# Safety Data Sheet

According to Occupational Health and Safety (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Malaysia Regulation 2013

# CARBOWAX™ Polyethylene Glycol 400

Version 1.1 Release Date: 21.05.2018

## SECTION 1: Identification of the hazardous chemical and of the supplier

### Product identifier

| | | |
|---|---|---|
| Product name | : | CARBOWAX™ Polyethylene Glycol 400 |
| Chemical name | : | Polyoxyethylene 400 |
| CAS-No. | : | 25322-68-3 |

### Recommended use of the chemical and restrictions on use

| | | |
|---|---|---|
| Recommended use | : | Use as cleaners and polishes in chemical industry (e.g glass cleaner/antifog) |
| Restrictions on use | : | No restriction of use |

### Manufacturer or supplier's details

**Headquarters**

| | | |
|---|---|---|
| Company | : | PETRONAS Chemicals Group Berhad |
| Address | : | Tower 2, PETRONAS Twin Towers,<br>Kuala Lumpur City Centre,<br>50088 Kuala Lumpur<br>Malaysia |

**Plant Site**

| | | |
|---|---|---|
| Company | : | PETRONAS Chemicals Derivatives Sdn Bhd |
| Address | : | Administration Complex,<br>Kerteh Industrial Area,<br>KM 106 Jalan Kuala Terengganu - Kuantan,<br>24300 Kerteh, Kemaman,<br>Terengganu, Malaysia |
| Emergency telephone number | : | (+609) 830 7555<br>999 (Bomba)<br>National Poison Centre:<br>+604-6570099 (Mon-Fri : 8.10 am - 5.10 pm)<br>+6012-4309499 (Mon-Fri : 5.10 pm - 10.10 pm) &(Sat, Sun & Public holiday : 8.10 am - 5.10 pm) |

## SECTION 2: Hazards identification

### Classification of the hazardous chemical

Not a hazardous substance or mixture.

### Label elements

Not a hazardous substance or mixture.

### Other hazards which do not result in classification

No information available.

## SECTION 3: Composition and information of the ingredients of the hazardous chemical

| | | |
|---|---|---|
| Substance / Mixture | : | Substance |
| Chemical nature | : | Polyethylene Glycol |

### Hazardous components

No hazardous ingredients

## SECTION 4: First aid measures

| | | |
|---|---|---|
| If inhaled | : | Remove person to fresh air. If signs/symptoms continue, get medical attention.<br>If unconscious, place in recovery position and seek medical advice.<br>If symptoms persist, call a medical doctor. |
| In case of skin contact | : | Wash off with plenty of water. |
| In case of eye contact | : | Immediately flush eye(s) with plenty of water.<br>Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes.<br>Protect unharmed eye.<br>If eye irritation persists, consult a specialist. |
| If swallowed | : | Keep respiratory tract clear.<br>Do NOT give milk or alcoholic beverages.<br>Never give anything by mouth to an unconscious person. |
| General advice | : | Do not leave the victim unattended. |
| Most important symptoms and effects, both acute and delayed | : | No information available. |
| Notes to physician | : | If burn is present, treat as any thermal burn, after decontamination.<br>There is no specific antidote available.<br>Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. |

## SECTION 5: Firefighting measures

**Extinguishing media**

| | | |
|---|---|---|
| Suitable extinguishing media | : | Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective. |
| Unsuitable extinguishing media | : | Do not use direct water stream. May spread fire. |

**Physicochemical hazards arising from the chemical**

| | | |
|---|---|---|
| Hazardous combustion products | : | During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating.<br>Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide. |

**Special protective equipment and precautions for fire-fighters**

| | | |
|---|---|---|
| Special protective equipment for firefighters | : | Wear positive-pressure self-contained breathing apparatus (SBCA) and protective fire fighting clothing (includes fire fighting helmet, coat, pants, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance. |
| Specific extinguishing methods | : | Container may rupture from gas generation in a fire situation.<br>Violent steam generation or eruption may occur upon |

application of direct water stream to hot liquids.
Do not direct a solid stream of water or foam into hot, burning pools. This may cause frothing and increase fire intensity.
Standard procedure for chemical fires.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

## SECTION 6: Accidental release measures

| | | |
|---|---|---|
| Personal precautions, protective equipment and emergency procedures | : | Use appropriate safety equipment. |
| Environmental precautions | : | Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. |
| Methods and materials for containment and cleaning up | : | Wipe up with absorbent material (e.g. cloth, fleece).<br><br>Contain spilled material if possible.<br>Small spills can be diluted with large quantites of water.<br>Large spills can be collected in suitable and properly labeled containers.<br>Dispose of according to applicable regulations. See Section 13 Disposal Considerations. |

## SECTION 7: Handling and storage

### Handling

**Precautions for safe handling**

| | | |
|---|---|---|
| Advice on protection against fire and explosion | : | Normal measures for preventive fire protection. |
| Advice on safe handling | : | For personal protection see section 8.<br>Smoking, eating and drinking should be prohibited in the application area.<br>Practice care and caution to avoid skin and eye contact. |

### Storage

**Conditions for safe storage, including any incompatibilities**

| | | |
|---|---|---|
| Conditions for safe storage | : | Electrical installations / working materials must comply with the technological safety standards.<br>Store containers tightly closed in a well ventilated area. Use product promptly after opening.<br>Store in the following(s): Stainless steel. Polypropylene. Polyethylene lined contained. Teflon. Glass-lined container. Plasite 3066 lined container. Plasite 3070 lined container. 316 stainless steel. |
| Materials to avoid | : | No materials to be especially mentioned. |

## SECTION 8: Exposure controls and personal protection

### Control parameters

Contains no substances with occupational exposure limit values.

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

| | | |
|---|---|---|
| Eye/face protection | : | Use safety glasses. Safety glasses should be consistent with EN 166 or equivalent. |

Eye wash fountain should be located in immediate work area.

| | | |
|---|---|---|
| Skin protection | : | Protective suit<br>Wear clean, body-covering clothing.<br>Use gloves with insulation for thermal protection, when needed. |
| Hand protection | | |
| Remarks | : | The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier. |
| Respiratory protection | : | Atmospheric levels should be maintained below the exposure guideline. When airborne exposure guidelines and/or comfort levels may be exceeded, use an approved air-purifying respirator. |
| Hygiene measures | : | Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.<br>General industrial hygiene practice. |

## SECTION 9: Physical and chemical properties

| | | |
|---|---|---|
| Appearance | : | Liquid |
| Colour | : | Colourless |
| Odour | : | Odourless |
| Odour Threshold | : | No data available |
| pH | : | No data available |
| Melting point/range | : | 4 - 8 °C |
| Boiling point/boiling range | : | > 200 °C |
| Flash point | : | 227 °C Method: ASTM D 93, Pensky-Martens closed cup |
| Evaporation rate | : | < 0.01 |
| Flammability (liquids) | : | No data available |
| Self-ignition | : | No data available |
| Upper explosion limit / Upper flammability limit | : | No data available |
| Lower explosion limit / Lower flammability limit | : | No data available |
| Vapour pressure | : | < 0.001 hPa (20 °C) |
| Relative vapour density | : | 10 |
| Relative density | : | No data available |
| Density | : | No data available |
| Solubility(ies) | | |
| Water solubility | : | Soluble |
| Partition coefficient: n-octanol/water | : | No data available |
| Auto-ignition temperature | : | No data available |
| Decomposition temperature | : | No data available |
| Viscosity | | |
| Viscosity, dynamic | : | No data available |
| Viscosity, kinematic | : | No data available |
| Molecular weight | : | 380 - 420 g/mol |

## SECTION 10: Stability and reactivity

| | | |
|---|---|---|
| Reactivity | : | Hazardous polymerisation does not occur. |
| Chemical stability | : | Stable under normal conditions. |
| Possibility of hazardous reactions | : | No dangerous reaction known under conditions of normal use.Hazardous polymerisation does not occur. |
| Conditions to avoid | : | Product can oxidize at elevated temperatures.Generation of gas during decomposition can cause pressure in closed systems.Heat, sparks, flame and build-up of static electricity.Exposure to elevated temperatures can cause product to decompose. |
| Incompatible materials | : | Normally unreactive. However, avoid strong bases at high temperatures, strong acids, strong oxidizing agents and materials reactive with hydroxyl compounds. |
| Hazardous decomposition products | : | Decomposition products depend upon temperature, air supply and the presence of other materials.<br>Decomposition products can include and are not limited to: Carbon dioxide, alcohols, ethers, hydrocarbons, ketones and polymer fragments. |

## SECTION 11: Toxicological information

### Acute toxicity

**Product:**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat): > 2,000 mg/kg |
| Acute inhalation toxicity | : | Remarks: No data available |
| Acute dermal toxicity | : | LD50 (Rat): > 2,000 mg/kg |

### Skin corrosion/irritation

**Product:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Result | : | No skin irritation |

### Serious eye damage/eye irritation

**Product:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Result | : | No eye irritation |

### Respiratory or skin sensitisation

**Product:**

| | | |
|---|---|---|
| Exposure routes | : | Inhalation |
| Remarks | : | No data available |
| Exposure routes | : | Skin contact |
| Species | : | Humans |
| Result | : | Not sensitising |

### Germ cell mutagenicity

**Product:**

| | | |
|---|---|---|
| Germ cell mutagenicity - Assessment | : | In vitro tests did not show mutagenic effects |

**Carcinogenicity**

**Product:**

| | | |
|---|---|---|
| Carcinogenicity - Assessment | : | No data available |

**Reproductive toxicity**

**Product:**

| | | |
|---|---|---|
| Reproductive toxicity - Assessment | : | No toxicity to reproduction |

**STOT - single exposure**

**Product:**

| | | |
|---|---|---|
| Remarks | : | No data available |

**STOT - repeated exposure**

**Product:**

| | | |
|---|---|---|
| Remarks | : | No data available |

**Aspiration toxicity**

**Product:**

| | | |
|---|---|---|
| Statement on Aspiration Tox. | : | No data available |

## SECTION 12: Ecological information

**Ecotoxicity**

**Product:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Poecilia reticulata (guppy)): > 100 mg/l<br>Exposure time: 96 h |
| Toxicity to daphnia and other aquatic invertebrates | : | LC50 (Daphnia magna (Water flea)): 1,000 mg/l<br>Exposure time: 48 h |
| Toxicity to algae | : | NOEC (Selenastrum capricornutum (green algae)): 56.02 mg/l<br>Exposure time: 72 h |
| Toxicity to fish (Chronic toxicity) | : | Remarks: No data available |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | Remarks: No data available |
| Toxicity to microorganisms | : | Remarks: No data available |

**Persistence and degradability**

**Product:**

| | | |
|---|---|---|
| Biodegradability | : | Result: Readily biodegradable. |

**Bioaccumulative potential**

**Product:**

| | | |
|---|---|---|
| Bioaccumulation | : | Remarks: Does not bioaccumulate. |

**Mobility in soil**

**Product:**

Mobility : Medium: Soil
Remarks: Weakly absorbed in soil.

**Other adverse effects**

**Product:**

Additional ecological information : No data available

## SECTION 13: Disposal information

**Disposal methods**

Contaminated packaging : Incinerate in a furnace where permitted under national and local regulations.
At very low concentrations in water, this product is biodegradable in a biological wastewater treatment plant.
Dispose in accordance with all national and local environmental regulations.
Empty containers should be recycled or disposed of through an approved waste management facility.
Disposal methods identified are for the product as sold.
For proper disposal of used materials, an assessment must be completed to determine the proper and permissible waste management options permissible under applicable rules regulations and/or laws governing your location.

## SECTION 14: Transport information

**International Regulations**

**UNRTDG**
Not regulated as a dangerous good

**IATA-DGR**
Not regulated as a dangerous good

**IMDG-Code**
Not regulated as a dangerous good

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

Pollution category : Z
Ship type : 3

## SECTION 15: Regulatory information

**Safety, health, and environmental regulations specific for the hazardous chemical**

Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013.
Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000.

**The components of this product are reported in the following inventories:**

CH INV : On the inventory, or in compliance with the inventory.
TSCA : On TSCA Inventory.
DSL : All components of this product are on the Canadian DSL

| | | |
|---|---|---|
| AICS | : | On the inventory, or in compliance with the inventory. |
| NZIoC | : | On the inventory, or in compliance with the inventory. |
| ENCS | : | On the inventory, or in compliance with the inventory. |
| ISHL | : | On the inventory, or in compliance with the inventory. |
| KECI | : | On the inventory, or in compliance with the inventory. |
| PICCS | : | On the inventory, or in compliance with the inventory. |
| IECSC | : | On the inventory, or in compliance with the inventory. |

## SECTION 16: Other information

| | | |
|---|---|---|
| SDS preparation date | : | 25.09.2014 |
| Revision Date | : | 21.05.2018 |
| Sources of key data used to compile the Safety Data Sheet | : | ECHA - European Chemicals Agency |

**Full text of other abbreviations**

| | | |
|---|---|---|
| (Q)SAR | - | (Quantitative) Structure Activity Relationship |
| ACGIH | - | American Conference of Governmental Industrial Hygienists |
| AICS | - | Australian Inventory of Chemical Substances |
| ANTT | - | National Agency for Transport by Land of Brazil |
| ASTM | - | American Society for the Testing of Materials |
| bw | - | Body weight |
| CCHC | - | Chemicals Classification and Hazard Communication |
| CMR | - | Carcinogen, Mutagen or Reproductive Toxicant |
| CPR | - | Controlled Products Regulations |
| DIN | - | Standard of the German Institute for Standardisation |
| DSL | - | Domestic Substances List (Canada) |
| ECx | - | Concentration associated with x% response |
| ELx | - | Loading rate associated with x% response |
| EmS | - | Emergency Schedule |
| ENCS | - | Existing and New Chemical Substances (Japan) |
| ErCx | - | Concentration associated with x% growth rate response |
| ERG | - | Emergency Response Guide |
| GHS | - | Globally Harmonized System |
| GLP | - | Good Laboratory Practice |
| IARC | - | International Agency for Research on Cancer |
| IATA | - | International Air Transport Association |
| IBC | - | International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk |
| IC50 | - | Half maximal inhibitory concentration |
| ICAO | - | International Civil Aviation Organization |
| ICOP | - | Industry Code of Practice on Chemicals Classification and Hazard Communication |
| IECSC | - | Inventory of Existing Chemical Substances in China |
| IMDG | - | International Maritime Dangerous Goods |
| IMO | - | International Maritime Organization |
| ISHL | - | Industrial Safety and Health Law (Japan) |
| ISO | - | International Organisation for Standardization |
| KECI | - | Korea Existing Chemicals Inventory |
| LC50 | - | Lethal Concentration to 50 % of a test population |
| LD50 | - | Lethal Dose to 50% of a test population (Median Lethal Dose) |
| MARPOL | - | International Convention for the Prevention of Pollution from Ships |
| MY PEL | - | Malaysian Permissible Exposure Limit |

| | | |
|---|---|---|
| n.o.s. | - | Not Otherwise Specified |
| Nch | - | Chilean Norm |
| NITE | - | National Institute of Technology and Evaluation |
| NO(A)EC | - | No Observed (Adverse) Effect Concentration |
| NO(A)EL | - | No Observed (Adverse) Effect Level |
| NOELR | - | No Observable Effect Loading Rate |
| NOM | - | Official Mexican Norm |
| NTP | - | National Toxicology Program |
| NZIoC | - | New Zealand Inventory of Chemicals |
| OCSPP | - | Office of Chemical Safety and Pollution Prevention |
| OECD | - | Organization for Economic Co-operation and Development |
| PBT | - | Persistent, Bioaccumulative and Toxic |
| PICCS | - | Philippines Inventory of Chemicals and Chemical Substances |
| REACH | - | Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals |
| SADT | - | Self-Accelerating Decomposition Temperature |
| SDS | - | Safety Data Sheet |
| STEL | - | Short Term Exposure Limit |
| TCSI | - | Taiwan Chemical Substance Inventory |
| TDG | - | Transportation of Dangerous Goods |
| TSCA | - | Toxic Substances Control Act (United States) |
| TWA | - | Time Weighted Average |
| UN | - | United Nations |
| UNRTDG | - | United Nations Recommendations on the Transport of Dangerous Goods |
| UVCB | - | Unknown or Variable Composition, Complex Reaction Products and Biological Materials |
| vPvB | - | Very Persistent and Very Bioaccumulative |
| WHMIS | - | Workplace Hazardous Materials Information System |

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