene, Propylene Tetramer)
14.3 Class / Division	:	3
14.4 Packing group	:	III
14.5 Environmental hazards	:	Product considered environmentally hazardous based on available data
14.6 Special precautions for user	:	No additional information available

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 ADR, RID, IMO and ICAO regulations before transporting the product. It is 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. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

15.1.2. National regulations

Germany

VwVwS Annex reference	:	Water hazard class (WGK) 3, severe hazard to waters (Classification according to VwVwS, Annex 4)
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV	:	Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen	:	None of the components are listed
SZW-lijst van mutagene stoffen	:	None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding	:	None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid	:	None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling	:	None of the components are listed

Denmark

Class for fire hazard	:	Class III-1

Store unit	:	50 liter
Classification remarks	:	Flammable according to the Danish Ministry of Justice; Emergency management guidelines for the storage of flammable liquids must be followed
Recommendations Danish Regulation	:	Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Other information : None.

Full text of R-, H- and EUH-statements:

Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Asp. Tox. 1	Aspiration hazard, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
H226	Flammable liquid and vapour
H304	May be fatal if swallowed and enters airways
H319	Causes serious eye irritation
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

Braskem - SDS EU

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.