SAFETY DATA SHEET

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

Product identifier

Trade name of the substance	European Grade Gasolines - All Grades (Refer to Synonyms for Product Name)
Identification No.	649-378-00-4
Registration number	01-2119471335-39-0088
Synonyms	En-228 European Premium Gasoline * Premium Gasoline - 60KPA DVPE 10PPM SUL * Premium Gasoline - 70KPA DVPE 10PPM SUL * Premium Gasoline - 80KPA DVPE 10PPM SUL * Premium Gasoline - 90KPA DVPE 10PPM SUL * Premium Gasoline - 95KPA DVPE 10PPM SUL * Premium Gasoline - 100KPA DVPE 10PPM SUL * En-228 European Super Gasoline * Super Gasoline - 60KPA DVPE 10PPM SUL * Super Gasoline - 70KPA DVPE 10PPM SUL * Super Gasoline - 80KPA DVPE 10PPM SUL * Super Gasoline - 90KPA DVPE 10PPM SUL * Super Gasoline - 95KPA DVPE 10PPM SUL * Super Gasoline - 100KPA DVPE 10PPM SUL * Sub Octane Prem. Gasoline Blendstock
SDS number	2000
Date of first issue	29-July-2011
Version number	02
Revision date	11-August-2011
Supersedes date	29-July-2011

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

Identified uses	Distribution of a substance. Formulation & (re) packaging of substances and mixtures. Manufacture of substance. Use as a Fuel. Use as an intermediate.
Uses advised against	None known.

Details of the supplier of the safety data sheet

Supplier

Company name	Valero Energy Ltd
Address	1 Westferry Circus Canary Wharf London E14 4HA UK
General information:	
United States:	01/210 345 4593
Contact person	Not available.
Emergency telephone number	
Europe:	0044/(0)18 65 407333

Section 2: Hazards identification

Classification of the substance or mixture

The substance has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Directive 67/548/EEC or 1999/45/EC as amended

Classification	F+;R12, Carc. Cat. 2;R45, Muta. Cat. 2;R46, Repr. Cat. 3;R62-63, Xn;R65, Xi;R38, R67, N;R51/53

The full text for all R-phrases is displayed in section 16.

Classification according to Regulation (EC) No 1272/2008 as amended

Physical hazards		
Flammable liquids	Category 1	Extremely flammable liquid and vapour.
Health hazards		
Skin corrosion/irritation	Category 2	Causes skin irritation.
Germ cell mutagenicity	Category 1B	May cause genetic defects.
Carcinogenicity	Category 1B	May cause cancer.
Reproductive toxicity	Category 2	Suspected of damaging fertility or the unborn child.

Specific target organ toxicity - single exposure	Category 3 narcotic effects	May cause drowsiness or dizziness.
Aspiration hazard	Category 1	May be fatal if swallowed and enters airways.
Environmental hazards		
Hazardous to the aquatic environment - long-term hazard	Category 2	Toxic to aquatic life with long lasting effects.

Hazard summary

Physical hazards Extremely flammable.

Health hazards May cause cancer. May cause heritable genetic damage. Harmful: may cause lung damage if swallowed. Vapours may cause drowsiness and dizziness. Possible risk of harm to the unborn child. Possible risk of impaired fertility. Irritating to skin.

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

Specific hazards Prolonged exposure may cause chronic effects.

Main symptoms Vapours have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Irritant effects.

Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: Gasoline ; Low boiling naphtha - unspecified

Identification No. 649-378-00-4

Signal word Danger

Hazard statements Extremely flammable liquid and vapour. May be fatal if swallowed and enters airways. Causes skin irritation. May cause drowsiness or dizziness. May cause genetic defects. May cause cancer. Suspected of damaging fertility or the unborn child. Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Take precautionary measures against static discharge. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Ground/bond container and receiving equipment. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Avoid breathing mist or vapour. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Avoid release to the environment.

Response In case of fire: Use foam, carbon dioxide, dry powder for extinction. Collect spillage. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Storage Store locked up. Store in a well-ventilated place. Keep cool. Keep container tightly closed.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental label information None.

Other hazards Not assigned.

Section 3: Composition/information on ingredients

Substance

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Gasoline ; Low boiling naphtha - unspecified	100	86290-81-5 289-220-8	01-2119471335-39-0088	649-378-00-4	#

Classification: **DSD:** F+;R12, Carc. Cat. 2;R45, Muta. Cat. 2;R46, Repr. Cat. 3;R62-63, Xn;R65, Xi;R38, R67, N;R51/53

CLP: Flam. Liq. 1;H224, Asp. Tox. 1;H304, Skin Irrit. 2;H315, STOT SE 3;H336, Muta. 1B;H340, Carc. 1B;H350, Repr. 2;H361, Aquatic Chronic 2;H411

CLP: Regulation No. 1272/2008.
DSD: Directive 67/548/EEC.
#: This substance has workplace exposure limit(s).

Additional components

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Toluene	5 - 20	108-88-3 203-625-9	-	601-021-00-3	-
Benzene	0,1 - 1	71-43-2 200-753-7	-	601-020-00-8	-

Composition comments The full text for all R- and H-phrases is displayed in section 16. All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Section 4: First aid measures

General information If exposed or concerned: get medical attention/advice. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use.

Description of first aid measures

Inhalation Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.

Skin contact Remove contaminated clothing and shoes. Wash off immediately with soap and plenty of water. Get medical attention if irritation develops or persists. Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes. If high pressure injection under the skin occurs, always seek medical attention.

Eye contact Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.

Ingestion Rinse mouth thoroughly. Do not induce vomiting without advice from poison control centre. Do not give mouth-to-mouth resuscitation. Get medical attention immediately.

Most important symptoms and effects, both acute and delayed Skin irritation. Defatting of the skin. Rash. May cause eye irritation on direct contact. Cyanosis (blue tissue condition, nails, lips, and/or skin). Narcosis. Unconsciousness. Decrease in motor functions. Behavioural changes. Aspiration may cause pulmonary oedema and pneumonitis. jaundice Liver enlargement. Oedema. Proteinuria.

Indication of any immediate medical attention and special treatment needed If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

Section 5: Firefighting measures

General fire hazards The product is extremely flammable, and explosive vapour/air mixtures may be formed even at normal room temperatures. Containers may explode when heated.

Extinguishing media

Suitable extinguishing media Water spray. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO_2).

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

Special hazards arising from the substance or mixture Vapor may cause flash fire. Vapors can flow along surfaces to distant ignition source and flash back. Sensitive to static discharge.

Advice for firefighters

Special protective equipment for firefighters Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

Special firefighting procedures	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. Withdraw immediately in case of rising sound from venting safety devices or any discolouration of tanks due to fire. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Move containers from fire area if you can do it without risk. In the event of fire, cool tanks with water spray. Cool containers exposed to flames with water until well after the fire is out. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Vapours may form explosive air mixtures even at room temperature. Prevent buildup of vapours or gasses to explosive concentrations. Some of these materials, if spilled, may evaporate leaving a flammable residue. Water runoff can cause environmental damage.

Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Keep upwind. Keep out of low areas. Ventilate closed spaces before entering. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. See Section 8 for personal protective equipment.
For emergency responders	Keep unnecessary personnel away. Wear protective clothing as described in Section 8 of this safety data sheet.
Environmental precautions	Gasoline may contain oxygenated blend products (Ethanol, etc.) that are soluble in water and therefore precautions should be taken to protect surface and groundwater sources from contamination. If facility or operation has an "oil or hazardous substance contingency plan", activate its procedures. Stay upwind and away from spill. Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not enter or stay in area unless monitoring indicates that it is safe to do so. Isolate hazard area and restrict entry to emergency crew. Extremely flammable. Keep all sources of ignition (flames, smoking, flares, etc.) and hot surfaces away from release. Contain spill in smallest possible area. Recover as much product as possible (e.g. by vacuuming). Stop leak if it can be done without risk. Use water spray to disperse vapors. Use compatible foam to minimize vapour generation as needed. Spilled material may be absorbed by an appropriate absorbent, and then handled in accordance with environmental regulations. Prevent spilled material from entering sewers, storm drains, other unauthorized treatment or drainage systems and natural waterways. Contact fire authorities and appropriate local agencies.
Methods and material for containment and cleaning up	Extinguish all flames in the vicinity. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Small Spills: Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Cover with plastic sheet to prevent spreading. Following product recovery, flush area with water. Clean surface thoroughly to remove residual contamination. Wipe up with absorbent material (e.g. cloth, fleece). Never return spills in original containers for re-use. Prevent entry into waterways, sewers, basements or confined areas. Stop leak if you can do so without risk. This material is a water pollutant and should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Should not be released into the environment. This material and its container must be disposed of as hazardous waste. Use non-sparking tools and explosion-proof equipment.
Reference to other sections	For personal protection, see section 8. For waste disposal, see section 13.

Section 7: Handling and storage

Precautions for safe handling	Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Avoid prolonged exposure. Use only with adequate ventilation. Wash thoroughly after handling. The product is extremely flammable, and explosive vapour/air mixtures may be formed even at normal room temperatures. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. When using, do not eat, drink or smoke.
Conditions for safe storage, including any incompatibilities	Flammable liquid storage. Do not handle or store near an open flame, heat or other sources of ignition. Keep container tightly closed in a cool, well-ventilated place.
Specific end use(s)	Distribution of a substance. Formulation & (re) packaging of substances and mixtures. Manufacture of substance. Use as a Fuel. Use as an intermediate.

Section 8: Exposure controls/personal protection

Control parameters

Occupational exposure limits

Austria. MAK List

Additional components	Type	Value
Toluene (108-88-3)	STEL	100 ppm
	MAK	190 mg/m3
	STEL	380 mg/m3
	MAK	50 ppm

Austria. TRK List

Additional components	Type	Value
Benzene (71-43-2)	TWA	1 ppm
	STEL	12,8 mg/m3
	TWA	3,2 mg/m3
	STEL	4 ppm

Belgium. Exposure Limit Values.

Additional components	Type	Value
Benzene (71-43-2)	TWA	1 ppm
		3,25 mg/m3
Toluene (108-88-3)	STEL	100 ppm
	TWA	192 mg/m3
	STEL	384 mg/m3
	TWA	50 ppm

Bulgaria. OELs. Regulation No 13 of Ministry of Labor & Social Policy, with Ministry of Health, on protection of workers related to exposure to chemical agents at work

Material	Type	Value
Gasoline ; Low boiling naphtha - unspecified (86290-81-5)	TWA	300 mg/m3

Additional components	Type	Value
Benzene (71-43-2)	TWA	3,25 mg/m3
Toluene (108-88-3)	TWA	150 mg/m3
	STEL	300 mg/m3

Cyprus. OELs. Control of factory atmosphere and dangerous substances in factories regulation, PI 311/73, as amended.

Additional components	Type	Value
Benzene (71-43-2)	TWA	10 ppm
		30 mg/m3
Toluene (108-88-3)	TWA	100 ppm
		375 mg/m3

Czech Republic. OELs. Government Decree 361

Material	Type	Value
Gasoline ; Low boiling naphtha - unspecified (86290-81-5)	Ceiling	1000 mg/m3
	TWA	400 mg/m3

Additional components	Type	Value
Benzene (71-43-2)	Ceiling	10 mg/m3
	TWA	3 mg/m3
Toluene (108-88-3)	TWA	200 mg/m3
	Ceiling	500 mg/m3

Denmark. Exposure Limit Values

Additional components	Type	Value
Benzene (71-43-2)	TLV	0,5 ppm
		1,6 mg/m3
Toluene (108-88-3)	TLV	25 ppm
		94 mg/m3

Estonia. OELs. Occupational Exposure Limit Values for Hazardous Substances (Minister of Social Affairs Regulation No. 57)

Additional components	Type	Value
Benzene (71-43-2)	TWA	0,5 ppm
		1,5 mg/m3
	STEL	3 ppm
		9 mg/m3
Toluene (108-88-3)	STEL	100 ppm
	TWA	200 mg/m3
	STEL	400 mg/m3
	TWA	50 ppm

Finland. Workplace Exposure Limits

Additional components	Type	Value
Benzene (71-43-2)	TWA	1 ppm
		3,25 mg/m3
Toluene (108-88-3)	STEL	100 ppm
	TWA	25 ppm
	STEL	380 mg/m3
	TWA	81 mg/m3

France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984

Additional components	Type	Value
Benzene (71-43-2)	VME	1 ppm
		3,25 mg/m3
Toluene (108-88-3)	VLE	100 ppm
	VME	192 mg/m3
	VLE	384 mg/m3
	VME	50 ppm

Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)

Additional components	Type	Value
Toluene (108-88-3)	TWA	190 mg/m3
		50 ppm

Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace

Additional components	Type	Value
Toluene (108-88-3)	AGW	190 mg/m3
		50 ppm

Greece. OELs (Decree No. 90/1999, as amended)

Additional components	Type	Value
Toluene (108-88-3)	TWA	100 ppm
	STEL	150 ppm
	TWA	375 mg/m3
	STEL	560 mg/m3

Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

Additional components	Type	Value
Benzene (71-43-2)	Ceiling	3 mg/m3
Toluene (108-88-3)	TWA	190 mg/m3
	STEL	380 mg/m3

Iceland. OELs. Regulation 154/1999 on occupational exposure limits

Material	Type	Value
Gasoline ; Low boiling naphtha - unspecified (86290-81-5)	TWA	180 mg/m3
		25 ppm

Additional components	Type	Value
Benzene (71-43-2)	TWA	0,5 ppm
		1,6 mg/m3
Toluene (108-88-3)	STEL	188 mg/m3
	TWA	25 ppm
	STEL	50 ppm
	TWA	94 mg/m3

Ireland. Occupational Exposure Limits

Additional components	Type	Value
Benzene (71-43-2)	TWA	1 ppm
		3 mg/m3
Toluene (108-88-3)	STEL	100 ppm
	TWA	188 mg/m3
		50 ppm
	STEL	560 mg/m3

Italy. OELs

Material	Type	Value
Gasoline ; Low boiling naphtha - unspecified (86290-81-5)	TWA	300 ppm
	STEL	500 ppm

Additional components	Type	Value
Benzene (71-43-2)	TWA	0,5 ppm
	STEL	2,5 ppm

Italy. OELs

Additional components	Type	Value
Toluene (108-88-3)	TWA	192 mg/m3
		50 ppm

Latvia. OELs. Occupational exposure limit values of chemical substances in work environment

Additional components	Type	Value
Benzene (71-43-2)	TWA	1 ppm
		3,25 mg/m3
Toluene (108-88-3)	STEL	150 mg/m3
	TWA	50 mg/m3

Lithuania. OELs. Occupational Exposure Limit Values for Hazardous Chemical Substance Concentration, General Requirements (No. 645/169)

Additional components	Type	Value
Benzene (71-43-2)	TWA	1 ppm
	STEL	19 mg/m3
	TWA	3,25 mg/m3
	STEL	6 ppm
Toluene (108-88-3)	STEL	100 ppm
	TWA	200 mg/m3
	STEL	400 mg/m3
	TWA	50 ppm

Luxembourg. OELs

Additional components	Type	Value
Toluene (108-88-3)	STEL	100 ppm
	TWA	192 mg/m3
	STEL	384 mg/m3
	TWA	50 ppm

Luxembourg. OELs for Carcinogens/Mutagens

Additional components	Type	Value
Benzene (71-43-2)	TWA	1 ppm
		3,25 mg/m3

Netherlands. OELs (binding)

Additional components	Type	Value
Benzene (71-43-2)	TWA	3,25 mg/m3
Toluene (108-88-3)	TWA	150 mg/m3
	STEL	384 mg/m3

Norway. Administrative Norms for Contaminants in the Workplace

Additional components	Type	Value
Benzene (71-43-2)	TLV	1 ppm
		3 mg/m3
Toluene (108-88-3)	TLV	25 ppm
		94 mg/m3

Poland. MACs. Minister of Labour and Social Policy Regarding Maximum Allowable Concentrations and Intensities in Working Environment

Additional components	Type	Value
Benzene (71-43-2)	TWA	1,6 mg/m3
Toluene (108-88-3)	TWA	100 mg/m3
	STEL	200 mg/m3

Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)

Additional components	Type	Value
Benzene (71-43-2)	TWA	0,5 ppm
	STEL	2,5 ppm
Toluene (108-88-3)	TWA	50 ppm

Romania. OELs. Protection of workers from exposure to chemical agents at the workplace

Material	Type	Value
Gasoline ; Low boiling naphtha - unspecified (86290-81-5)	TWA	300 mg/m3
	STEL	500 mg/m3

Additional components	Type	Value
Benzene (71-43-2)	TWA	1 ppm
		3,25 mg/m3
Toluene (108-88-3)	STEL	100 ppm
	TWA	192 mg/m3
	STEL	384 mg/m3

Romania. OELs. Protection of workers from exposure to chemical agents at the workplace

Additional components	Type	Value
	TWA	50 ppm

Slovakia. OELs. Decree of the government of the Slovak Republic concerning protection of health in work with chemical agents

Additional components	Type	Value
Toluene (108-88-3)	TWA	192 mg/m3
	Ceiling	384 mg/m3
	TWA	50 ppm

Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)

Additional components	Type	Value
Benzene (71-43-2)	TWA	1 ppm
		3,25 mg/m3
Toluene (108-88-3)	TWA	190 mg/m3
		50 ppm

Spain. Occupational Exposure Limits

Additional components	Type	Value
Toluene (108-88-3)	STEL	100 ppm
	TWA	192 mg/m3
	STEL	384 mg/m3
	TWA	50 ppm

Sweden. Occupational Exposure Limit Values

Additional components	Type	Value
Benzene (71-43-2)	TWA	0,5 ppm
		1,5 mg/m3
	STEL	3 ppm
		9 mg/m3
Toluene (108-88-3)	STEL	100 ppm
	TWA	200 mg/m3
	STEL	400 mg/m3
	TWA	50 ppm

Switzerland. SUVA Grenzwerte am Arbeitsplatz

Additional components	Type	Value
Benzene (71-43-2)	TWA	0,5 ppm
		1,6 mg/m3
Toluene (108-88-3)	TWA	190 mg/m3
	STEL	200 ppm
	TWA	50 ppm
	STEL	760 mg/m3

UK. EH40 Workplace Exposure Limits (WELs)

Additional components	Type	Value
Benzene (71-43-2)	TWA	1 ppm
Toluene (108-88-3)	STEL	100 ppm
	TWA	191 mg/m3
	STEL	384 mg/m3
	TWA	50 ppm

EU. Indicative Exposure and Directives relating to the protection of risks related to work exposure to chemical, physical, and biological agents.

Additional components	Type	Value
Toluene (108-88-3)	STEL	100 ppm
	TWA	192 mg/m3
	STEL	384 mg/m3
	TWA	50 ppm

EU. OELs, Directive 2004/37/EC on carcinogen and mutagens from Annex III, Part A

Additional components	Type	Value
Benzene (71-43-2)	TWA	1 ppm
		3,25 mg/m3

Biological limit values

Finland. HTP-arvot, App 2., Biological Limit Values, (BRA/BGV) , Social Affairs and Ministry of Health

Additional components	Value	Determinant	Specimen	Sampling time
Toluene (108-88-3)	500 nmol/l	Toluene concentration	Blood	Sampling Date: The morning after the workday.

France. Biological indicators of exposure (IBE) (National Institute for Research and Security (INRS, ND 2065)

Additional components	Value	Determinant	Specimen	Sampling time
Benzene (71-43-2)	5 mg/l	Acide muconique	Urine	Sampling time: End of shift.
Toluene (108-88-3)	1 mg/l	Toluène	Venous blood	Sampling time: End of shift.
	2500 mg/g	Acide hippurique	Creatinine in urine	Sampling time: Last 4 hours of the shift.
	2500 mg/g	Acide hippurique	Creatinine in urine	Sampling time: End of shift.

Recommended monitoring procedures Follow standard monitoring procedures.

DNEL

Material	Type	Route	Value	Form
Gasoline ; Low boiling naphtha - unspecified (86290-81-5)	Workers	Inhalation	1100 mg/m³/15min	Acute Local effects
	Consumer	Inhalation	1200 mg/m³/15min	Aerosol, Acute Systemic effects
	Workers	Inhalation	1300 mg/m³/15min	Acute Systemic effects
	Consumer	Inhalation	180 mg/m³/24h	Long term Local effects
		Inhalation	640 mg/m³/15min	Acute Local effects
	Workers	Inhalation	840 mg/m³/8h	Long term Local effects

PNEC Not available.

Exposure controls

Appropriate engineering controls Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof equipment.

Individual protection measures, such as personal protective equipment

General information Use personal protective equipment as required. Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. Keep working clothes separately. Launder contaminated clothing before reuse.

Eye/face protection Wear safety glasses. If splash potential exists, wear full face shield or chemical goggles.

Skin protection

- Hand protection Wear chemical-resistant, impervious gloves. Chlorinated Polyethylene (or Chlorosulfonated Polyethylene), Viton, Polyurethane, Nitrile rubber. Suitable gloves can be recommended by the glove supplier. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.

- Other Wear chemical-resistant, impervious gloves. Full body suit and boots are recommended when handling large volumes or in emergency situations. Flame retardant protective clothing is recommended.

Respiratory protection Wear a NIOSH-approved (or equivalent) full-facepiece airline respirator in the positive pressure mode with emergency escape provisions. In case of inadequate ventilation or risk of inhalation of vapours, use suitable respiratory equipment with gas filter (type A2). Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.

Thermal hazards When material is heated, wear gloves to protect against thermal burns.

Hygiene measures Consult supervisor for special handling instructions. Avoid contact with eyes. Avoid contact with skin. Wash hands before breaks and immediately after handling the product. Provide eyewash station and safety shower. Handle in accordance with good industrial hygiene and safety practices.

Environmental exposure controls Contain spills and prevent releases and observe national regulations on emissions.

Section 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance Colorless to yellow liquid.

Physical state Liquid.

Form Liquid.

Colour Colorless to yellow.

Odour Petroleum.

Odour threshold Not available.

pH Not applicable.

Melting point/freezing point	Not applicable.
Boiling point, initial boiling point, and boiling range	25 - 220 °C (77 - 428 °F)
Flash point	< -40 °C (< -40 °F) Tagliabue closed cup Cup ASTM D56
Auto-ignition temperature	> 280 °C (> 536 °F)
Flammability (solid, gas)	Not available.
Flammability limit - lower (%)	1,4
Flammability limit - upper (%)	7,6
Oxidising properties	Not available.
Explosive properties	Not available.
Explosive limit	Not available.
Vapour pressure	35 - 90 kPa @ 37,8 °C (100 °F)
Vapour density	3 - 4 Typical.
Evaporation rate	Not available.
Relative density	Not available.
Solubility (water)	Insoluble.
Partition coefficient (n-octanol/water)	Log Pow: 2 - 7
Decomposition temperature	Not available.
Viscosity	< 1 mm²/s @ 40 °C (104 °F)
Percent volatile	Not available.
Other information	No relevant additional information available.

Section 10: Stability and reactivity

Reactivity	The product is stable and non reactive under normal conditions of use, storage and transport.
Chemical stability	Stable under normal temperature conditions and recommended use.
Possibility of hazardous reactions	Not available.
Conditions to avoid	Heat, flames and sparks. Ignition sources. Contact with incompatible materials. Do not pressurize, cut, weld, braze, solder, drill, grind or expose empty containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode and cause injury or death.
Incompatible materials	Strong acids. Strong oxidizers such as nitrates, chlorates, peroxides.
Hazardous decomposition products	Carbon oxides. Hydrocarbons.

Section 11: Toxicological information

General information	May be fatal if swallowed and enters airways. Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Ingestion	Ingestion may cause irritation and malaise. Swallowing or vomiting of the liquid may result in aspiration into the lungs.
Inhalation	Vapours may cause drowsiness and dizziness.
Skin contact	Causes skin irritation.
Eye contact	Direct contact with eyes may cause temporary irritation.
Symptoms	Irritation of nose and throat. Irritation of eyes and mucous membranes. Skin irritation. May cause eye irritation on direct contact. Narcosis. Unconsciousness. Behavioural changes. Decrease in motor functions. Cyanosis (blue tissue condition, nails, lips, and/or skin). Jaundice. Proteinuria. Liver enlargement. Conjunctivitis. Corneal damage. Defatting of the skin. Rash. Oedema.

Information on toxicological effects

Acute toxicity	Harmful if inhaled, absorbed through skin, or swallowed. Harmful: may cause lung damage if swallowed. Irritating to eyes, respiratory system and skin. May be fatal if swallowed and enters airways. In high concentrations, vapours and spray mists are narcotic and may cause headache, fatigue, dizziness and nausea. Harmful if inhaled. Irritating to skin. May cause respiratory tract irritation.

Product	Test results
Gasoline ; Low boiling naphtha - unspecified (86290-81-5)	Acute Dermal LD50 Rabbit: > 3,75 g/kg

Product	Test results
	Acute Inhalation LD50 Rat: > 20000 mg/kg 4 hours
	Acute Oral LD50 Rat: > 5 ml/kg

Skin corrosion/irritation
Causes skin irritation.
For a 4-hour exposure, the Primary Irritation Index (PII) in rabbits is: 4,8/8,0.

Serious eye damage/eye irritation
Direct contact with eyes may cause temporary irritation.
The Draize eye irritation mean score in rabbits for a 24-hour exposure was: 0/110.

Respiratory sensitisation
Not classified.

Skin sensitisation
Not classified.
The results of a skin sensitization study in guinea pigs were negative.

Germ cell mutagenicity
May cause genetic defects. In in-vitro experiments, neither benzene, toluene nor xylene changed the number of sister-chromatid exchanges (SCEs) or the number of chromosomal aberrations in human lymphocytes. However, toluene and xylene caused a significant cell growth inhibition which was not observed with benzene in the same concentrations. In in-vivo experiments, toluene changed the number of sister-chromatid exchanges (SCEs) in human lymphocytes. Toluene may cause heritable genetic damage.

Carcinogenicity
May cause cancer. Contains benzene, a classified IARC 1 chemical (Known Human Carcinogen). Also contains ethylbenzene, which is classified as an IARC 2B chemical (Possibly Carcinogenic to Humans).

IARC Monographs. Overall Evaluation of Carcinogenicity

Benzene (CAS 71-43-2)	1 Carcinogenic to humans.
Gasoline ; Low boiling naphtha - unspecified (CAS 86290-81-5)	2B Possibly carcinogenic to humans.
Toluene (CAS 108-88-3)	3 Not classifiable as to carcinogenicity to humans.

Reproductive toxicity
Suspected of damaging the unborn child. Suspected of damaging fertility. Benzene, xylene and toluene have demonstrated animal effects of reproductive toxicity. Animal studies of benzene have shown testicular effects, alterations in reproductive cycles, chromosomal aberrations and embryo/fetotoxicity. Ethanol has demonstrated human effects of reproductive toxicity. May damage fertility or the unborn child. Can cause adverse reproductive effects - such as birth defects, miscarriages, or infertility. Avoid exposure to women during early pregnancy. Avoid contact during pregnancy/while nursing.

Specific target organ toxicity - single exposure
May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure
Not classified.

Aspiration hazard
Not available.

Mixture versus substance information
Not available.

Other information
Symptoms may be delayed.

Section 12: Ecological information

Toxicity

Product	Test results
Gasoline ; Low boiling naphtha - unspecified (86290-81-5)	LC50 Daphnia magna: 3 mg/l 48 hours
	LC50 Mysidopsis bahia: 1,8 mg/l 96 hours
	LC50 Oncorhynchus mykiss: 2,7 mg/l 96 hours
	LC50 Sheepshead minnow (Cyprinodon variegatus): 8,3 mg/l 96 hours

Persistence and degradability
None known.

Bioaccumulative potential
Not available.

Mobility
Not available.

Environmental fate - Partition coefficient
Log Pow: 2 - 7

Mobility in soil
Not available.

Results of PBT and vPvB assessment
Not a PBT or vPvB substance or mixture.

Other adverse effects
Toxic to aquatic life with long lasting effects.

Section 13: Disposal considerations

Waste treatment methods

Residual waste	Dispose of in accordance with local regulations.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied.
EU waste code	13 07 02*
Disposal methods/information	Dispose in accordance with all applicable regulations. This material and its container must be disposed of as hazardous waste. Do not discharge into drains, water courses or onto the ground.

Section 14: Transport information

ADR

UN number	UN1203
UN proper shipping name	Gasoline
Transport hazard class(es)	3
Subsidiary class(es)	-
Packing group	II
Environmental hazards	Yes
Labels required	3
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

RID

UN number	UN1203
UN proper shipping name	Gasoline
Transport hazard class(es)	3
Subsidiary class(es)	-
Packing group	II
Environmental hazards	Yes
Labels required	3
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

ADN

UN number	UN1203
UN proper shipping name	Gasoline
Transport hazard class(es)	3
Subsidiary class(es)	-
Packing group	II
Environmental hazards	Yes
Labels required	3
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number	UN1203
UN proper shipping name	Gasoline
Transport hazard class(es)	3
Subsidiary class(es)	-
Packing group	II
Environmental hazards	Yes
Labels required	3
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN1203
UN proper shipping name	Gasoline
Transport hazard class(es)	3
Subsidiary class(es)	-
Packing group	II
Marine pollutant	Yes
Labels required	3
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.

Section 15: Regulatory information

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

EU Regulations

Regulation (EC) No. 2037/2000 on substances that deplete the ozone layer, Annex I

Not listed.

Regulation (EC) No. 2037/2000 on substances that deplete the ozone layer, Annex II

Not listed.

Regulation (EC) No. 850/2004 on persistent organic pollutants, Annex I

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1

Benzene (CAS 71-43-2)

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V

Not listed.

Directive 96/61/EC concerning integrated pollution prevention and control (IPPC): Article 15, European Pollution Emission Registery (EPER)

Benzene (CAS 71-43-2)
Toluene (CAS 108-88-3)

Regulation (EC) No. 1907/2006, REACH Article 59(1). Candidate List

Not listed.

Other regulations	The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended and respective national laws implementing EC directives. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006. 96/82/EC (Seveso II) Directive; Part 2 (Classified Substances) - Extremely Flammable
National regulations	Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work. Pregnant women should not work with the product, if there is the least risk of exposure.
Chemical safety assessment	For this substance a chemical safety assessment has been carried out.

Section 16: Other information

List of abbreviations	DSD: Directive 67/548/EEC. CLP: Regulation No. 1272/2008. DNEL: Derived No-Effect Level. PNEC: Predicted No-Effect Concentration. PBT: Persistent, bioaccumulative and toxic. vPvB: Very Persistent and very Bioaccumulative.
References	Not available.
Information on evaluation method leading to the classification of mixture	The mixture is classified based on test data for physical hazards. The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available. For details, refer to Sections 9, 11 and 12.
Full text of any statements or R-phrases and H-phrases under Sections 2 to 15	R12 Extremely flammable. R38 Irritating to skin. R45 May cause cancer. R46 May cause heritable genetic damage. R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R62 Possible risk of impaired fertility. R63 Possible risk of harm to the unborn child. R65 Harmful: may cause lung damage if swallowed. R67 Vapours may cause drowsiness and dizziness. H224 - Extremely flammable liquid and vapour. H304 - May be fatal if swallowed and enters airways. H315 - Causes skin irritation. H336 - May cause drowsiness or dizziness. H340 - May cause genetic defects. H350 - May cause cancer. H361 - Suspected of damaging fertility or the unborn child. H411 - Toxic to aquatic life with long lasting effects.
Training information	Not available.
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