



MATERIAL SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

SDS #: HSE-FUE-010

MOTOR GASOLINE

Date of the previous version: 01-Oct-2014

Revision Date: 01-Oct-2015

Version 7.0

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name	MOTOR GASOLINE
Also known as	PREMIER – PROTEC – EXCELLIUM
Number	
Pure substance/mixture	Mixture

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

Identified uses	Use as a fuel.
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1.3. Details of the supplier of the safety data sheet

Supplier	TOTAL (PHILIPPINES) CORP. 7/F 11 th Corporate Center Triangle Drive cor, 11 th Ave. Bonifacio Global City 1634 Taguig City Tel: (02) 8490888 Fax: (02) 8490999
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1.4. Emergency telephone number

(0998) 9588683

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Flammable liquids – Category 1 – H224
 Aspiration toxicity – Category 1 – H304
 Skin corrosion/irritation – Category 2 – H315
 Germ Cell Mutagenicity – Category 1B – H340
 Carcinogenicity – Category 1B – H350
 Reproductive toxicity – Category 2 – H361fd
 Specific target organ systemic toxicity (single exposure) – Category 3 – H336
 Chronic aquatic toxicity – Category 2 – H411

F+;R12 - Carc. cat. 2;R45 - Muta. cat. 2;R46 - Repr. cat. 3;R62 - Repr. cat. 3;
 R63 - Xn;R65 - Xi;R38 - R67 - N;R51-53

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2.2. Label elements

Labelled according to:

REGULATION (EC) No 1272/2008



Signal word

DANGER

Hazard Statements

H224 – Extremely flammable liquid and vapor

H350 – May cause cancer

H340 – May cause genetic defects

H361fd – Suspected of damaging fertility. Suspected of damaging the unborn child

H304 – May be fatal if swallowed and enters airways

H315 – Causes skin irritation

H336 – May cause drowsiness or dizziness

H411 – Toxic to aquatic life with long lasting effects

Precautionary Statements

P201 – Obtain special instructions before use

P210 – Keep away from heat/sparks/open flames/hot surfaces - No smoking

P261 – Avoid breathing dust/fume/gas/mist/vapors/spray

P280 – Wear protective gloves and eye/face protection

P301 + P310 – IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

P331 – Do NOT induce vomiting

P403 + P233 – Store in a well-ventilated place. Keep container tightly closed

P243 – Take precautionary measures against static discharge

P240 – Ground / bond container and receiving equipment.

P241 – Use explosion-proof electrical / ventilating / lighting equipment.

P242 – Use only non-sparking tools.

P273 – Avoid release to the environment.

P501 – Dispose of contents/ container to an approved waste disposal plant.

P102 – Keep out of reach of children.

Contains gasoline (n-hexane < 5%).

2.3. Other hazards**Physical-chemical properties:**

Extremely flammable. Highly volatile. The vapors are heavier than air and may carry along the ground giving a high risk of explosion. In case of pump. Friction generated by product discharge can create static charges of sufficient magnitude to cause

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SPARKS WHICH MAY LEAD TO FIRE OR EXPLOSION.

Properties affecting health:

Repeated inhalation of large amounts of vapor results in benzene exposure. May cause central nervous system depression with nausea, headache, dizziness, vomiting, and in coordination.

Vapors or mists are irritating for mucous membranes, notably in the eyes. If swallowed accidentally, the product may enter the lungs due to its low viscosity and lead to the rapid development of very serious pulmonary lesions (medical survey during 48 hours).

3. COMPOSITION / INFORMATION ON INGREDIENTS**3.1. Mixture****Chemical nature:**

A complex combination of hydrocarbons consisting primarily of paraffins, cyclo-paraffins, aromatic and olefinic hydrocarbons having carbon numbers predominantly greater than C3 and boiling in the range of 30°C to 260°C (86°F to 500°F).

Hazardous ingredients:

Chemical Name	EC-No	REACH registration No:	CAS-No	Weight %	Classification (Dir. 67/548)	Classification (Reg. 1272/2008)
Gasoline	289-220-8	01-2119471335-39	86290-81-5	>89%	F+;R12 Carc. Cat.2;R45 Muta. Cat.2;R46 Repr. Cat.3; R62 Repr. Cat.3; R63 Xn;R65 Xi;R38 R67 N;R51/53	Flam. Liq. 1 (H224) Carc. 1B (H350) Muta. 1B (H340) Repr. 2 (H361fd) Asp. Tox. 1 (H304) Skin Irrit. 2 (H315) STOT SE 3 (H336) Aquatic Chronic 2 (H411)

Additional information:

May contain multi-purpose additives to boost performance.

Other constituents required for disclosure

Chemical Name	EC-No	REACH registration No:	CAS-No	Weight %	Classification (Dir. 67/548)	Classification (Reg. 1272/2008)
Benzene	200-753-7	01-2119447106-44	71-43-2	<2	F; R11 Xi; R36/38 Carc.Cat.1; R45 Muta.Cat.2; R46 T; R48/23/24/25 Xn; R65	Flam. Liq. 2 (H225) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Carc. 1A (H350) Muta. 1B (H340) STOT RE 1 (H372) Asp. Tox. 1 (H304)
Toluene	203-625-9	01-2119471310-51	108-88-3	<15	F; R11 Xi; R38 Xn; R48/20 R65 Repr.Cat.3; R63 R67	Flam. Liq. 2 (H225) Skin Irrit. 2 (H315) Repr. 2 (H361d) STOT SE 3 (H336) STOT RE 2 (H373) Asp. Tox. 1 (H304)
Hexane	203-777-6	no data available	110-54-3	>3	F; R11 Xi; R38	Flam. Liq. 2 (H225) Skin Irrit. 2 (H315)

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					N; R51 R53 Repr.Cat.3; R62 Xn; R65 R48/20 R67	Repr. 2 (H361f) STOT SE 3 (H336) STOT RE 2 (H373) Asp. Tox. 1 (H304) Aquatic Chronic 2 (H411)
Xylenes (o-, m-, p- isomers)	215-535-7	01-2119488216-32	1330-20-7	<10	R10 Xn; R20/21 Xi; R38	Flam. Liq. 3 (H226) Acute Tox. 4 (H312) Acute Tox. 4 (H332) Skin Irrit. 2 (H315)
Isopentane	201-142-8	no data available	78-78-4	<20	F+; R12 N; R51 R53 Xn; R65 R66 R67	Flam. Liq. 1 (H224) STOT SE 3 (H336) Asp. Tox. 1 (H304) Aquatic Chronic 2 (H411)
Pentane	203-692-4	no data available	109-66-0	<1	F+; R12 N; R51 R53 Xn; R65 R66 R67	Flam. Liq. 2 (H225) STOT SE 3 (H336) Asp. Tox. 1 (H304) Aquatic Chronic 2 (H411)
Ethyl benzene	202-849-4	no data available	100-41-4	<1	F; R11 Xn; R20	Flam. Liq. 2 (H225) Acute Tox. 4 (H332)

For the full text of the R-phrases mentioned in this Section, see Section 16
For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES**4.1. Description of first-aid measures****General advice**

IN CASE OF SERIOUS OR PERSISTENT CONDITIONS, CALL A DOCTOR OR EMERGENCY MEDICAL CARE.

Before attempting to rescue casualties, isolate area from all potential sources of ignition including disconnecting electrical supply.
Ensure adequate ventilation and check that a safe, breathable atmosphere is present before entry into confined spaces.
Drench contaminated clothing with water before removing to avoid risk of sparks from static electricity.

Eye contact

Rinse thoroughly with plenty of water, also under the eyelids.
Check for and remove any contact lenses. Rinse eyes.
If eye irritation persists, consult a specialist.

Skin contact

Remove contaminated clothing and shoes. Wash skin with soap and water.
High pressure injection of the products to the skin may have very serious consequences even though no symptom or injury may be apparent.
In this case, the casualty should be sent immediately to hospital.
For minor thermal burns, hold the burned area under cold running water for at least five minutes, or until the pain subsides. Wash off with soap and water.

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Inhalation	In case of exposure to intense concentrations of vapors, fumes or spray, transport the person away from the contaminated zone, keep warm and allow to rest. Immediately begin artificial respiration if breathing has ceased. Call a physician immediately.
Ingestion	Give nothing to drink. Do NOT induce vomiting. as there is high risk of aspiration. The fluid can enter the lungs and cause damage (chemical pneumonitis, potentially fatal). Take victim immediately to hospital. Do not wait for symptoms to develop.
Protection of first-aiders	CAUTION! First aid personnel must be aware of personal risk during rescue!. Use personal protective equipment. See Section 8 for more detail.

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

Eye contact	Burning feeling and temporary redness.
Skin contact	May cause irritation. Redness.
Inhalation	Inhalation of vapors may cause headache, nausea, vomiting and an altered state of consciousness. May cause irritation of respiratory tract.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause central nervous system depression.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	Harmful: If swallowed accidentally, the product may enter the lungs due to its low viscosity and lead to the rapid development of very serious inhalation pulmonary lesions (medical survey during 48 hours).Treat symptomatically
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5. FIRE-FIGHTING MEASURES**5.1. Extinguishing media**

Suitable extinguishing media	Extinguishing media – small fires: Carbon dioxide (CO ₂), Dry powder, Sand or earth. Extinguishing media – large fires: Foam, Foams on base of general-purpose emulsifier. Water spray, Water fog (trained personnel only).
Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire. Simultaneous use of foam and water on the same surface is to be avoided as water

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destroys the foam.

5.2. Special hazards arising from the substance or mixture

Special hazard

In case of fire hazardous decomposition products may be produced such as: Sulfur oxides. Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled in confined spaces or at high concentration.
Vapors may form explosive mixtures with air.

5.3. Advice for fire-fighters

Special protective equipment for fire-fighters

In case of a large fire or in confined or poorly ventilated spaces, wear full fire resistant protective clothing and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Other information

Cool down any tanks and surfaces exposed to fire by spraying abundantly with water. Use water to cool tanks and parts exposed to the thermal flux not caught up in the flames.
Do not allow run-off from fire fighting to enter drains or water courses. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

General Information

Except in case of small spillages: The feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency.
If required, notify relevant authorities according to all applicable regulations.
Avoid contact with skin, eyes and inhalation of vapors. Evacuate non-essential personnel.
For personal protection see section 8.
Stop or contain leak at the source, if safe to do so. Cut off the electric power supply if this operation causes no sparks in the area containing vapors from the product.
Stay upwind. In case of large spillages, alert occupants in downwind areas.
ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). In case of important spillages: risk of fire or explosion . Cover discharges with foam in order to reduce the risks of ignition.
Vapors are heavier than air and may spread near ground level to sources of ignition.

Advice for non-emergency personnel

Do not touch or walk through spilled material. For personal protection see section 8.
ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate

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area).

Advice for emergency responders

Take all appropriate steps to avoid fire, explosion and inhalation hazards to the rescuers including the use of breathing apparatus. In case of:

Small spillages: normal antistatic working clothes are usually adequate.

Large spillages: full body suit of chemically resistant and antistatic material. Work gloves (preferably gauntlets) providing adequate chemical resistance. Remarks: Gloves made of PVA are not water-resistant, and are not suitable for emergency use. Work helmet. Antistatic non-skid safety shoes or boots. Goggles and/or face shield, if splashes or contact with eyes is possible or anticipated.

Respiratory protection: A half or full-face respirator with filter(s) for organic vapors (and when applicable: for H₂S). A Self-Contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.

6.2. Environmental precautions

General Information

The product should not be allowed to enter drains, water courses or the soil. Do not allow material to contaminate ground water system.

In case of spill in river, suspend the use of the water downstream to the spill point. If necessary: Consult an expert. Local authorities should be advised if significant spillages cannot be contained.

6.3. Methods and materials for containment and cleaning up

Methods for containment

Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13). Large spillages may be cautiously covered with foam, if available, to limit fire risk. In case of spillage in the water: Let the product spread on the surface of the water, In case of no obstacle (barrage, bank or shore). Spillages of liquid product in the water will likely result in a quick and complete vaporization of the product. In case of small spillages in closed waters, when the quantities to be recovered are small (some tens of liters), contain product with floating barriers or other equipment

Methods for cleaning up

Never use dispersing agents.

Transfer recovered product and other materials to suitable tanks or containers and store/dispose according to relevant regulations.

Do not flush into surface water or sanitary sewer system. Prevent product from entering drains.

6.4. Reference to other sections

Personal protective equipment

See Section 8 for more detail.

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Waste treatment	See Section 13.
Other information	Recommended measures are based on the most likely spillage scenarios for this material. However, local conditions (wind, air temperature, wave/current direction and speed) may significantly influence the choice of appropriate actions. For this reason, local experts should be consulted when necessary. Local regulations may also prescribe or limit actions to be taken.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling	Take precautionary measures against static electricity. Ensure that all relevant regulations regarding explosive atmospheres, handling and storage facilities of flammable products, are followed. The inspection, cleaning and maintenance of storage containers require the application of strict procedures and must be entrusted to qualified personnel (internal or external). Ensure adequate ventilation. Vapors may form explosive mixtures with air. Do not smoke. Avoid breathing vapors or mists. Avoid contact with skin, eyes and clothing. NEVER ATTEMPT TO PRIME THE CONTAINER SIPHON BY SUCKING WITH THE MOUTH. Prevent the formation of vapors, mists and aerosols. Do not use compressed air for filling, discharging, or handling operations. Never pierce, drill, grind, cut, saw or weld any empty container. For personal protection see section 8.
Technical measures	Ensure adequate ventilation. WHILE MOVING THE PRODUCT: To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Take all necessary precautions to prevent water from entering the containers, tanks, transfer lines etc.
Prevention of fire and explosion	Handle away from any source of ignition (open flame and sparks) and heat (hot manifolds or casings). Take precautionary measures against static discharges. Ground/bond containers, tanks and transfer/receiving equipment. Friction generated by product discharge can create static charges of sufficient magnitude to cause SPARKS WHICH MAY LEAD TO FIRE OR EXPLOSION. Do not allow splash loading and ensure that the product is poured slowly, particularly at the beginning of the operation. Empty containers may contain flammable or explosive vapors. Never weld any container or empty pipe that has not been degassed. OPERATE ONLY ON COLD AND DEGASSED TANKS IN VENTILATED PREMISES (TO AVOID RISK OF EXPLOSION). Design installations (machinery and equipment) to prevent burning product from spreading (tanks, retention systems, interceptors (traps) in drainage systems).

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Hygiene measures

When using, do not eat, drink or smoke. Avoid contact with skin, eyes and clothing. Avoid breathing vapors, mist or gas. Wash hands before breaks and immediately after handling the product. IF ON SKIN: Wash skin with soap and water. Remove contaminated clothing and shoes.
Gloves must be periodically inspected and changed in case of wear, perforations or contaminations.
Provide regular cleaning of equipment, work area and clothing. Keep away from food, drink and animal feeding stuffs.
Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. Use personal protective equipment as required.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures / Storage conditions

Storage area layout, tank design, equipment and operating procedures must comply with the relevant European, national or local legislation.
All the electric installations, including the lighting of rooms that may contain this product, must be adapted to the risk area, in compliance with the European ATEX directives. Take precautionary measures against static discharges.
Ensure all equipment is electrically grounded before beginning transfer operations. Storage installations should be designed with adequate bunds so as to prevent ground or water pollution in case of leaks or spills. Do not remove the hazard labels of the containers (even if they are empty).
Store the packed products (drums, samples, cans ...) in properly ventilated rooms, away from damp, heat and any potential source of ignition.
Keep preferably in the original container. Otherwise reproduce all indication of the regulation label on the new container. Keep containers tightly closed and properly labeled.
Store separately from oxidizing agents.

Materials to avoid

Copper, Zinc, Magnesium, galvanized materials.
Dangerous reaction with oxidizing agents (chlorates, nitrates, and permanganates...).

Packaging material

Use only containers, seals, pipes, etc... made in a material suitable for use with aromatic hydrocarbons. Use material compatible with ethanol.

7.3. Specific end uses

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

Exposure limits

Ingredients with workplace control parameters

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Chemical Name	European Union
Benzene 71-43-2	S* TWA 1 ppm TWA 3.25 mg/m ³
Toluene 108-88-3	TWA 50 ppm TWA 192 mg/m ³ STEL 100 ppm STEL 384 mg/m ³ S*
Xylenes (o-, m-, p- isomers) 1330-20-7	TWA 50 ppm TWA 221 mg/m ³ STEL 100 ppm STEL 442 mg/m ³
Isopentane 78-78-4	TWA 1000 ppm TWA 3000 mg/m ³
Pentane 109-66-0	TWA 1000 ppm TWA 3000 mg/m ³
Hexane 110-54-3	TWA 20 ppm TWA 72 mg/m ³
Ethyl benzene 100-41-4	TWA 100 ppm TWA 442 mg/m ³ STEL 200 ppm STEL 884 mg/m ³ S*

Legend

See Section 16

DNEL Worker (Industrial/Professional)

Chemical Name	Short term, systemic effects	Short term, local effects	Long term, systemic effects	Long term, local effects
Gasoline 86290-81-5	1300 mg/m ³ /15min (inhalation)	1100 mg/m ³ /15min (inhalation)		840 mg/m ³ /8h (inhalation)

DNEL Consumer

Chemical Name	Short term, systemic effects	Short term, local effects	Long term, systemic effects	Long term, local effects
Gasoline 86290-81-5	1200 mg/m ³ /15min (inhalation)	640 mg/m ³ /15min (inhalation)		180 mg/m ³ /8h (inhalation)

8.2. Exposure controls**Occupational Exposure Controls****Engineering measures**

Ensure adequate ventilation. Apply technical measures to comply with the occupational exposure limits.

When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment. Do not enter empty storage tanks until measurements of available oxygen have been carried out.

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Personal protective equipment

General information	Protective engineering solutions should be implemented and in use before personal protective equipment is considered.
Respiratory protection	<p>In case of insufficient ventilation wear suitable respiratory equipment. To enter tankers, tanks, reservoirs where the oxygen content is too low, wear insulating respiratory apparatus.</p> <p>In an emergency or for exceptional short-lasting jobs in an atmosphere polluted by the product, it is necessary to wear protective respiratory equipment. When using a mask or half mask: Full face piece respirator with organic vapor/acid gas cartridge or canister: Type AX. The use of breathing apparatus must comply strictly with the manufacturer's instructions and the regulations governing their choices and uses.</p>
Eye protection	If splashes are likely to occur, wear: Safety glasses with side-shields, or face-shield.
Skin and body protection	Wear suitable protective clothing: hydrocarbon-proof clothing. Protective shoes or boots.
Hand protection	Hydrocarbon-proof gloves for aromatic hydrocarbons. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. Note. Gloves made of PVA are not water-resistant, and are not suitable for emergency use.

Repeated or prolonged exposure

Glove Material	Glove thickness	Break through time	Remarks
PVA	(*)	> 480 min	EN 374, (*), any thickness
Fluorinated rubber	(*)	> 480 min	EN 374, (*), any thickness
Nitrile rubber	> 0.5 mm	> 480 min	EN 374

In case of contact through splashing:

Glove Material	Glove thickness	Break through time	Remarks
Nitrile rubber	> 0.3 mm	> 480 min	EN 374

Environmental Exposure Controls

General information The product should not be allowed to enter drains, water courses or the soil.

9. PHYSICAL AND CHEMICAL PROPERTIES**9.1. Information on basic physical and chemical properties**

Appearance Clear and bright, visibly free of suspended or precipitated contaminants

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Color 91RON – Green
95RON – Red
97RON – Blue

Physical state @ 20°C Liquid

Engineering measures

<u>Property</u>	<u>Values</u>	<u>Remarks</u>	<u>Methods</u>
pH		Not applicable	
Boiling point / boiling range	30 - 210°C		ASTM D 86
Flash point	< -40°C		ASTM D 93
Evaporation rate		Not applicable	
Flammability limits in air			
Upper	8.7%		
Lower	1.4%		
Vapor pressure	< 100kPa @ 37.8°C		EN 13016-1
Vapor density	> 3		
Density	725 - 783 kg/m ³	@ 15°C	
Water solubility		Not applicable	
Solubility in other solvents		No information available	
logPow		Not applicable	
Auto-ignition temperature	> 300 °C		ASTM E 659-78
Viscosity, kinematic	<0.5 mm ² /s	20°C	ISO 3104
Explosive properties	Not explosive		
Oxidizing properties	This product is not considered oxidizing based on chemical structure considerations		
Possibility of hazardous reactions	None under normal processing		

9.2. Other information**10. STABILITY AND REACTIVITY****10.1. Reactivity**

General information No information available.

10.2. Chemical stability

Stability Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

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Hazardous reactions None under normal processing.**10.4. Conditions to avoid****Conditions to avoid** Take precautionary measures against static discharges. Heat, flames and sparks.**10.5. Incompatible materials****Materials to avoid** Copper, Zinc, Magnesium, galvanized materials .
Dangerous reaction with oxidizing agents (chlorates, nitrates, and permanganates...).**10.6. Hazardous decomposition products****Hazardous Decomposition Products** None under normal use. Carbon oxides. Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot.**11. TOXICOLOGICAL INFORMATION****11.1. Information on toxicological effects****Acute toxicity local effects, product information**

General information The acute toxicity has been adequately characterized in a large number of GLP-compliant guideline investigations following oral, dermal or inhalation exposure.

Skin contact Heavier, aromatic materials caused more irritation than lighter, paraffinic streams. May cause irritation. Redness.

Eye contact Key study indicated that the material is not irritating to the eye. Burning feeling and temporary redness.

Inhalation Inhalation of vapors may cause headache, nausea, vomiting and an altered state of consciousness.
May cause irritation of respiratory tract.

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause central nervous system depression.

Acute toxicity, component information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Gasoline	LD50 > 5000 mg/kg bw (rat -	LD50 > 2000 mg/kg bw	LC50 (4h) > 5610 mg/m ³ air

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	OECD TG 401)	(rabbit - OECD TG 402 - under occlusive conditions)	(vapor) (rat - OECD 403)
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Sensitization**Sensitization**

There are no reports available to indicate that the substance has the potential to cause skin and respiratory sensitization.

Specific effects**Carcinogenicity**

The carcinogenic potential of the substance has been investigated (inhalation exposure for 2 years). Observations are not considered relevant to humans. A constituent that is known to be a human carcinogen. BENZENE.

Chemical Name	European Union
Gasoline 86290-81-5	Carc. 1B (H350)

Other constituents required for disclosure

Chemical Name	European Union
Benzene 71-43-2	Carc. 1A (H350)

Mutagenicity

Chemical Name	European Union
Gasoline 86290-81-5	Muta. 1B (H340)

Other constituents required for disclosure

Chemical Name	European Union
Benzene 71-43-2	Muta. 1B (H340)

Germ cell mutageny

The mutagenic potential of the substance has been extensively studied in a range of in-vivo and in-vitro assays. The majority of the studies showed no evidence of mutagenic activity. A constituent is known to be a germ cell mutagen. Benzene.

Reproductive toxicity

Results of guideline developmental toxicity studies on the substance and OECD developmental toxicity screening studies showed no evidence of developmental toxicity in rats. The substance can contain amounts of toluene and/or n-hexane. Constituents that are known to be potential reprotoxicants.

Chemical Name	European Union
Gasoline 86290-81-5	Repr. 2 (H361fd)

Other constituents required for disclosure

Chemical Name	European Union
Toluene 108-88-3	Repr. 2 (H361d)
Hexane	Repr. 2 (H361f)

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110-54-3

Repeated Dose Toxicity**Target Organ Effects (STOT)**

Blood. Reproductive system. Gastrointestinal tract (GI). Central nervous system (CNS). Eyes. Respiratory system. Liver. Skin.

Specific target organ systemic toxicity (single exposure)

Acute exposure studies show no evidence of systemic toxicity, other than a potential to cause narcosis / CNS depression at higher exposure concentrations.

Specific target organ systemic toxicity (repeated exposure)

The repeat dose toxicity of the substance has been studied following dermal and inhalation exposure for periods between 10 days and up to 2 years. In dermal studies, no systemic toxicity has been seen. The only effect observed was moderate to severe dermal irritation. Repeated inhalation exposure causes: light hydrocarbon nephropathy. An effect which is considered to be both sex and species specific.

Aspiration toxicity

The fluid can enter the lungs and cause damage (chemical pneumonitis, potentially fatal).

Other information**12. ECOLOGICAL INFORMATION****12.1. Toxicity**

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Acute aquatic toxicity, product information**Acute aquatic toxicity, component information**

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish	Toxicity to microorganisms
Gasoline 86290-81-5	EL50 (72 h) > 3.1 mg/l (Selenastrum capricornutum/Pseudokirchnerella subcapitata – OECD 201)	EL50 (48 h) > 4.5 mg/l (Daphnia magna – OECD 202)	LL50 (96 h) > 8.2 mg/l (Pimephales promelas - OECD 203)	

Chronic aquatic toxicity, product information**Chronic aquatic toxicity, component information**

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish	Toxicity to microorganisms
Gasoline 86290-81-5		NOEL (21d) > 2.6 mg/l (Daphnia magna - OECD)	NOEL (14/28d) > 2.6 mg/l (Read across from	

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		211)	Daphnia magna)	
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Effects on terrestrial organisms

No information available.

12.2. Persistence and degradability

General information No product level data available.

12.3. Bioaccumulative potential

Product information No information available.

logPow, component information Not applicable.

12.4. Mobility

Method	Compartment	Result	(%)	Remarks
Percent distribution in media (Calculation according to Mackay, Level III)	Soil		0.34	
Percent distribution in media (Calculation according to Mackay, Level III)	Sediment		0.81	
Percent distribution in media (Calculation according to Mackay, Level III)	Water		5.83	
Percent distribution in media (Calculation according to Mackay, Level III)	Air		93.02	

Soil Given its physical and chemical characteristics, the product is generally mobile in the ground. It may contaminate ground water.

Air The product evaporates in the air and dissipates more or less depending on local conditions. However, it may stagnate in pools in low-lying areas, in an undisturbed or confined atmosphere.

Water The product spreads on the surface of the water. May exhibit slight solubility in water.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment This product contains no substance considered as PBT and/or vPvB according to REACH Regulation Annex XIII Criteria.

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12.6. Other adverse effects

General information No information available.

13. DISPOSAL CONSIDERATIONS**13.1. Waste treatment methods**

Waste from residues / unused products	Dispose of in accordance with the European Directives on waste and hazardous waste. Should not be released into the environment. Dispose of in accordance with local regulations. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations.
Contaminated packaging	Empty containers may contain flammable or explosive vapors. Do not cut, weld, bore, burn or incinerate emptied containers, unless they have been cleaned and declared safe. Empty containers should be taken to an approved waste handling site for recycling or disposal.
EWC Waste Disposal No.	According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

14. TRANSPORT INFORMATION**ADR / RID**

UN/ID No	UN1203
Proper shipping name	Gasoline
Proper shipping name	GASOLINE
Hazard class	3
Packing group	II
ADR/RID-labels	3
Environmental hazard	Yes
Classification code	F1
Special provisions	243, 534
Tunnel restriction code	(D/E)
ADR Hazard ID (Kemmler No.)	33
Description	UN1203, GASOLINE, 3, PG II, (D/E)
Excepted quantity	E2
Limited quantity	1 L

IMDG / IMO

UN/ID No	UN1203
Proper shipping name	Gasoline
Hazard class	3

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Packing group	II
Marine pollutant	P
EmS No.	F-E, S-E
Description	UN1203, GASOLINE, 3, PG II, (0°C c.c.), MARINE POLLUTANT
Special provisions	243
Excepted quantity	E2
Limited quantity	1 L

ICAO / IATA

UN/ID No	UN1203
Proper shipping name	Gasoline
Hazard class	3
Packing group	II
ERG group	3H
Special provisions	A100
Description	UN1203, GASOLINE, 3, PG II
Excepted quantity	E2
Limited quantity	1 L

ADN

UN/ID No	UN1203
Proper shipping name	Gasoline
Proper shipping name	GASOLINE
Hazard class	3
Hazard labels	3
Packing group	II
Environmental hazard	Yes
Classification code	F1
Description	UN1203, GASOLINE, 3, PG II
Excepted quantity	E2
Limited quantity	1 L
Ventilation	VE01

15. REGULATORY INFORMATION**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****European Union****Other regulations**

This product may only be used for the purpose of motor fuels which are covered by Directive 98/70/EC. Directive 1999/13/EC on the limitation of emissions of volatile organic compounds. Take note of Dir 94/33/EC on the protection of young people at work. Take note of Dir 92/85/EEC on the safety and health at work of pregnant workers. Directive 2004/37/EC of the European Parliament and of the Council of 29 April 2004 on the protection of workers from the risks related to exposure to carcinogens or mutagens at work.

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Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

International inventories

EINECS / ELINCS	Complies
TSCA	
DSL	Complies
ENCS	Complies
IECSC	
KECL	Complies
PICCS	Complies
AICS	Complies
NZIoC	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals

Further information**15.2. Chemical safety assessment**

Chemical Safety Assessment See exposure scenarios.

16. OTHER INFORMATION**Full text of R-phrases referred to under Sections 2 and 3**

R45 – May cause cancer
R12 – Extremely flammable
R46 – May cause heritable genetic damage
R67 – Vapors may cause drowsiness and dizziness
R63 – Possible risk of harm to the unborn child
R38 – Irritating to skin
R11 – Highly flammable
R10 – Flammable
R41 – Risk of serious damage to eyes
R36 – Irritating to eyes
R20 – Also harmful by inhalation
R65 – Also harmful: may cause lung damage if swallowed.
R51/53 – Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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R36/37 – Irritating to eyes and respiratory system
R37/38 – Irritating to respiratory system and skin
R39/23/24/25 – Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed
R23/24/25 – Toxic by inhalation, in contact with skin and if swallowed.

Full text of H-statements referred to under Sections 2 and 3

H224 – Extremely flammable liquid and vapor.
H225 – Highly flammable liquid and vapor.
H226 – Flammable liquid and vapor.
H301 – Toxic if swallowed.
H304 – May be fatal if swallowed and enters airways.
H311 – Toxic in contact with skin.
H312 – Harmful in contact with skin.
H315 – Causes skin irritation.
H318 – Causes serious eye damage.
H319 – Causes serious eye irritation.
H331 – Toxic if inhaled.
H332 – Harmful if inhaled.
H335 – May cause respiratory irritation.
H336 – May cause drowsiness or dizziness.
H340 – May cause genetic defects.
H350 – May cause cancer.
H370 – Causes damage to organs.
H372 – Causes damage to organs through prolonged or repeated exposure.
H373 – May cause damage to organs through prolonged or repeated exposure.
H361d – Suspected of damaging fertility. Suspected of damaging the unborn child.
H361f – Suspected of damaging fertility.
H411 – Toxic to aquatic life with long lasting effects.

Abbreviations, acronyms

GLP = Good Laboratory Practice
bw = body weight
bw/day = body weight/day

Legend Section 8

+	Sensitizer	*	Skin designation
**	Hazard Designation	C:	Carcinogen
M:	Mutagen	R:	Toxic to reproduction

Revision date: 01-Oct-2015

Revision note:**This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**

This safety data sheet serves to complete but not to replace the technical product sheets. The information contained herein is given in good faith and is accurate to the best of knowledge at the date indicated above. It is understood by the user that any use of the product for purposes other than those for which it was designed entails potential risk. The information given herein in no way dispenses the user from knowing and applying all provisions regulating his activity. The user bears sole liability for the precautions required when using the product. The regulatory texts indicated herein are intended to aid the user to fulfill his obligations. This list is not to be considered complete and exhaustive. It is the user's responsibility to ensure that he is subject to no other obligations than those mentioned.



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End of the safety data sheet.