

**SAFETY DATA SHEET****1. IDENTIFICATION**

Product identifier	: Green Petroleum Coke
Other means of identification	: Green Anode Coke, Row Coke
Recommended use of the chemical and restrictions on use	: <ol style="list-style-type: none">1. It is the raw material of Calcined Coke, which is used as a decomposition material at the aluminum plant2. Reductor in tin smelting process3. Additional carbon enhancer in metal or steel smelting industry4. Fuel in cement industry and power plant
Manufacturer	: PT Pertamina (Persero) Jl. Medan Merdeka Timur No. 1A Jakarta Pusat ZIP Code 10110 Phone: 1500-000 Email: pcc@pertamina.com
Emergency phone number	: 1500-000

2. HAZARD IDENTIFICATION

Classification	: Not classified
Signal word	: Not classified
Hazard statement	: Not classified
Precautionary statement	: Not classified
Pictogram	: -
Other hazards which do not result in classification	: Not classified

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration (%)
Coke (petroleum)	64741-79-3	100

4. FIRST AID MEASURES**Necessary description**

- **In case of eye contact** : Rinse immediately and plentifully with water, also under the eyelids, for at least 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- **In case of skin contact** : Take off immediately all contaminated clothing, including underwear and shoes. Rinse thoroughly with plenty of water for at least 20 minutes and take medical advice.
- **If inhaled** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. In case of breathing difficulties, administer oxygen. If necessary, seek medical advice.
- **If swallowed** : Rinse mouth immediately and drink large quantities of water. Do not induce vomiting. If swallowed, seek medical

**SAFETY DATA SHEET****4. FIRST AID MEASURES**

Most important symptoms/effects	: advice immediately and show this container or label.
	: May cause respiratory irritation. Repeated exposure to aerosols may result in lung damage.
	: May cause skin irritation. Prolonged or repeated contacts with the skin may cause dermatitis.
Indication of Immediate medical attention and special treatment needed, if necessary	: May cause irritation to the eyes.
	: No data available.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	: Water, foam, chemical dry powder, carbon dioxide
Unsuitable extinguishing media	: Water spray
Specific hazards	
• Other explosion and fire hazards	: Fire Hazard Flammable solid. Vapours may cause fire/explosion if source of ignition is present. May release flammable gases. Hydrogen sulfide. Combustion generates : carbon oxides (CO and CO ₂). Nitrogen oxides (NO _x). hydrocarbons. Explosive Hazard Risk of explosion if heated in a confined system. Gas/vapour explosive with air within explosion limits.
Flash point °C	: No data available
Flammability value	: No data available.
Hazardous chemical composition	: In combustion: releases toxic (high) gas / vapors.
Special protective actions for fire fighters	
a. Water spray	: Cool tanks/drums with water spray/remove them into safety.
b. Dry chemical powder	: Spray it to the base of fire from upwind.
c. Carbon dioxide (CO₂)	: Spray it to the base of fire from upwind.
Special protective equipment for fire-fighter	: Extra personal protection: complete protective clothing including self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures	: Eliminate all ignition sources if safe to do so. No flames, No sparks. Eliminate all sources of ignition. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Evacuate unnecessary personnel. Avoid generation of dust. Ventilate affected
-----------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

**SAFETY DATA SHEET****6. ACCIDENTAL RELEASE MEASURES**

- area.
Stop leaks in water without risk. The material will float, contact the specialist. Eliminate all ignisi sources. Warn shipping activities.
- Environmental precautions** : Do not discharge into drains or the environment. Do not discharge into surface water.
- Procedures** : Report the occurrence of a spill according to the local authorization specified when the spill is expected to contaminate the drains.
- Methods and materials for containment and cleaning up** : Ventilate affected area. Avoid generation of dust.
Sweep or shovel spills into appropriate container for disposal. Dispose of this material and its container to hazardous or special waste collection point. Avoid raising powdered materials into airborne dust. Do not empty into drains or the aquatic environment.

7. HANDLING AND STORAGE

- Precautions for safe handling** : Handle in accordance with good industrial hygiene and safety procedures. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Do not eat, drink and do not smoke in areas where product is used. Take off contaminated clothing and wash before reuse.
- Conditions for safe storage (including any incompatibilities)** : Protect from sunlight. Store in a well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep container tightly closed. Store at room temperature. Keep coke piles wet to avoid environmental pollution due to fineparticles of the product.
Store at room temperature. Store according to local legislation.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters**

- **Exposure limit** : TWA 5 mg/m³
- **Biological exposure indicator** : No data available.

Appropriate engineering control

- **Ventilation** : Provide adequate ventilation. Provide local exhaust or general room ventilation to minimize vapour concentrations. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Contact lenses should not be worn.

**SAFETY DATA SHEET****8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Individual protection measures**

- **Eye and face protection** : Chemical goggles or safety glasses. Contact lenses should not be worn.
- **Skin protection** : Protective gloves made of PVC. Wear suitable protective clothing.
- **Respiratory protection** : No data available.
- **Hygiene practices** : Wash hands at rest and after work.
Do not eat and drink while using the product.
No smoking while using the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Characteristic	Test Result
Organoleptic (physical appearance, color, etc)	: Solid, black
Odor	: None
Odor threshold	: No data available.
pH	: No data available.
Melting/freezing point	: No data available.
Boiling point/boiling range	: No data available.
Flammability	: No data available.
Flash point	: No data available.
Evaporation rate	: No data available.
Lower/upper flammability limit and explosion limit	: No data available.
Vapor pressure	: No data available.
Vapor density	: No data available.
Relative density	: No data available.
Solubility	
• Water solubility	: Insoluble
• Other solubility	: Soluble in toluene
Partition coefficient (n-octanol/water)	: No data available.
Auto-ignition temperature	: No data available.
Decomposition temperature	: No data available.
Viscosity	: No data available.

10. STABILITY AND REACTIVITY

- | | |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| Reactivity | : Polymerization of hazardous materials is not formed. |
| Chemical stability | : The product is stable at normal handling- and storage conditions. No polymerization. |
| Posibility of hazardous reactions | : When mixed with air and exposed to an ignition source, dust may burn in the open air or explode if confined. |
| Conditions to avoid | : Heat sources. Keep out of direct sunlight. |

**SAFETY DATA SHEET****10. STABILITY AND REACTIVITY**

- Incompatible materials** : Strong oxidizing agents. Chlorates. chromic acid.
Hazardous decomposition products : On burning: release of (highly) toxic gases/vapours.

11. TOXICOLOGICAL INFORMATION**Comprehensive toxicological/health information**

- **Acute toxicity** : No data available. Suspected not to cause acute toxicity. This statement is derived from compounds or products that have similar structures or compositions
 - **Skin corrosion/irritation** : No data available. Suspected that it may not cause skin corrosion/irritation according to compound or product which has similar structure or composition.
 - **Serious eye damage/irritation** : No data available. Suspected that it may not cause serious damage or irritation to the eye according to compound or product which has similar structure or composition.
 - **Respiratory or skin sensitization** : No data available. Suspected that it may not cause respiratory or skin sensitization according to compound or product which has similar structure or composition.
 - **Germ cell mutagenicity** : No data available. Suspected that it is not mutagen according to compound or product which has similar structure or composition.
 - **Carcinogenicity** : No data available. Suspected that it may not cause cancer according to compound or product which has similar structure or composition.
 - **Reproductive toxicity** : No data available. Suspected that it may not toxic to reproductive organs according to compound or product which has similar structure or composition.
 - **STOT-single exposure** : No data available. Suspected that it is not toxic to specific target organs after single exposure according to compound or product which has similar structure or composition.
 - **STOT-repeated exposure** : No data available. Suspected that it is not toxic to specific organs after repeated exposure according to compound or product which has similar structure or composition.
 - **Aspiration hazards** : No data available. Suspected that it is not aspiration hazards according to compound or product which has similar structure or composition.
- Information on the likely routes exposure** : Inhaled, skin contact, eye contact
- Symptoms related to the physical, chemical, and toxicological characteristics** : No data available. Further testing has not been done.
- Delayed and immediate effects, and also chronic effects from both short or long term exposure** : No data available. Further testing has not been done.
- Numerical measure of** : No data available. Further testing has not been done.

**SAFETY DATA SHEET****11. TOXICOLOGICAL INFORMATION****toxicity**

Intervative effects : No data available. Further testing has not been done.

Where specific chemical data are not available : No data available. Further testing has not been done.

Mixture : No data available. Further testing has not been done.

Mixture vs. Ingredient information : No data available. Further testing has not been done.

Other in formation : Prolonged or repeated exposure to skin may cause dermatitis. Chronic exposure to highly dust concentration causes lung damage. Dust of this product may cause respiratory irritation. Dust of this product may cause skin irritation. Dust of this product may cause eye irritation.

12. ECOLOGICAL INFORMATION

Ecotoxicity : No data available. Further testing has not been done.

Persistence and degradability : This product is expected to have a low potential to degrade and thus is expected to persist in the environment.

Bioaccumulative potential : Potential bio-accumulation but metabolism and physical properties can reduce bio-concentration or limit bio-availability.

Mobility in soil : Low solubility to water, is expected to float and migrate into sediment. It is expected to be partitioned into sediment and solid waste.

Other adverse effects : No data available. Further testing has not been done.

13. DISPOSAL CONSIDERATION

Disposal methods : Disposal must be done according to official regulations. Consult the local waste disposal expert about waste disposal. Disposal through controlled incineration or authorised waste dump. Do not re-use empty containers.

14. TRANSPORT INFORMATION

USA DOT : Not classified

RID / ADR : Not classified

IMO : Not classified

ICAO / IATA : Not classified

15. REGULATORY INFORMATION

Safety, health, and environmental regulation (specific for the product in : - Peraturan Menteri Perindustrian Nomor 23/M-IND/PER/4/2013 tentang Perubahan Atas Peraturan Menteri Perindustrian Nomor 87/M-IND/PER/9/2009 Tentang Sistem Harmonisasi Global Klasifikasi dan

**SAFETY DATA SHEET****15. REGULATORY INFORMATION**

question)

Label pada Bahan Kimia

- Peraturan Pemerintah Republik Indonesia, Nomor 74 Tahun 2001 Tentang Pengelolaan Bahan Berbahaya dan Beracun Presiden Republik Indonesia
- Keputusan Menteri Tenaga Kerja No Kep-187/Men/1999 tentang Pengendalian Bahan Kimia Berbahaya
- ACGIH®. 2016. TLVs® and BEIs®

16. OTHER INFORMATION

Revision date : 2017

Key/legend or acronym : ACGIH - American Conference on Governmental Industrial Hygienist

BEI - Biological Exposure Indices

CAS No. - Chemical Abstract Service Number

IMO - International Maritime Organization

ICAO/IATA - International Civil Organization Aviation/
International Air Transport Association

PVC - Poly Vinyl Chloride

SCBA - Self Contained Breathing Apparatus

RID/ADR - European Agreements Concerning the
International Carriage of Dangerous Goods by Rail and by
road

TLV - Threshold Limit Value

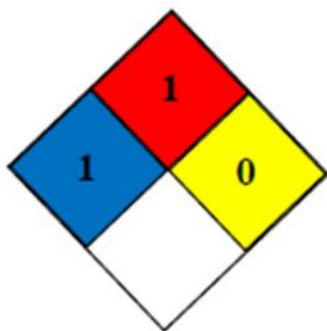
TWA - Time-Weighted Average

USA DOT - United States Department of Transportation

UN - United Nations

Key literature references : <http://sites.petrobras.com.br/minisite/reach/downloads/fichas-tecnicas/Ingles/PGT-BV-SDS/Green-Petroleum-Coke.pdf>
and sources for data used : echa.europa.eu
in the SDS

NFPA





Degrees	Red	Blue	Yellow
0	Will not burn	Live ordinary material	Normally stable
1	Must be preheated to burn	Slightly hazardous	Unstable if heated – use normal precautions
2	Ignites when moderately heated	Hazardous – use breathing apparatus	Violent chemical change possible – use hose streams from distance



SAFETY DATA SHEET

16. OTHER INFORMATION

3	Ignites at normal temperatures	Extremely dangerous – use full protective clothing	Strong shock or heat may detonate - use monitors from behind explosion resistant barriers
4	Extremely flammable	Too dangerous to enter vapor or liquid	May detonate – vacate area if materials are exposed to fire

White	
	Radioactive
	Never contact with water

Disclaimer

The information is composed based on current knowledge and intended to describe safety, health, and environment hazard of the product. Therefore, it should not be construed as guarantee any specific property of the product. All risks while using this product is the user's responsibility. It is not allowed to make change of this document, except there is legal consent.