

## Economic Commission for Europe

### Inland Transport Committee

#### Working Party on the Transport of Dangerous Goods

Joint Meeting of Experts on the Regulations annexed to the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN) (ADN Safety Committee)

#### Thirty-fifth session

Geneva, 26-30 August 2019

Item 4 (b) of the provisional agenda

**Proposal for amendments to the Regulations annexed to ADN:  
other proposals**

28 August 2019

English

## Additional Information to the Proposal for amendment of UN 2057 (Tripropylene) in Table C

### Transmitted by the European Chemical Industry Council (CEFIC)

1. Based on discussion during the 35<sup>th</sup> session of the ADN Safety Committee CEFIC had been asked to provide additional information to the working document ECE/TRANS/WP.15/AC.2/2019/27.
2. Tripropylene is also named as Nonene or Propylene Trimer
3. Further information can be found on the website of Pubchem (<https://pubchem.ncbi.nlm.nih.gov/compound/Tripropylene>) (from 271.94°F = 133°C)

**PubChem** Tripropylene (Compound)

water. Hence floats on water. May irritate skin on contact. Vapors heavier than air. Inhalation of vapors may cause irritation. Prolonged inhalation may lead to breathing difficulty. Ingestion causes abdominal discomfort, nausea and diarrhea. Used to make other chemicals and as a lubricating oil additive.

from CAMEO Chemicals

#### 3.2.2 Boiling Point

271.94 to 287.06 ° F at 760 mm Hg (USCG, 1999)

U.S. Coast Guard. 1999. Chemical Hazard Response Information System (CHRIS) - Hazardous Chemical Data. Commandant Instruction 16465.12C. Washington, D.C.: U.S. Government Printing Office.

from CAMEO Chemicals

#### 3.2.3 Flash Point

75 ° F (USCG, 1999)

U.S. Coast Guard. 1999. Chemical Hazard Response Information System (CHRIS) - Hazardous Chemical Data. Commandant Instruction 16465.12C. Washington, D.C.: U.S. Government Printing Office.

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CONTENTS

- 1 Structures
- 2 Names and Identifiers
- 3 Chemical and Physical Properties
- 4 Related Records
- 5 Chemical Vendors
- 6 Use and Manufacturing
- 7 Safety and Hazards
- 8 Patents
- 9 Classification
- 10 Information Sources

## 4. And the ECHA site

Alkenes, C16-18

Assessment reports

Reference substances

Categories

- Viscosity  
- Additional physico-chemical information

Flammability

Currently viewing: S-01 | Summary

Administrative data Link to relevant study record(s) Description of key information Key value for chemical safety assessment

Additional information Justification for classification or non-classification

#### Justification for classification or non-classification

The flash point of hex-1-ene is -25°C and the boiling point was measured as 64 °C.

The flash point of oct-1-ene is 10°C and the boiling point is 121.29°C.

The flash point of dec-1-ene is 45 to <55 °C.

The flash point of nonene lies in the range 21 to <55°C and the boiling point lies in the range 121 - 171°C.

The flash point of decene is 45 to <55°C.

The flash point of Alkenes C6- is < -10°C and the boiling point is 60 - 80°C.

The flash point of Hydrocarbons C4-10, unsaturated is in the range <-10 - 23°C and based on read across within the category the boiling point range lies between 60 and 147°C.

The flash point of alkenes, C6 - 8 branched, C7-rich is < 0°C and the boiling point is 87 - 98°C.

The flash point of alkenes, C6 - 8 is < 0°C and the boiling point is 87 - 98°C.

The flash point of alkenes, C7 - 9 branched, C8 rich is 3°C and the boiling point is 113 - 127°C.



Product Name: NONENE  
 Revision Date: 16 Aug 2019  
 Page 1 of 15

## SAFETY DATA SHEET

<b>SECTION 1</b>	<b>IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING</b>
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As of the revision date above, this SDS meets the regulations in the United Kingdom & Ireland.

### 1.1. PRODUCT IDENTIFIER

Product Name: NONENE  
 Product Description: Olefin

**Registration Name:**

Alkenes, C8-10-branched, C9-rich

**Identification Number:** (CAS #)97593-01-6

**Registration Number:**

01-2119489790-25

### 1.2. RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

**Intended Use:** Chemical feedstock

**Identified Uses:**

Manufacture of substance  
 Distribution of substance  
 Use as an intermediate

**Uses advised against:** This product is not recommended for any industrial, professional or consumer use other than the Identified Uses above.

### 1.3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

**Supplier:** ExxonMobil Petroleum & Chemical BVBA  
 Polderdijkweg  
 B-2030 Antwerpen  
 Belgium  
 Phone: +32 3 790 31 11

**Local Contact:**

ExxonMobil Chemical Ltd.  
 MAILPOINT 14  
 MARSH LANE  
 FAWLEY, SOUTHAMPTON  
 SO45 1TX HAMPSHIRE  
 Great Britain

**Supplier General Contact:**  
**E-Mail:**

(UK) (+44) (0) 23 8089 3822  
 sds.uk@exxonmobil.com

### 1.4. EMERGENCY TELEPHONE NUMBER

Product Name: NONENE  
Revision Date: 16 Aug 2019  
Page 2 of 15

24 Hour Emergency Telephone:  
National Poison Control Centre:

+ (44) 8708200418 (CHEMTREC)  
(UK) 111 / (IE) (+353) 1 809 2166

## SECTION 2 HAZARDS IDENTIFICATION

### 2.1. CLASSIFICATION OF SUBSTANCE OR MIXTURE

Classification according to Regulation (EC) No 1272/2008

Flammable liquid: Category 3.

Aspiration toxicant: Category 1.

Acute aquatic toxicant: Category 1. Chronic aquatic toxicant: Category 1.

H226: Flammable liquid and vapour.

H304: May be fatal if swallowed and enters airways.

H400: Very toxic to aquatic life. H410: Very toxic to aquatic life with long lasting effects.

### 2.2. LABEL ELEMENTS

Label elements according to Regulation (EC) No 1272/2008

Pictograms:



Signal Word: Danger

Hazard Statements:

H226: Flammable liquid and vapour.

H304: May be fatal if swallowed and enters airways.

H410: Very toxic to aquatic life with long lasting effects.

EUH066: Repeated exposure may cause skin dryness or cracking.

Precautionary Statements:

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-



Product Name: NONENE  
 Revision Date: 16 Aug 2019  
 Page 3 of 15

proof electrical, ventilating and lighting equipment. P242: Use non-sparking tools. P243: Take action to prevent static discharges. P273: Avoid release to the environment. P280: Wear protective gloves and eye / face protection. P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P331: Do NOT induce vomiting. P332 + P313: If skin irritation occurs: Get medical advice/attention. P370 + P378: In case of fire: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish. P391: Collect spillage. P403 + P235: Store in a well-ventilated place. Keep cool. P405: Store locked up. P501: Dispose of contents and container in accordance with local regulations.

Contains: Alkenes, C8-10-branched, C9-rich

### 2.3. OTHER HAZARDS

#### Physical / Chemical Hazards:

Material can accumulate static charges which may cause an ignition. Material can release vapours that readily form flammable mixtures. Vapour accumulation could flash and/or explode if ignited. May form explosive peroxides.

#### Health Hazards:

Repeated exposure may cause skin dryness or cracking. Mildly irritating to skin. May be irritating to the eyes, nose, throat, and lungs.

#### Environmental Hazards:

No additional hazards. Material does not meet the criteria for PBT or vPvB in accordance with REACH Annex XIII.

## SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

### 3.1. SUBSTANCES

This material is defined as a substance.

#### Reportable hazardous substance(s) complying with the classification criteria and/or with an exposure limit (OEL)

Name	CAS#	EC#	Registration#	Concentration *	GHS/CLP classification
Alkenes, C8-10-branched, C9-rich	97593-01-6	307-301-9	01-2119489790-25	100 %	[Skin Irrit. 3 H316], Aquatic Acute 1 H400 (M factor 1), Aquatic Chronic 1 H410 (M factor 1), Asp. Tox. 1 H304, EUH066, Flam. Liq. 3 H226

Note - any classification in brackets is a GHS building block that was not adopted by the EU in the CLP regulation (No 1272/2008) and therefore is not applicable in the EU or in non-EU countries which have implemented the CLP regulation and is shown for informational purposes only.

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Product Name: NONENE  
 Revision Date: 16 Aug 2019  
 Page 4 of 15

Note: See SDS Section 16 for full text of hazard statements.

3.2. MIXTURES Not Applicable. This product is regulated as a substance.

<b>SECTION 4</b>	<b>FIRST AID MEASURES</b>
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#### 4.1. DESCRIPTION OF FIRST AID MEASURES

##### INHALATION

Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

##### SKIN CONTACT

Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse.

##### EYE CONTACT

Flush thoroughly with water. If irritation occurs, get medical assistance.

##### INGESTION

Seek immediate medical attention. Do not induce vomiting.

#### 4.2. MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

No important symptoms or effects.

#### 4.3. INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

<b>SECTION 5</b>	<b>FIRE FIGHTING MEASURES</b>
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#### 5.1. EXTINGUISHING MEDIA

**Suitable Extinguishing Media:** Use water fog, foam, dry chemical or carbon dioxide (CO<sub>2</sub>) to extinguish flames.

**Unsuitable Extinguishing Media:** Straight streams of water

#### 5.2. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

**Hazardous Combustion Products:** Incomplete combustion products, Oxides of carbon, Smoke, Fume

#### 5.3. ADVICE FOR FIRE FIGHTERS

**Fire Fighting Instructions:** FLAMMABLE. Evacuate area. If a leak or spill has not ignited, use water spray to disperse the vapours and to protect personnel attempting to stop a leak. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. Fire-fighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.



Product Name: NONENE  
 Revision Date: 16 Aug 2019  
 Page 5 of 15

**Unusual Fire Hazards:** FLAMMABLE. Vapour is flammable and heavier than air. Vapour may travel across the ground and reach remote ignition sources, causing a flashback fire danger.

#### FLAMMABILITY PROPERTIES

Flash Point [Method]: 23°C (73°F) [ASTM D-56]  
 Upper/Lower Flammable Limits (Approximate volume % in air): UEL: 4.0 LEL: 0.5 [Approximate] [In-house method]  
 Autoignition Temperature: 230°C (446°F) [ASTM E659]

### SECTION 6 ACCIDENTAL RELEASE MEASURES

#### 6.1. PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

##### NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

##### PROTECTIVE MEASURES

Avoid contact with spilled material. Warn or evacuate occupants in surrounding and downwind areas if required, due to toxicity or flammability of the material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.

#### 6.2. ENVIRONMENTAL PRECAUTIONS

Large Spills: Dyke far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

#### 6.3. METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

**Land Spill:** Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do so without risk. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Prevent entry into waterways, sewer, basements or confined areas. A vapour-suppressing foam may be used to reduce vapour. Use clean non-sparking tools to collect absorbed material. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Large Spills: Water spray may reduce vapour, but may not prevent ignition in enclosed spaces. Recover by pumping or with suitable absorbent.

**Water Spill:** Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Warn other shipping. Remove from the surface by skimming or with suitable absorbents.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

#### 6.4. REFERENCES TO OTHER SECTIONS

See Sections 8 and 13.

Product Name: NONENE  
 Revision Date: 16 Aug 2019  
 Page 6 of 15

<b>SECTION 7</b>	<b>HANDLING AND STORAGE</b>
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**7.1. PRECAUTIONS FOR SAFE HANDLING**

Avoid contact with skin. Prevent exposure to ignition sources, for example use non-sparking tools and explosion-proof equipment. Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may cause an electrical spark (ignition source). Use proper bonding and/or ground procedures. However, bonding and grounds may not eliminate the hazard from static accumulation. Consult local applicable standards for guidance. Additional references include American Petroleum Institute 2003 (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practice on Static Electricity) or CENELEC CLC/TR 50404 (Electrostatics - Code of practice for the avoidance of hazards due to static electricity).

**Loading/Unloading Temperature:** [Ambient]

**Transport Temperature:** [Ambient]

**Transport Pressure:** [Ambient]

**Static Accumulator:** This material is a static accumulator. A liquid is typically considered a nonconductive, static accumulator if its conductivity is below 100 pS/m (100x10E-12 Siemens per meter) and is considered a semiconductive, static accumulator if its conductivity is below 10,000 pS/m. Whether a liquid is nonconductive or semiconductive, the precautions are the same. A number of factors, for example liquid temperature, presence of contaminants, anti-static additives and filtration can greatly influence the conductivity of a liquid.

**7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES**

Ample fire water supply should be available. A fixed sprinkler/deluge system is recommended. Nitrogen blanketing of containers is recommended. The type of container used to store the material may affect static accumulation and dissipation. Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area. Outside or detached storage preferred. Storage containers should be earthed and bonded. Fixed storage containers, transfer containers and associated equipment should be earthed and bonded to prevent accumulation of static charge.

**Storage Temperature:** [Ambient]

**Storage Pressure:** [Ambient]

**Suitable Containers/Packing:** Tankers; Tank Trucks; Drums; Barges; Tank Cars

**Suitable Materials and Coatings (Chemical Compatibility):** Carbon Steel; Stainless Steel; Polypropylene; Viton; Epoxy Phenolic; CAF Joints; Polyamide Epoxy; Nickel Steel; Cast Iron; Bronze; Epoxy Amine Coatings; Monel; Vinyl Coatings; Inorganic Zinc Coatings; Copper

**Unsuitable Materials and Coatings:** Butyl Rubber; Natural Rubber

**7.3. SPECIFIC END USES**

Section 1 informs about identified end-uses. No industrial or sector specific guidance available.

<b>SECTION 8</b>	<b>EXPOSURE CONTROLS / PERSONAL PROTECTION</b>
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**8.1. CONTROL PARAMETERS****EXPOSURE LIMIT VALUES**

Exposure limits/standards (Note: Exposure limits are not additive)

Substance Name	Form	Limit/Standard		Note	Source
Alkenes, C8-10-branched, C9-rich		TWA	350		ExxonMobil





Product Name: NONENE  
 Revision Date: 16 Aug 2019  
 Page 7 of 15

			mg/m3			
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Note: Information about recommended monitoring procedures can be obtained from the relevant agency(ies)/institute(s):

UK Health and Safety Executive (HSE)

## 8.2. EXPOSURE CONTROLS

This product has been registered as an intermediate and is required to be handled and used at all times only under strictly controlled conditions as defined in Article 18(4) of Regulation (EC) No.1907/2006 (REACH Regulation) and consistent with the exposure control measures described in the safety data sheet.

### ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:

Adequate ventilation should be provided so that exposure limits are not exceeded. Use explosion-proof ventilation equipment to stay below exposure limits.

### PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

**Respiratory Protection:** If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

Half-face filter respirator Type A filter material, European Committee for Standardization (CEN) standards EN 136, 140 and 405 provide respirator masks and EN 149 and 143 provide filter recommendations.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapour warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

**Hand Protection:** Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use

Product Name: NONENE  
 Revision Date: 16 Aug 2019  
 Page 8 of 15

conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

Chemical resistant gloves are recommended. Viton, minimum 0.71 mm thickness or comparable protective barrier material with a high performance level for continuous contact use conditions, permeation breakthrough minimum 480 minutes in accordance with CEN standards EN 420 and EN 374.

**Eye Protection:** If contact is likely, safety glasses with side shields are recommended.

**Skin and Body Protection:** Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:  
 Chemical/oil resistant clothing is recommended.

**Specific Hygiene Measures:** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

#### ENVIRONMENTAL CONTROLS

Comply with applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9	PHYSICAL AND CHEMICAL PROPERTIES
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Note: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the Supplier for additional information.

#### 9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid  
 Form: Clear  
 Colour: Colourless  
 Odour: Petroleum/Solvent  
 Odour Threshold: No data available  
 pH: No data available  
 Melting Point: No data available  
 Freezing Point: No data available  
 Initial Boiling Point / and Boiling Range: 134°C (273°F) - 147°C (297°F) [ASTM D1078]  
 Flash Point [Method]: 23°C (73°F) [ASTM D-56]  
 Evaporation Rate (n-butyl acetate = 1): 1.6 [In-house method]  
 Flammability (Solid, Gas): Not technically feasible  
 Upper/Lower Flammable Limits (Approximate volume % in air): UEL: 4.0 LEL: 0.5 [Approximate]  
 [In-house method]  
 Vapour Pressure: 1.6 kPa (12 mm Hg) at 20 °C | 8.53 kPa (63.98 mm Hg) at 60°C  
 | 3.73 kPa (27.98 mm Hg) at 40°C [In-house method]  
 Vapour Density (Air = 1): > 1 at 101 kPa [In-house method]



Product Name: NONENE  
 Revision Date: 16 Aug 2019  
 Page 9 of 15

Relative Density: No data available  
 Solubility(ies): water Negligible  
 Partition coefficient (n-Octanol/Water Partition Coefficient): > 5 [In-house method]  
 Autoignition Temperature: 230°C (446°F) [ASTM E659]  
 Decomposition Temperature: No data available  
 Viscosity: [N/D at 40°C] | 0.83 cSt (0.83 mm<sup>2</sup>/sec) at 20°C [ASTM D 445]  
 Explosive Properties: None  
 Oxidizing Properties: None

## 9.2. OTHER INFORMATION

Density (at 20 °C): 737 kg/m<sup>3</sup> (6.15 lbs/gal, 0.74 kg/dm<sup>3</sup>) - 747 kg/m<sup>3</sup> (6.23 lbs/gal, 0.75 kg/dm<sup>3</sup>) [ASTM D4052]  
 Pour Point: < -50°C (-58°F) [ASTM D5950]  
 Molecular Weight: 126  
 Hygroscopic: No

## SECTION 10 STABILITY AND REACTIVITY

- 10.1. REACTIVITY: See sub-sections below.
- 10.2. CHEMICAL STABILITY: Material is stable under normal conditions.
- 10.3. POSSIBILITY OF HAZARDOUS REACTIONS: Hazardous polymerization will not occur.
- 10.4. CONDITIONS TO AVOID: Contact with air. Avoid heat, sparks, open flames and other ignition sources.
- 10.5. INCOMPATIBLE MATERIALS: Halogenated compounds, Halogens, Inorganic acids, Molten Sulphur, Strong oxidisers
- 10.6. HAZARDOUS DECOMPOSITION PRODUCTS: Material does not decompose at ambient temperatures.

## SECTION 11 TOXICOLOGICAL INFORMATION

### 11.1. INFORMATION ON TOXICOLOGICAL EFFECTS

Hazard Class	Conclusion / Remarks
<b>Inhalation</b>	
Acute Toxicity (Rat) 4 hour(s) LC50 > 20 mg/l (Vapour) Test scores or other study results do not meet criteria for classification.	Minimally Toxic. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 403
Irritation: No end point data for material.	Elevated temperatures or mechanical action may form vapours, mist, or fumes which may be irritating to the eyes, nose, throat, or lungs.
<b>Ingestion</b>	
Acute Toxicity (Rat): LD50 > 5000 mg/kg Test scores or other study results do not meet criteria for classification.	Minimally Toxic. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 423

Product Name: NONENE  
 Revision Date: 16 Aug 2019  
 Page 10 of 15

<b>Skin</b>	
Acute Toxicity (Rabbit): LD50 > 3160 mg/kg Test scores or other study results do not meet criteria for classification.	Minimally Toxic. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 402
Skin Corrosion/Irritation: Data available. Test scores or other study results do not meet criteria for classification.	Mildly irritating to skin with prolonged exposure. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 404
<b>Eye</b>	
Serious Eye Damage/Irritation: Data available. Test scores or other study results do not meet criteria for classification.	May cause mild, short-lasting discomfort to eyes. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 405
<b>Sensitisation</b>	
Respiratory Sensitization: No end point data for material.	Not expected to be a respiratory sensitizer.
Skin Sensitization: Data available. Test scores or other study results do not meet criteria for classification.	Not expected to be a skin sensitizer. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 406
Aspiration: Data available.	May be fatal if swallowed and enters airways. Based on physico-chemical properties of the material.
Germ Cell Mutagenicity: Data available. Test scores or other study results do not meet criteria for classification.	Not expected to be a germ cell mutagen. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 471 473 474 476
Carcinogenicity: No end point data for material.	Not expected to cause cancer.
Reproductive Toxicity: Data available. Test scores or other study results do not meet criteria for classification.	Not expected to be a reproductive toxicant. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 422
Lactation: No end point data for material.	Not expected to cause harm to breast-fed children.
<b>Specific Target Organ Toxicity (STOT)</b>	
Single Exposure: No end point data for material.	Not expected to cause organ damage from a single exposure.
Repeated Exposure: Data available. Test scores or other study results do not meet criteria for classification.	Not expected to cause organ damage from prolonged or repeated exposure. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 408 413

#### OTHER INFORMATION

##### For the product itself:

Vapour concentrations above recommended exposure levels are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anaesthetic and may have other central nervous system effects. Prolonged and/or repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.

#### SECTION 12 ECOLOGICAL INFORMATION

The information given is based on data for the material, components of the material, or for similar materials, through the application of bridging principals.



Product Name: NONENE  
 Revision Date: 16 Aug 2019  
 Page 11 of 15

#### 12.1. TOXICITY

Material -- Expected to be very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

#### 12.2. PERSISTENCE AND DEGRADABILITY

##### Biodegradation:

Material -- Expected to biodegrade slowly.

##### Hydrolysis:

Material -- Transformation due to hydrolysis not expected to be significant.

##### Photolysis:

Material -- Transformation due to photolysis not expected to be significant.

##### Atmospheric Oxidation:

Material -- Expected to degrade rapidly in air

#### 12.3. BIOACCUMULATIVE POTENTIAL Not determined.

#### 12.4. MOBILITY IN SOIL

Material -- Highly volatile, will partition rapidly to air. Not expected to partition to sediment and wastewater solids.

#### 12.5. PERSISTENCE, BIOACCUMULATION AND TOXICITY FOR SUBSTANCE(S)

Material does not meet the Reach Annex XIII criteria for PBT or vPvB.

#### 12.6. OTHER ADVERSE EFFECTS

No adverse effects are expected.

### ECOLOGICAL DATA

#### Ecotoxicity

Test	Duration	Organism Type	Test Results
Aquatic - Acute Toxicity	48 hour(s)	Daphnia magna	EC50 0.56-1 mg/l: data for similar materials
Aquatic - Acute Toxicity	96 hour(s)	Oncorhynchus mykiss	LC50 0.87 mg/l: data for similar materials
Aquatic - Acute Toxicity	72 hour(s)	Pseudokirchneriella subcapitata	EC50 1-1.8 mg/l: data for similar materials
Aquatic - Chronic Toxicity	21 day(s)	Daphnia magna	LOEC 28.7 ug/l: data for similar materials
Aquatic - Chronic Toxicity	21 day(s)	Daphnia magna	NOEC 19.4 ug/l: data for similar materials

#### Persistence, Degradability and Bioaccumulation Potential

Media	Test Type	Duration	Test Results: Basis
Water	Calculated		BCF 252-3985
Octanol-Water	Calculated		log Kow >5



Product Name: NONENE  
 Revision Date: 16 Aug 2019  
 Page 12 of 15

<b>SECTION 13</b>	<b>DISPOSAL CONSIDERATIONS</b>
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Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

#### 13.1. WASTE TREATMENT METHODS

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

European Waste Code: 07 XX XX

NOTE: These codes are assigned based upon the most common uses for this material and may not reflect contaminants resulting from actual use. Waste producers need to assess the actual process used when generating the waste and its contaminants in order to assign the proper waste disposal code(s).

**Empty Container Warning** Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. **DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.**

<b>SECTION 14</b>	<b>TRANSPORT INFORMATION</b>
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#### LAND (ADR/RID)

14.1. UN Number: 2057  
 14.2. UN Proper Shipping Name (Technical Name): TRIPROPYLENE  
 14.3. Transport Hazard Class(es): 3  
 14.4. Packing Group: III  
 14.5. Environmental Hazards: Yes  
 14.6. Special Precautions for users:  
 Classification Code: F1  
 Label(s) / Mark(s): 3, EHS  
 Hazard ID Number: 30  
 Hazchem EAC: 3Y

#### INLAND WATERWAYS (ADN)

14.1. UN (or ID) Number: 2057  
 14.2. UN Proper Shipping Name (Technical Name): TRIPROPYLENE  
 14.3. Transport Hazard Class(es): 3  
 14.4. Packing Group: III  
 14.5. Environmental Hazards: Yes  
 14.6. Special Precautions for users:  
 Hazard ID Number: 30  
 Label(s) / Mark(s): 3 (N1), EHS



Product Name: NONENE  
 Revision Date: 16 Aug 2019  
 Page 13 of 15

#### SEA (IMDG)

14.1. UN Number: 2057  
 14.2. UN Proper Shipping Name (Technical Name): TRIPROPYLENE  
 14.3. Transport Hazard Class(es): 3  
 14.4. Packing Group: III  
 14.5. Environmental Hazards: Marine Pollutant  
 14.6. Special Precautions for users:  
 Label(s): 3  
 EMS Number: F-E, S-D  
 Transport Document Name: UN2057, TRIPROPYLENE, 3, PG III, (23°C c.c.), MARINE POLLUTANT

#### SEA (MARPOL 73/78 Convention - Annex II):

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code  
 Substance Name: NONENE (all isomers)  
 Ship type required: 2  
 Pollution category: Y

#### AIR (IATA)

14.1. UN Number: 2057  
 14.2. UN Proper Shipping Name (Technical Name): TRIPROPYLENE  
 14.3. Transport Hazard Class(es): 3  
 14.4. Packing Group: III  
 14.5. Environmental Hazards: Yes  
 14.6. Special Precautions for users:  
 Label(s) / Mark(s): 3  
 Transport Document Name: UN2057, TRIPROPYLENE, 3, PG III

<b>SECTION 15</b>	<b>REGULATORY INFORMATION</b>
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#### REGULATORY STATUS AND APPLICABLE LAWS AND REGULATIONS

Listed or exempt from listing/notification on the following chemical inventories (May contain substance(s) subject to notification to the EPA Active TSCA inventory prior to import to USA): AICS, DSL, ENCS, IECSC, KECI, PICCS, TCSI, TSCA

The national inventory listings are based on the CAS number or numbers listed below.

CAS
97593-01-6
27215-95-8
68526-55-6

#### 15.1. SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

##### Applicable EU Directives and Regulations:

1907/2006 [... on the Registration, Evaluation, Authorisation and Restriction of Chemicals ... and amendments thereto]

Product Name: NONENE  
 Revision Date: 16 Aug 2019  
 Page 14 of 15

2004/42/CE [on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC.]  
 96/82/EC as extended by 2003/105/EC [ ... on the control of major-accident hazards involving dangerous substances]. Product contains a substance that falls within the criteria defined in Annex I. Refer to Directive for details of requirements taking into account the volume of product stored on site.  
 98/24/EC [ ... on the protection of workers from the risk related to chemical agents at work ...]. Refer to Directive for details of requirements.  
 1272/2008 [on classification, labelling and packaging of substances and mixtures.. and amendments thereto]

## 15.2. CHEMICAL SAFETY ASSESSMENT

**REACH Information:** A Chemical Safety Assessment has been carried out for one or more substances present in the material.

<b>SECTION 16</b>	<b>OTHER INFORMATION</b>
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**REFERENCES:** Sources of information used in preparing this SDS included one or more of the following: results from in house or supplier toxicology studies, CONCAWE Product Dossiers, publications from other trade associations, such as the EU Hydrocarbon Solvents REACH Consortium, U.S. HPV Program Robust Summaries, the EU IUCLID Data Base, U.S. NTP publications, and other sources, as appropriate.

List of abbreviations and acronyms that could be (but not necessarily are) used in this safety data sheet:

Acronym	Full text
N/A	Not applicable
N/D	Not determined
NE	Not established
VOC	Volatile Organic Compound
AICS	Australian Inventory of Chemical Substances
AIHA WEEL	American Industrial Hygiene Association Workplace Environmental Exposure Limits
ASTM	ASTM International, originally known as the American Society for Testing and Materials (ASTM)
DSL	Domestic Substance List (Canada)
EINECS	European Inventory of Existing Commercial Substances
ELINCS	European List of Notified Chemical Substances
ENCS	Existing and new Chemical Substances (Japanese inventory)
IECSC	Inventory of Existing Chemical Substances in China
KECI	Korean Existing Chemicals Inventory
NDSL	Non-Domestic Substances List (Canada)
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances
TLV	Threshold Limit Value (American Conference of Governmental Industrial Hygienists)
TSCA	Toxic Substances Control Act (U.S. inventory)
UVCB	Substances of Unknown or Variable composition, Complex reaction products or Biological materials
LC	Lethal Concentration





Product Name: NONENE  
 Revision Date: 16 Aug 2019  
 Page 15 of 15

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LD	Lethal Dose
LL	Lethal Loading
EC	Effective Concentration
EL	Effective Loading
NOEC	No Observable Effect Concentration
NOELR	No Observable Effect Loading Rate

**KEY TO THE H-CODES CONTAINED IN SECTION 3 OF THIS DOCUMENT (for information only):**

Flam. Liq. 3 H226: Flammable liquid and vapor; Flammable Liquid, Cat 3  
 Asp. Tox. 1 H304: May be fatal if swallowed and enters airways; Aspiration, Cat 1  
 [Skin Irrit. 3 H316]: Causes mild skin irritation; Skin Corr/Irritation, Cat 3  
 Aquatic Acute 1 H400: Very toxic to aquatic life; Acute Env Tox, Cat 1  
 Aquatic Chronic 1 H410: Very toxic to aquatic life with long lasting effects; Chronic Env Tox, Cat 1  
 EUH066: Repeated exposure may cause skin dryness or cracking.

**THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:**

Section 01: Company Mailing Address - Additional information information was modified.  
 Section 01: Product Intended Use information was modified.

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 DGN: 4406107OGB (1005448)

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<b>ANNEX</b>
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Annex not required for this material.