

PETROL INJECT

Version number: GHS 2.0
Replaces version of: 2015-06-23 (GHS 1)

revision: 2016-02-09

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

1.1 Product identifier

Trade name

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Registration number (REACH)

not relevant (mixture)

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

Relevant identified uses

Fuel additive

Cleaner for injectors and valve

1.3 Details of the supplier of the safety data sheet

Address: C/ Feldepató 31,32

City: 45220 – Yeles, Toledo, SPAIN

Telephone: +34 925 545 916

E-mail: 3rg@3rgindustrial.com

Web: www.3rgindustrial.com

1.4 Emergency telephone number

112 (European emergency number, available throughout the European Union)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Section	Hazard class	Cat-egory	Hazard class and category	Hazard state-ment
2.6	flammable liquid	Cat. 3	(Flam. Liq. 3)	H226
3.3	serious eye damage/eye irritation	Cat. 2	(Eye Irrit. 2)	H319
3.7	reproductive toxicity	Cat. 1B	(Repr. 1B)	H360
3.8D	specific target organ toxicity - single exposure (narcotic effects, drowsiness)	Cat. 3	(STOT SE 3)	H336
3.10	aspiration hazard	Cat. 1	(Asp. Tox. 1)	H304
4.1C	hazardous to the aquatic environment - chronic hazard	Cat. 2	(Aquatic Chronic 2)	H411

Remarks

For full text of H-phrases: see SECTION 16.

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The most important adverse physicochemical, human health and environmental effects

The product is combustible and can be ignited by potential ignition sources. Spillage and fire water can cause pollution of watercourses.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

Signal word

Danger

Pictograms

GHS02, GHS07,
GHS08, GHS09



Hazard statements

H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H360	May damage fertility or the unborn child.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

Precautionary statements - prevention

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements - response

P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/....
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER/doctor/.../if you feel unwell.
P331	Do NOT induce vomiting.
P370+P378	In case of fire: Use sand, carbon dioxide or powder extinguisher to extinguish.

Precautionary statements - storage

P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

Precautionary statements - disposal

P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
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Hazardous ingredients for labelling:

Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyc-
lics, aromatics (2-25%), ferrocene

2.3 Other hazards

Repeated exposure may cause skin dryness or cracking.

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SECTION 3: Composition/information on ingredients

3.1 Substances

not relevant (mixture)

3.2 Mixtures

Description of the mixture

Name of substance	Identifier	wt%	Classification acc. to 1272/2008/EC	Pictograms	Classification acc. to 67/548/EEC
Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	CAS No 64742-82-1 EC No 919-446-0	75 - < 90	Flam. Liq. 3 / H226 STOT SE 3 / H336 Asp. Tox. 1 / H304 Aquatic Chronic 2 / H411	   	flammable; R10 harmful; Xn; R48/20-65 R66-67 dangerous for the environment; N; R51-53
solvent naphtha	CAS No 64742-94-5 EC No 265-198-5	1 - < 5	STOT SE 3 / H336 Asp. Tox. 1 / H304 Aquatic Chronic 2 / H411	  	
Distillates (petroleum), hydrotreated light	CAS No 64742-47-8 EC No 265-149-8	1 - < 5	Asp. Tox. 1 / H304		harmful; Xn; R65
potassium 1,2-bis(2-ethylhexyloxycarbonyl)ethanesulphonate	CAS No 7491-09-0 EC No 231-308-5	1 - < 5	Skin Irrit. 2 / H315 Eye Dam. 1 / H318		irritant; Xi; R38-41
ferrocene	CAS No 102-54-5 EC No 203-039-3	1 - < 5	Flam. Sol. 1 / H228 Acute Tox. 4 / H302 Acute Tox. 4 / H332 Repr. 1B / H360 STOT RE 2 / H373 Aquatic Chronic 1 / H410	   	highly flammable; F; R11 harmful; Xn; R20/22-48/20/22 toxic for reproduction; Repr. Cat. 1; R61 toxic for reproduction; Repr. Cat. 2; R60 dangerous for the environment; N; R50-53
naphthalene	CAS No 91-20-3 EC No 202-049-5	< 1	Flam. Sol. 2 / H228 Acute Tox. 4 / H302 Carc. 2 / H351 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410	   	

For full text of abbreviations: see SECTION 16.

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SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Avoid contact with eyes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Narcotic effects.

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

foam, carbon monoxide (CO), fire extinguishing powder

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

In case of insufficient ventilation and/or in use, may form flammable/explosive vapour-air mixture. Solvent vapours are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures.

Hazardous combustion products

Flammable vapors. Hazardous combustion products:

The products of incomplete combustion and thermolysis may be carbon monoxide, carbon dioxide, hydrocarbons, aldehydes and smoke. The inhalation of vapors is very dangerous. Combustion residues and contaminated firefighting water should be disposed in accordance with local laws.

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Evacuate the danger area at least 50 meters in all directions, depending on the released quantity. Keep away the uninvolved staff. Stay on the side from which the wind is blowing. Remove persons to safety. Ventilate affected area. Provision of sufficient ventilation.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases. Warning and evacuating people in the neighbourhood.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose it.

6.3 Methods and material for containment and cleaning up

Advices on how to contain a spill

Covering of drains.

Advices on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage (sawdust, kieselgur (diatomite), sand, universal binder).

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

• Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Avoidance of ignition sources. Keep away from sources of ignition - No smoking. Use only in well-ventilated areas. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools.

• Warning

Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapours are heavier than air, spread along floors and form explosive mixtures with air. Vapours may form explosive mixtures with air.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

• Explosive atmospheres

Keep container tightly closed and in a well-ventilated place. Use local and general ventilation. Keep cool. Protect from sunlight.

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• Flammability hazards

Keep away from sources of ignition - No smoking. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Protect from sunlight.

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice

• Ventilation requirements

Use local and general ventilation. Ground/bond container and receiving equipment.

• Packaging compatibilities

Keep only in original container. Suitable packaging materials: steel, stainless steel.

7.3 Specific end use(s)

See section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m ³]	Source
EU	mesitylene (1,3,5-trimethylbenzene)	108-67-8	IOELV	20	100	2000/39/EC
EU	naphthalene	91-20-3	IOELV	10	50	91/322/EEC
EU	1,2,4-trimethylbenzene	95-63-6	IOELV	20	100	2000/39/EC
GB	aromatics	91-20-3	WEL		500	EH40/2005

Notation

TWA Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average

Relevant DNELs/DMELs/PNECs and other threshold levels

• relevant DNELs of components of the mixture

Name of substance	EC No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	919-446-0	DNEL	330 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	919-446-0	DNEL	570 mg/cm ³	human, inhalatory	worker (industry)	acute - systemic effects
Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	919-446-0	DNEL	44 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	919-446-0	DNEL	570 mg/cm ³	human, inhalatory	consumer (private households)	acute - systemic effects

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Name of substance	EC No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	919-446-0	DNEL	71 mg/cm ³	human, inhalatory	consumer (private households)	acute - systemic effects
Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	919-446-0	DNEL	26 mg/kg	human, dermal	consumer (private households)	chronic - systemic effects
Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	919-446-0	DNEL	26 mg/kg	human, oral	consumer (private households)	chronic - systemic effects
potassium 1,2-bis(2-ethylhexyloxycarbonyl)ethanesulphonate	231-308-5	DNEL	18.75 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
potassium 1,2-bis(2-ethylhexyloxycarbonyl)ethanesulphonate	231-308-5	DNEL	132.2 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
potassium 1,2-bis(2-ethylhexyloxycarbonyl)ethanesulphonate	231-308-5	DNEL	13.4 mg/kg	human, oral	consumer (private households)	chronic - systemic effects
potassium 1,2-bis(2-ethylhexyloxycarbonyl)ethanesulphonate	231-308-5	DNEL	13.4 mg/kg	human, dermal	consumer (private households)	chronic - systemic effects
potassium 1,2-bis(2-ethylhexyloxycarbonyl)ethanesulphonate	231-308-5	DNEL	46.6 mg/m ³	human, inhalatory	consumer (private households)	chronic - systemic effects
ferrocene	203-039-3	DNEL	0.04 mg/m ³	human, inhalatory	worker (industry)	acute - systemic effects
ferrocene	203-039-3	DNEL	0.025 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
ferrocene	203-039-3	DNEL	0.02 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
ferrocene	203-039-3	DNEL	0.013 mg/kg	human, oral	consumer (private households)	chronic - systemic effects
ferrocene	203-039-3	DNEL	0.013 mg/kg	human, dermal	consumer (private households)	chronic - systemic effects
ferrocene	203-039-3	DNEL	0.005 mg/m ³	human, inhalatory	consumer (private households)	chronic - systemic effects
naphthalene	202-049-5	DNEL	25 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
naphthalene	202-049-5	DNEL	3.57 mg/kg	human, dermal	worker (industry)	chronic - systemic effects

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Name of substance	EC No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
naphthalene	202-049-5	DNEL	25 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects

• relevant PNECs of components of the mixture

Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
potassium 1,2-bis(2-ethylhexyloxycarbonyl)ethanesulphonate	7491-09-0	PNEC	0.0066 mg/l	aquatic organisms	freshwater	short-term (single instance)
potassium 1,2-bis(2-ethylhexyloxycarbonyl)ethanesulphonate	7491-09-0	PNEC	0.00066 mg/l	aquatic organisms	marine water	short-term (single instance)
potassium 1,2-bis(2-ethylhexyloxycarbonyl)ethanesulphonate	7491-09-0	PNEC	122 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
potassium 1,2-bis(2-ethylhexyloxycarbonyl)ethanesulphonate	7491-09-0	PNEC	0.525 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
potassium 1,2-bis(2-ethylhexyloxycarbonyl)ethanesulphonate	7491-09-0	PNEC	0.0525 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
potassium 1,2-bis(2-ethylhexyloxycarbonyl)ethanesulphonate	7491-09-0	PNEC	0.101 mg/kg	terrestrial organisms	soil	short-term (single instance)
potassium 1,2-bis(2-ethylhexyloxycarbonyl)ethanesulphonate	7491-09-0	PNEC	0.066 mg/l	aquatic organisms	water	continuous
ferrocene	102-54-5	PNEC	0.00003 mg/l	aquatic organisms	freshwater	short-term (single instance)
ferrocene	102-54-5	PNEC	0.000003 mg/l	aquatic organisms	marine water	short-term (single instance)
ferrocene	102-54-5	PNEC	0.876 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
ferrocene	102-54-5	PNEC	0.0103 mg/l	aquatic organisms	water	continuous
naphthalene	91-20-3	PNEC	2.4 µg/l	aquatic organisms	freshwater	short-term (single instance)
naphthalene	91-20-3	PNEC	2.4 µg/l	aquatic organisms	marine water	short-term (single instance)
naphthalene	91-20-3	PNEC	2.9 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)

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Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
naphthalene	91-20-3	PNEC	67.2 µg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
naphthalene	91-20-3	PNEC	67.2 µg/kg	aquatic organisms	marine sediment	short-term (single instance)
naphthalene	91-20-3	PNEC	53.3 µg/kg	terrestrial organisms	soil	short-term (single instance)
naphthalene	91-20-3	PNEC	20 µg/l	aquatic organisms	water	continuous

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Safety glasses with side-shields (frame goggles) (EN 166).

Skin protection

Chemical resistant protective gloves (EN 374)

Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): fluoroelastomer (FKM) - 0.7 mm coating thickness Polyethylene-Laminate (PE laminate) - ca. 0.1 mm coating thickness

Suitable materials short-term contact and/or splashes (recommended: At least protective index 2, corresponding > 30 minutes of permeation time according to EN 374) nitrile rubber (NBR) - 0.4 mm coating thickness

Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances .

• hand protection

Chemical protection gloves are suitable, which are tested according to EN 374.

• other protection measures

Wash hands thoroughly after handling. Protective clothing against liquid and gaseous chemicals, including liquid aerosols and solid particles. Footwear protecting against chemicals.

Respiratory protection

Type: AX (gas filters and combined filters against low-boiling point organic compounds, colour code: Brown).

Type: A-P2 (combined filters against particles and organic gases and vapours, colour code: Blue/White).

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid
Colour	different
Odour	characteristic

Other physical and chemical parameters

pH (value)	not determined
Melting point/freezing point	
Initial boiling point and boiling range	135 °C at 1 atm
Flash point	29 °C at 101.3 kPa
Evaporation rate	not determined
Flammability (solid, gas)	not relevant (fluid)
Explosive limits	
• lower explosion limit (LEL)	0.6 vol%
• upper explosion limit (UEL)	7 vol%
Vapour pressure	10kPa στους 20 °C
Density	0.79 g/cm ³
Solubility(ies)	not determined
Partition coefficient	
n-octanol/water (log KOW)	This information is not available.
Auto-ignition temperature	>200 °C
Viscosity	not determined
Explosive properties	none
Oxidising properties	none

9.2 Other information

Solvent content	>99%
Solid content	<1%

SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". The mixture contains reactive substance(s): risk of ignition

• if heated

risk of ignition

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

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10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hints to prevent fire or explosion

Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

Physical stresses which might result in a hazardous situation and have to be avoided

high temperatures - static electricity

10.5 Incompatible materials

oxidisers

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification according to GHS (1272/2008/EC, CLP)

Acute toxicity

Shall not be classified as acutely toxic.

• Acute toxicity of components of the mixture

Name of substance	CAS No	Exposure route	ATE
solvent naphtha	64742-94-5	inhalation: vapour	>5.28
ferrocene	102-54-5	oral	1,320
ferrocene	102-54-5	inhalation: dust/mist	1.5
naphthalene	91-20-3	oral	710
naphthalene	91-20-3	inhalation: vapour	>0.4

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Summary of evaluation of the CMR properties

May damage the unborn child.

May damage fertility.

Shall not be classified as germ cell mutagenic.

Shall not be classified as carcinogenic.

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Specific target organ toxicity (STOT)

- **Specific target organ toxicity - single exposure**

May cause drowsiness or dizziness.

- **Specific target organ toxicity - repeated exposure**

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

12.1 Toxicity

Toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute)

Aquatic toxicity (acute) of components of the mixture

Name of substance	EC No	Endpoint	Value	Species	Exposure time
Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	919-446-0	ErC50	0.94 mg/l	algae	72 hours
Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	919-446-0	EC50	0.53 mg/l	algae	72 hours
Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	919-446-0	EL50	22 mg/l	daphnia magna	48 hours
Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	919-446-0	EL50	10 mg/l	algae	72 hours
Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	919-446-0	EL50	43.98 mg/l	microorganisms	48 hours
Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	919-446-0	LL50	30 mg/l	fish	96 hours
ferrocene	203-039-3	LC50	24.5 mg/l	fish	48 hours
ferrocene	203-039-3	EC50	1.03 mg/l	algae	72 hours
naphthalene	202-049-5	LC50	7.9 mg/l	fish	96 hours
naphthalene	202-049-5	EC50	2.16 mg/l	aquatic invertebrates	48 hours

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Aquatic toxicity (chronic)

May cause long-term adverse effects in the aquatic environment.

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
ferrocene	102-54-5	EC50	2.5 mg/l	aquatic invertebrates	24 h
ferrocene	102-54-5	LC50	0.2 mg/l	aquatic invertebrates	21 d
naphthalene	91-20-3	LC50	7.76 mg/l	fish	24 h

12.2 Persistence and degradability

Tests for this parameter is not applicable to UVCB substances.

Degradability of components of the mixture

Name of substance	CAS No	Process	Degradation rate	Time
ferrocene	102-54-5	carbon dioxide generation	11 %	8 d

12.3 Bioaccumulative potential

Bioaccumulative potential of components of the mixture

Name of substance	CAS No	BCF	Log KOW
ferrocene	102-54-5		3.711
naphthalene	91-20-3		3.4

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

The hydrocarbon substances do not meet the criteria for persistence, bioaccumulation and toxicity and hence the product is not considered to be PBT or vPvB.

12.6 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste treatment-relevant information

Solvent reclamation/regeneration.

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packagings- Waste code (EU)

15 01 10x. Packaging containing residues of or contaminated by dangerous substances.

Waste treatment (Content) - Waste code (EU)

14 06 03x Other solvents and solvent mixtures

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Packaging containing residues of or contaminated by dangerous substances

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1	UN number	1993
14.2	UN proper shipping name Hazardous ingredients	FLAMMABLE LIQUID, N.O.S. Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%), Ferrocene
14.3	Transport hazard class(es) Class	3 (flammable liquids)
14.4	Packing group	III (substance presenting low danger)
14.5	Environmental hazards	hazardous to the aquatic environment (Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%))
14.6	Special precautions for user Provisions for dangerous goods (ADR) should be complied within the premises.	
14.7	Transport in bulk according to Annex II of MARPOL and the IBC Code The cargo is not intended to be carried in bulk.	

Information for each of the UN Model Regulations

• Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)

UN number	1993
Proper shipping name	FLAMMABLE LIQUID, N.O.S.
Class	3
Classification code	F1
Packing group	III
Danger label(s)	3 + "fish and tree"



Environmental hazards	yes (hazardous to the aquatic environment)
Special provisions (SP)	274, 601, 640E
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
Transport category (TC)	3
Tunnel restriction code (TRC)	D/E
Hazard identification No	30

Emergency Action Code

3YE

• International Maritime Dangerous Goods Code (IMDG)

UN number	1993
Proper shipping name	FLAMMABLE LIQUID, N.O.S.
Class	3
Marine pollutant	yes (hazardous to the aquatic environment)
Packing group	III
Danger label(s)	3 + "fish and tree"

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Special provisions (SP)	223, 274, 955
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
EmS	F-E, S-E
Stowage category	E
• International Civil Aviation Organization (ICAO-IATA/DGR)	
UN number	1993
Proper shipping name	Flammable liquid, n.o.s.
Class	3
Environmental hazards	yes (hazardous to the aquatic environment)
Packing group	III
Danger label(s)	3



Special provisions (SP)	A3, 274
Excepted quantities (EQ)	E1
Limited quantities (LQ)	10 L

SECTION 15: Regulatory information

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

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
2000/39/EC	Commission Directive establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC
91/322/EEC	Commission Directive on establishing indicative limit values by implementing Council Directive 80/1107/EEC
Acute Tox.	acute toxicity
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
Aquatic Acute	hazardous to the aquatic environment - acute hazard
Aquatic Chronic	hazardous to the aquatic environment - chronic hazard
Asp. Tox.	aspiration hazard
ATE	Acute Toxicity Estimate
BCF	BioConcentration Factor
Carc.	carcinogenicity
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)

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Abbr.	Descriptions of used abbreviations
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
CMR	Carcinogenic, Mutagenic or toxic for Reproduction
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-licence/)
EmS	Emergency Schedule
Eye Dam.	seriously damaging to the eye
Eye Irrit.	irritant to the eye
F+	extremely flammable
Flam. Liq.	flammable liquid
Flam. Sol.	flammable solid
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
IOELV	indicative occupational exposure limit value
log KOW	n-octanol/water
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
N	dangerous for the environment
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
Repr.	reproductive toxicity
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	corrosive to skin
Skin Irrit.	irritant to skin
STOT RE	specific target organ toxicity - repeated exposure
STOT SE	specific target organ toxicity - single exposure
TWA	time-weighted average
vPvB	very Persistent and very Bioaccumulative
WEL	workplace exposure limit
Xi	irritant
Xn	harmful

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Key literature references and sources for data

- Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU
- Regulation (EC) No. 1272/2008 (CLP, EU GHS)

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.

Health hazards/environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H226	flammable liquid and vapour
H228	flammable solid
H302	harmful if swallowed
H304	may be fatal if swallowed and enters airways
H315	causes skin irritation
H318	causes serious eye damage
H319	causes serious eye irritation
H332	harmful if inhaled
H336	may cause drowsiness or dizziness
H351	suspected of causing cancer
H360	may damage fertility or the unborn child
H373	may cause damage to organs through prolonged or repeated exposure
H400	very toxic to aquatic life
H410	very toxic to aquatic life with long lasting effects
H411	toxic to aquatic life with long lasting effects
R10	flammable
R11	highly flammable
R20/22	harmful by inhalation and if swallowed
R38	irritating to skin
R41	risk of serious damage to eyes
R48/20	harmful: danger of serious damage to health by prolonged exposure through inhalation
R48/20/22	harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed
R50/53	very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R51/53	toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R60	may impair fertility
R61	may cause harm to the unborn child
R65	harmful: may cause lung damage if swallowed
R66	repeated exposure may cause skin dryness or cracking
R67	vapours may cause drowsiness and dizziness

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Disclaimer

This Safety Data Sheet (SDS) is prepared with our best knowledge and with our best faith. It is based on information that was provided to our company via the Safety Data Sheets of the suppliers of this mixture's constituents. The information in this SDS will be updated as soon as new information is available; 3RG INDUSTRIAL AUTO SL provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. Furthermore, this safety data sheet (including its Annex) is made up based on the legal requirements as set by EC 1907/2006 (REACH) based on information as is available at the date the SDS was edited. Further information received following the time scale as foreseen by REACH and the guidance policies as described in the REACH Implementation.