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

1.1

Product information

Product Name : PA-18
Material : 1112683, 1112684, 1112290, 1110870, 1073622, 1073620, 1073623, 1073624, 1074098, 1074099, 1074092, 1073613, 1074100, 1073609, 1074101, 1073607, 1074223, 1073641, 1073629, 1073631, 1073633, 1073634, 1073635, 1073636, 1073602, 1073638, 1074803, 1073640, 1073625, 1073628, 1073627, 1073626, 1073637, 1074093, 1074094, 1073639, 1074789, 1073640, 1073628, 1073627, 1073626, 1073637, 1074093, 1074094, 1073639, 1074789, 1073623, 1074824, 1074825, 1074822, 1074791, 1074790, 1037088, 1037087

1.3

Details of the supplier of the safety data sheet

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

Local : Chevron Phillips Chemicals International N.V.
Airport Plaza (Stockholm Building)
Leonardo Da Vinci laan 19
1831 Diegem
Belgium

SDS Requests: (800) 852-5530
Technical Information: (832) 813-4862
Responsible Party: Product Safety Group
Email: sds@cpchem.com

1.4

Emergency telephone:

Health:
866.442.9628 (North America)
1.832.813.4984 (International)

Transport:
CHEMTREC 800.424.9300 or 703.527.3887 (int'l)
SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
REGULATION (EC) No 1272/2008

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

2.2 Labeling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

SECTION 3: Composition/information on ingredients

3.1 - 3.2 Substance or Mixture

Synonyms
- Octadecene-1 polymer with 2,5-Furandione
- PA-18, HV Commercial Grade
- PA-18, HV Low Color Grade
- PA-18, LV Low Color
- PA-18, LV Commercial Grade
- Maleic anhydride/octadecene copolymer
- Poly(maleic anhydride-alt-1-octadecene)
- Octadecene/MA copolymer

Molecular formula: \((C18H36-C4H2O3)x\)

Hazardous ingredients

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Classification (REGULATION (EC) No 1272/2008)</th>
<th>Concentration [wt%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,5-Furandione, polymer with 1-octadecene</td>
<td>25266-02-8</td>
<td>Not a hazardous substance or mixture according to GHS. :</td>
<td>100</td>
</tr>
</tbody>
</table>

Contains no hazardous ingredients according to GHS.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice: Do not leave the victim unattended.
If inhaled: If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.

In case of eye contact: Remove contact lenses. Protect unharmed eye. If eye irritation persists, consult a specialist.

If swallowed: Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

**SECTION 5: Firefighting measures**

Flash point: No data available

Autoignition temperature: Not applicable

5.1 Extinguishing media

5.3 Advice for firefighters

Special protective equipment for fire-fighters: Wear self-contained breathing apparatus for firefighting if necessary.

Further information: Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Fire and explosion protection: Provide appropriate exhaust ventilation at places where dust is formed.

Hazardous decomposition products: Carbon oxides.

**SECTION 6: Accidental release measures**

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions: Avoid dust formation.

6.2 Environmental precautions

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

**SECTION 7: Handling and storage**

7.1 Precautions for safe handling

Handling: Avoid formation of respirable particles. Avoid dust.
accumulation in enclosed space. Do not breathe vapors/dust. Smoking, eating and drinking should be prohibited in the application area. Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary, but may not by themselves be sufficient.

Advice on protection against fire and explosion : Provide appropriate exhaust ventilation at places where dust is formed.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Requirements for storage areas and containers : Electrical installations / working materials must comply with the technological safety standards.

Advice on common storage : No materials to be especially mentioned.

SECTION 8: Exposure controls/personal protection

8.2 Exposure controls

Engineering measures

Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

Personal protective equipment

Respiratory protection : No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material.

Hand protection : No skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact. The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Safety glasses.

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Wear as appropriate: Lightweight protective clothing.

Hygiene measures : General industrial hygiene practice.
### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

**Appearance**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Powder</td>
</tr>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Color</td>
<td>white to yellow</td>
</tr>
</tbody>
</table>

**Safety data**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>no</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Molecular formula</td>
<td>(C18H36-C4H2O3)x</td>
</tr>
<tr>
<td>Molecular weight</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Pour point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative density</td>
<td>0.97 at 15.6 °C (60.1 °F)</td>
</tr>
</tbody>
</table>

**Water solubility**

Soluble in hydrocarbon solvents; insoluble in water.

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>2.500 cP</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Percent volatile</td>
<td>&lt; 1 %</td>
</tr>
<tr>
<td>Particle size</td>
<td>&lt; 500 µm</td>
</tr>
</tbody>
</table>
SECTION 10: Stability and reactivity

10.2 Chemical stability : This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Hazardous reactions : Hazardous reactions: Hazardous polymerization does not occur.

Further information: No hazards to be specially mentioned.

Hazardous reactions: Dust may form explosive mixture in air.

10.4 Conditions to avoid : Generation of Dusts.

10.5 Materials to avoid : Avoid contact with strong oxidizing agents.

10.6 Hazardous decomposition products : Carbon oxides

Other data : Keep in a dry place.
No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity
2,5-Furandione, polymer with 1-octadecene : LD50: > 8.000 mg/kg
Species: Rat

Acute inhalation toxicity
2,5-Furandione, polymer with 1-octadecene : No data available

Acute dermal toxicity
2,5-Furandione, polymer with 1-octadecene : LD50: > 2.000 mg/kg
Species: Rat
Method: OECD Test Guideline 402

Skin irritation
2,5-Furandione, polymer with 1-octadecene : No skin irritation
**Eye irritation**
2,5-Furandione, polymer with 1-octadecene: No eye irritation

**Repeated dose toxicity**
2,5-Furandione, polymer with 1-octadecene: Species: Rat  
Application Route: oral gavage  
Dose: 0, 100, 500, 1000 mg/kg  
Exposure time: 4 wk  
Number of exposures: daily  
NOEL: > 1000 mg/kg  
Species: Rat  
Application Route: oral gavage  
Dose: 0, 250 mg/kg  
Exposure time: 13 wk  
Number of exposures: daily  
NOEL: > 250 mg/kg

**Genotoxicity in vitro**
2,5-Furandione, polymer with 1-octadecene: Test Type: Ames test  
Result: negative

**PA-18 Further information**
The product contains no substances which at their given concentration, are considered to be hazardous to health.

**SECTION 12: Ecological information**

**12.1 Toxicity**

**Toxicity to fish**
2,5-Furandione, polymer with 1-octadecene: LC50: > 1000 mg/l  
Exposure time: 96 h  
Species: Scophthalmus maximus (Flatfish, Flounder)  
semi-static test

**Toxicity to daphnia and other aquatic invertebrates**
2,5-Furandione, polymer with 1-octadecene: > 2000 mg/l  
Exposure time: 48 h  
Species: Acartia tonsa (Marine Copepod)  
static test Method: ISO 14669 and PARCOM method

**Toxicity to algae**
2,5-Furandione, polymer with 1-octadecene: EL50: > 1000 mg/l  
Exposure time: 72 h  
Species: Skeletonema costatum (Marine Algae)  
static test

**12.2 Persistence and degradability**
Biodegradability
2,5-Furandione, polymer with 1-octadecene: This material is not expected to be readily biodegradable.

12.3 Bioaccumulative potential
Bioaccumulation
2,5-Furandione, polymer with 1-octadecene: The polymer is too large to be bioavailable. Accumulation in aquatic organisms is unlikely.

12.4 Mobility in soil
Mobility
2,5-Furandione, polymer with 1-octadecene: immobile

12.5 Results of PBT and vPvB assessment

12.6 Other adverse effects
Additional ecological information: This material is not expected to be harmful to aquatic organisms.

Ecotoxicology Assessment

Short-term (acute) aquatic hazard
2,5-Furandione, polymer with 1-octadecene: This product has no known ecotoxicological effects.

Long-term (chronic) aquatic hazard
2,5-Furandione, polymer with 1-octadecene: This product has no known ecotoxicological effects.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
The information in this SDS pertains only to the product as shipped.

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport information

14.1 - 14.7 Transport information
The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition).
Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.). Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the SDS and the bill of lading.

**US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)**

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

**IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)**

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

**IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)**

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

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

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

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

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

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

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

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

**SECTION 15: Regulatory information**

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National legislation


15.2
### SAFETY DATA SHEET

**PA-18**

**Version 1.6**
**Revision Date 2019-09-03**

#### Major Accident Hazard Legislation

<table>
<thead>
<tr>
<th>Legislation</th>
<th>96/82/EC Update: 2003</th>
<th>Directive 96/82/EC does not apply</th>
</tr>
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</table>

#### Notification status

<table>
<thead>
<tr>
<th>Region</th>
<th>Status Description</th>
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</thead>
<tbody>
<tr>
<td>Europe REACH</td>
<td>A substance or substances in this product is not registered or notified to be registered. Importation or manufacture of this product is still permitted provided that it does not exceed the REACH minimum threshold quantity of the non-regulated substances.</td>
</tr>
<tr>
<td>Switzerland CH INV</td>
<td>On the inventory, or in compliance with the inventory</td>
</tr>
<tr>
<td>United States of America (USA) TSCA</td>
<td>On or in compliance with the active portion of the TSCA inventory</td>
</tr>
<tr>
<td>Canada DSL</td>
<td>All components of this product are on the Canadian DSL</td>
</tr>
<tr>
<td>Australia AICS</td>
<td>On the inventory, or in compliance with the inventory</td>
</tr>
<tr>
<td>New Zealand NZIoC</td>
<td>Not in compliance with the inventory</td>
</tr>
<tr>
<td>Japan ENCS</td>
<td>On the inventory, or in compliance with the inventory</td>
</tr>
<tr>
<td>Korea KECI</td>
<td>A substance(s) in this product was not registered, notified to be registered, or exempted from registration by CPChem according to K-REACH regulations. Importation or manufacture of this product is still permitted provided the Korean Importer of Record has themselves notified the substance.</td>
</tr>
<tr>
<td>Philippines PICCS</td>
<td>On the inventory, or in compliance with the inventory</td>
</tr>
<tr>
<td>China IECSC</td>
<td>On the inventory, or in compliance with the inventory</td>
</tr>
<tr>
<td>Taiwan TCSI</td>
<td>On the inventory, or in compliance with the inventory</td>
</tr>
</tbody>
</table>

#### SECTION 16: Other information

**NFPA Classification**: Health Hazard: 0  
Fire Hazard: 2  
Reactivity Hazard: 0

**Further information**
**Legacy SDS Number**: PE0090

Significant changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information in this SDS pertains only to the product as shipped.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>ACGIH</td>
<td>American Conference of Government Industrial Hygienists</td>
</tr>
<tr>
<td>AICS</td>
<td>Australia, Inventory of Chemical Substances</td>
</tr>
<tr>
<td>DSL</td>
<td>Canada, Domestic Substances List</td>
</tr>
<tr>
<td>NDSL</td>
<td>Canada, Non-Domestic Substances List</td>
</tr>
<tr>
<td>CNS</td>
<td>Central Nervous System</td>
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<tr>
<td>CAS</td>
<td>Chemical Abstract Service</td>
</tr>
<tr>
<td>EC50</td>
<td>Effective Concentration</td>
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<tr>
<td>EC50</td>
<td>Effective Concentration 50%</td>
</tr>
<tr>
<td>EGEST</td>
<td>EOSCA Generic Exposure Scenario Tool</td>
</tr>
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<td>EOSCA</td>
<td>European Oilfield Specialty Chemicals Association</td>
</tr>
<tr>
<td>EINECS</td>
<td>European Inventory of Existing Chemical Substances</td>
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<tr>
<td>MAK</td>
<td>Germany Maximum Concentration Values</td>
</tr>
<tr>
<td>GHS</td>
<td>Globally Harmonized System</td>
</tr>
<tr>
<td>&gt;=</td>
<td>Greater Than or Equal To</td>
</tr>
<tr>
<td>IC50</td>
<td>Inhibition Concentration 50%</td>
</tr>
<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
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<td>IECSC</td>
<td>Inventory of Existing Chemical Substances in China</td>
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<td>ENCS</td>
<td>Japan, Inventory of Existing and New Chemical Substances</td>
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<td>KECI</td>
<td>Korea, Existing Chemical Inventory</td>
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<td>&lt;=</td>
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<tr>
<td>LC50</td>
<td>Lethal Concentration 50%</td>
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</table>

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
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<td>LD50</td>
<td>Lethal Dose 50%</td>
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<tr>
<td>LOAEL</td>
<td>Lowest Observed Adverse Effect Level</td>
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<tr>
<td>NFPA</td>
<td>National Fire Protection Agency</td>
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<td>NIOSH</td>
<td>National Institute for Occupational Safety &amp; Health</td>
</tr>
<tr>
<td>NTP</td>
<td>National Toxicology Program</td>
</tr>
<tr>
<td>NZIoC</td>
<td>New Zealand Inventory of Chemicals</td>
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<tr>
<td>NOAEL</td>
<td>No Observable Adverse Effect Level</td>
</tr>
<tr>
<td>NOEC</td>
<td>No Observed Effect Concentration</td>
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<td>OSHA</td>
<td>Occupational Safety &amp; Health Administration</td>
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<td>PEL</td>
<td>Permissible Exposure Limit</td>
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<td>PICCS</td>
<td>Philippines Inventory of Commercial Chemical Substances</td>
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<td>PRNT</td>
<td>Presumed Not Toxic</td>
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<tr>
<td>RCRA</td>
<td>Resource Conservation Recovery Act</td>
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<tr>
<td>STEL</td>
<td>Short-term Exposure Limit</td>
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<td>SARA</td>
<td>Superfund Amendments and Reauthorization Act.</td>
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<tr>
<td>TLV</td>
<td>Threshold Limit Value</td>
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<tr>
<td>TWA</td>
<td>Time Weighted Average</td>
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<tr>
<td>TSCA</td>
<td>Toxic Substance Control Act</td>
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<td>UVCB</td>
<td>Unknown or Variable Composition, Complex Reaction Products, and Biological Materials</td>
</tr>
<tr>
<td>WHMIS</td>
<td>Workplace Hazardous Materials Information System</td>
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