

Page 1 of 16  
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
Revised on / Version: 07.03.2013 / 0003  
Replaces revision of / Version: 28.01.2011 / 0002  
Valid from: 07.03.2013  
PDF print date: 18.02.2014  
51126- Octane Booster

## Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

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

#### 1.1 Product identifier

#### 51126- Octane Booster

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

##### Relevant identified uses of the substance or mixture:

Additives

##### Uses advised against:

No information available at present.

#### 1.3 Details of the supplier of the safety data sheet

Rymax B.V., Delweg 8, NL-6902 PJ Zevenaar  
Telephone: +31 (0)316 740 856, Fax: +31 (0)316 740 844  
www.rymax-lubricants.com

Qualified person's e-mail address: info@rymax-lubricants.com

#### 1.4 Emergency telephone

##### Emergency information services / official advisory body:

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##### Telephone number of the company in case of emergencies:

Tel.: +31 (0)316 740 856 (8.30 - 17.30h)

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### 2.1.1 Classification according to Regulation (EC) 1272/2008 (CLP)

Hazard class	Hazard category	Hazard statement
Asp. Tox.	1	H304-May be fatal if swallowed and enters airways.
Aquatic Chronic	3	H412-Harmful to aquatic life with long lasting effects.

##### 2.1.2 Classification according to Directives 67/548/EEC and 1999/45/EC (including amendments)

Xn, Harmful, R65  
R66  
Dangerous for the environment, R52-53

#### 2.2 Label elements

##### 2.2.1 Labeling according to Regulation (EC) 1272/2008 (CLP)


**Danger**
**Hazard statement**

H304-May be fatal if swallowed and enters airways. H412-Harmful to aquatic life with long lasting effects.

P101-If medical advice is needed, have product container or label at hand. P102-Keep out of reach of children.

**Prevention**

P273-Avoid release to the environment.

**Response**

P301+P310-IF SWALLOWED: Immediately call a POISON CENTER/doctor. P331-Do NOT induce vomiting.

**Disposal**

P501-Dispose of contents/container in a safe way.

EUH066-Repeated exposure may cause skin dryness or cracking.

Naphtha (petroleum), hydrotreated heavy

**2.3 Other hazards**

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006.

The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006.

**SECTION 3: Composition/information on ingredients**
**3.1 Substance**

n.a.

**3.2 Mixture**

<b>Naphtha (petroleum), hydrotreated heavy</b>	
<b>Registration number (REACH)</b>	--
<b>Index</b>	649-327-00-6
<b>EINECS, ELINCS, NLP</b>	265-150-3
<b>CAS</b>	CAS 64742-48-9
<b>content %</b>	80-100
<b>Classification according to Directive 67/548/EEC</b>	Harmful, Xn, R65 R66
<b>Classification according to Regulation (EC) 1272/2008 (CLP)</b>	Asp. Tox. 1, H304

<b>Tricarbonyl(methylcyclopentadienyl)manganese</b>	
<b>Registration number (REACH)</b>	--
<b>Index</b>	---
<b>EINECS, ELINCS, NLP</b>	235-166-5
<b>CAS</b>	CAS 12108-13-3

(GB)

Page 3 of 16  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revised on / Version: 07.03.2013 / 0003  
 Replaces revision of / Version: 28.01.2011 / 0002  
 Valid from: 07.03.2013  
 PDF print date: 18.02.2014  
 51126- Octane Booster

<b>content %</b>	1-<2,5
<b>Classification according to Directive 67/548/EEC</b>	Very toxic, T+, R26 Toxic, T, R24/25 Dangerous for the environment, N, R50-53
<b>Classification according to Regulation (EC) 1272/2008 (CLP)</b>	Acute Tox. 3, H301 Acute Tox. 3, H311 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1) Acute Tox. 2, H330

<b>Solvent naphtha (petroleum), heavy arom.</b>	
<b>Registration number (REACH)</b>	--
<b>Index</b>	649-424-00-3
<b>EINECS, ELINCS, NLP</b>	265-198-5
<b>CAS</b>	CAS 64742-94-5
<b>content %</b>	0,1-<1
<b>Classification according to Directive 67/548/EEC</b>	Dangerous for the environment, N, R51 Dangerous for the environment, R53 Harmful, Xn, R65 R66 R67
<b>Classification according to Regulation (EC) 1272/2008 (CLP)</b>	Aquatic Chronic 2, H411 Asp. Tox. 1, H304 STOT SE 3, H336

<b>1,2,4-trimethylbenzene</b>	<b>Substance for which an EU exposure limit value applies.</b>
<b>Registration number (REACH)</b>	--
<b>Index</b>	601-043-00-3
<b>EINECS, ELINCS, NLP</b>	202-436-9
<b>CAS</b>	CAS 95-63-6
<b>content %</b>	0,01-<1
<b>Classification according to Directive 67/548/EEC</b>	Flammable, R10 Harmful, Xn, R20 Irritant, Xi, R36/37/38 Dangerous for the environment, N, R51 Dangerous for the environment, R53
<b>Classification according to Regulation (EC) 1272/2008 (CLP)</b>	Flam. Liq. 3, H226 Acute Tox. 4, H332 Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315 Aquatic Chronic 2, H411

<b>Naphthalene</b>	<b>Substance for which an EU exposure limit value applies.</b>
<b>Registration number (REACH)</b>	--
<b>Index</b>	601-052-00-2
<b>EINECS, ELINCS, NLP</b>	202-049-5
<b>CAS</b>	CAS 91-20-3
<b>content %</b>	0,01-<1
<b>Classification according to Directive 67/548/EEC</b>	Harmful, Xn, R22 Carcinogen, R40, Carc.Cat.3 Dangerous for the environment, N, R50 Dangerous for the environment, R53
<b>Classification according to Regulation (EC) 1272/2008 (CLP)</b>	Carc. 2, H351 Acute Tox. 4, H302 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410

For the text of the R-phrases / H-phrases and classification codes (GHS/CLP), see Section 16.

Page 4 of 16  
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
Revised on / Version: 07.03.2013 / 0003  
Replaces revision of / Version: 28.01.2011 / 0002  
Valid from: 07.03.2013  
PDF print date: 18.02.2014  
51126- Octane Booster

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

Never pour anything into the mouth of an unconscious person!  
Medical supervision necessary due to possibility of delayed reaction.

#### Inhalation

Remove person from danger area.  
Supply person with fresh air and consult doctor according to symptoms.  
If the person is unconscious, place in a stable side position and consult a doctor.  
Respiratory arrest - Artificial respiration apparatus necessary.

#### Skin contact

Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap. Call a doctor immediately, keep datasheet at hand

#### Eye contact

Remove contact lenses.  
Wash thoroughly for several minutes using copious water - call doctor immediately, have Data Sheet available.

#### Ingestion

Rinse the mouth thoroughly with water.  
Do not induce vomiting. Consult doctor immediately.  
In case of vomiting, keep head low so that the stomach content does not reach the lungs.

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

Irritation of the eyes  
Product removes fat.  
Dermatitis (skin inflammation)

#### Ingestion:

Danger of aspiration  
Lung damage  
Inhalation:  
headaches  
irritation of the respiratory tract  
nausea  
Dizziness

Effects/damages the central nervous system  
Mental confusion

Coordination disorders

In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.

### 4.3 Indication of any immediate medical attention and special treatment needed

Gastric lavage (stomach washing) only under endotracheal intubation.  
Subsequent observation for pneumonia and pulmonary oedema.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

CO<sub>2</sub>  
Extinction powder  
Foam  
Water jet spray

#### Unsuitable extinguishing media

High volume water jet

### 5.2 Special hazards arising from the substance or mixture

In case of fire the following can develop:  
Oxides of carbon  
Manganese oxides  
Toxic pyrolysis products.  
Explosive vapour/air mixture  
Dangerous vapours heavier than air.

Page 5 of 16

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revised on / Version: 07.03.2013 / 0003

Replaces revision of / Version: 28.01.2011 / 0002

Valid from: 07.03.2013

PDF print date: 18.02.2014

51126- Octane Booster

In case of spreading near the ground, flashback to distance sources of ignition is possible.

### **5.3 Advice for firefighters**

In case of fire and/or explosion do not breathe fumes.

Protective respirator with independent air supply.

According to size of fire

Full protection, if necessary

Cool container at risk with water.

Dispose of contaminated extinction water according to official regulations.

## **SECTION 6: Accidental release measures**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Remove possible causes of ignition - do not smoke.

Ensure sufficient supply of air.

If air supply is not sufficient, wear protective breathing apparatus.

Avoid inhalation, and contact with eyes or skin.

If applicable, caution - risk of slipping

### **6.2 Environmental precautions**

If leakage occurs, dam up.

Resolve leaks if this possible without risk.

Prevent surface and ground-water infiltration, as well as ground penetration.

Prevent penetration into drains, cellars, working pits or other places in which accumulation could be hazardous.

If accidental entry into drainage system occurs, inform responsible authorities.

### **6.3 Methods and material for containment and cleaning up**

Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth) and dispose of according to Section 13.

Fill the absorbed material into lockable containers.

### **6.4 Reference to other sections**

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

## **SECTION 7: Handling and storage**

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

### **7.1 Precautions for safe handling**

#### **7.1.1 General recommendations**

Ensure good ventilation.

Avoid inhalation of the vapours.

If applicable, suction measures at the workstation or on the processing machine necessary.

Keep away from sources of ignition - Do not smoke.

Take measures against electrostatic charging, if appropriate.

Avoid contact with eyes or skin.

Handle and open container with care.

Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.

Observe directions on label and instructions for use.

Use working methods according to operating instructions.

#### **7.1.2 Notes on general hygiene measures at the workplace**

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.

Keep away from food, drink and animal feedingstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

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

Keep out of access to unauthorised individuals.

Store product closed and only in original packing.

Not to be stored in gangways or stair wells.

Observe special storage conditions (in Germany, e.g., in accordance with the regulations in the "Betriebssicherheitsverordnung").

Solvent resistant floor

Do not store with oxidizing agents.

Store in a well ventilated place.

Protect from direct sunlight and warming.

Store cool

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revised on / Version: 07.03.2013 / 0003  
 Replaces revision of / Version: 28.01.2011 / 0002  
 Valid from: 07.03.2013  
 PDF print date: 18.02.2014  
 51126- Octane Booster

### 7.3 Specific end use(s)

No information available at present.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Workplace exposure limit (WEL) of the total hydrocarbon solvent content of the mixture (RCP method according to EH40):  
 1200 mg/m<sup>3</sup>

<b>Chemical Name</b>	Naphtha (petroleum), hydrotreated heavy		Content %:80-100
WEL-TWA: 1200 mg/m <sup>3</sup> (>= C7 normal and branched chain alkanes)	WEL-STEL: ---	---	
BMGV: ---	Other information: ---		
<b>Chemical Name</b>	Solvent naphtha (petroleum), heavy arom.		Content %:0,1-<1
WEL-TWA: 500 mg/m <sup>3</sup> (Aromatics)	WEL-STEL: ---	---	
BMGV: ---	Other information: ---		
<b>Chemical Name</b>	1,2,4-trimethylbenzene		Content %:0,01-<1
WEL-TWA: 25 ppm (125 mg/m <sup>3</sup> ) (Trimethylbenzenes, all isomers or mixtures) (WEL), 20 ppm (100 mg/m <sup>3</sup> ) (EU)	WEL-STEL: ---	---	
BMGV: ---	Other information: ---		
<b>Chemical Name</b>	Naphthalene		Content %:0,01-<1
WEL-TWA: 10 ppm (50 mg/m <sup>3</sup> ) (EU)	WEL-STEL: ---	---	
BMGV: ---	Other information: ---		

WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period). | BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.

\*\* = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.

1,2,4-trimethylbenzene						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	100	mg/m <sup>3</sup>	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	100	mg/m <sup>3</sup>	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	16171	mg/kg bw/d	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	100	mg/m <sup>3</sup>	
Workers / employees	Human - blood	Long term, local effects	DNEL	100	mg/m <sup>3</sup>	
Consumer	Human - inhalation	Short term, systemic effects	DNEL	29,4	mg/m <sup>3</sup>	
Consumer	Human - inhalation	Long term, local effects	DNEL	29,4	mg/m <sup>3</sup>	
Consumer	Human - dermal	Long term, systemic effects	DNEL	9512	mg/kg bw/day	

Page 7 of 16

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revised on / Version: 07.03.2013 / 0003

Replaces revision of / Version: 28.01.2011 / 0002

Valid from: 07.03.2013

PDF print date: 18.02.2014

51126- Octane Booster

Consumer	Human - inhalation	Long term, systemic effects	DNEL	29,4	mg/m <sup>3</sup>	
Consumer	Human - oral	Long term, systemic effects	DNEL	15	mg/kg bw/d	
Consumer	Human - inhalation	Long term, local effects	DNEL	29,4	mg/m <sup>3</sup>	
	Environment - freshwater		PNEC	0,12	mg/l	
	Environment - marine		PNEC	0,12	mg/l	
	Environment - sewage treatment plant		PNEC	2,41	mg/l	
	Environment - sediment, freshwater		PNEC	13,56	mg/kg dry weight	
	Environment - sediment, marine		PNEC	13,56	mg/kg dry weight	
	Environment - soil		PNEC	2,34	mg/kg dry weight	

<b>Naphthalene</b>						
<b>Area of application</b>	<b>Exposure route / Environmental compartment</b>	<b>Effect on health</b>	<b>Descriptor</b>	<b>Value</b>	<b>Unit</b>	<b>Note</b>
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	3,57	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	25	mg/m <sup>3</sup>	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	25	mg/m <sup>3</sup>	
	Environment - freshwater		PNEC	2,4	µg/l	
	Environment - marine		PNEC	0,24	µg/l	
	Environment - sewage treatment plant		PNEC	2,9	mg/l	
	Environment - sediment, freshwater		PNEC	67200	mg/kg dry weight	
	Human - oral		PNEC	67200	mg/kg dry weight	
	Environment - soil		PNEC	53300	mg/kg dry weight	

## 8.2 Exposure controls

### 8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.

If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.

Applies only if maximum permissible exposure values are listed here.

### 8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.

Keep away from food, drink and animal feedingstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:

Tight fitting protective goggles with side protection (EN 166).

Skin protection - Hand protection:

Solvent resistant protective gloves (EN 374).

If applicable

Protective nitrile gloves (EN 374)

Protective gloves made of polyvinyl alcohol (EN 374)

Protective Viton® / fluoroelastomer gloves (EN 374)

Page 8 of 16  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revised on / Version: 07.03.2013 / 0003  
 Replaces revision of / Version: 28.01.2011 / 0002  
 Valid from: 07.03.2013  
 PDF print date: 18.02.2014  
 51126- Octane Booster

Protective hand cream recommended.

Skin protection - Other:  
 Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments)

Respiratory protection:  
 If OES or MEL is exceeded.  
 Gas mask filter A (EN 14387), code colour brown  
 At high concentrations:  
 Respiratory protection appliance (insulation device) (e.g. EN 137 or EN 138)  
 Observe wearing time limitations for respiratory protection equipment.

Thermal hazards:  
 If applicable, these are included in the individual protective measures (eye/face protection, skin protection, respiratory protection).

Additional information on hand protection - No tests have been performed.  
 In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.  
 Selection of materials derived from glove manufacturer's indications.  
 Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.  
 Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.  
 In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.  
 The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

### 8.2.3 Environmental exposure controls

No information available at present.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Amber, Clear
Odour:	Characteristic
Odour threshold:	Not determined
pH-value:	Not determined
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	Not determined
Flash point:	61-66 °C
Evaporation rate:	Not determined
Flammability (solid, gas):	Not determined
Lower explosive limit:	Not determined
Upper explosive limit:	Not determined
Vapour pressure:	Not determined
Vapour density (air = 1):	Not determined
Density:	0,776 g/ml
Bulk density:	Not determined
Solubility(ies):	Not determined
Water solubility:	Not determined
Partition coefficient (n-octanol/water):	Not determined
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not determined
Viscosity:	<7 mm <sup>2</sup> /s (40°C)
Explosive properties:	Not determined
Oxidising properties:	Not determined

### 9.2 Other information

Miscibility:	Not determined
Fat solubility / solvent:	Not determined
Conductivity:	Not determined
Surface tension:	Not determined
Solvents content:	Not determined

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revised on / Version: 07.03.2013 / 0003  
 Replaces revision of / Version: 28.01.2011 / 0002  
 Valid from: 07.03.2013  
 PDF print date: 18.02.2014  
 51126- Octane Booster

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

See also Subsection 10.2 to 10.6.  
 The product has not been tested.

### 10.2 Chemical stability

See also Subsection 10.1 to 10.6.  
 Stable with proper storage and handling.

### 10.3 Possibility of hazardous reactions

See also Subsection 10.1 to 10.6.  
 Possible build up of flammable vapour/air mixture.

### 10.4 Conditions to avoid

See also section 7.  
 Heating, open flame, ignition sources  
 Electrostatic charge

### 10.5 Incompatible materials

See also section 7.  
 Avoid contact with strong oxidizing agents.

### 10.6 Hazardous decomposition products

See also Subsection 10.1 to 10.5.  
 See also section 5.2  
 No decomposition when used as directed.

## SECTION 11: Toxicological information

Possibly more information on health effects, see Section 2.1 (classification).

### 51126- Octane Booster

Toxicity/effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	ATE	>5000,00	mg/kg	Rat		calculated value
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rabbit		Additive for motor oil
Acute toxicity, by inhalation:	LD50	>5,43	mg/l/4h	Rat		Additive for motor oil
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitisation:						n.d.a.
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity - single exposure (STOT-SE):						n.d.a.
Specific target organ toxicity - repeated exposure (STOT-RE):						n.d.a.
Aspiration hazard:						n.d.a.
Respiratory tract irritation:						n.d.a.
Repeated dose toxicity:						n.d.a.
Symptoms:						n.d.a.
Other information:						Classification according to calculation procedure.

### Naphtha (petroleum), hydrotreated heavy

Toxicity/effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>2000	mg/kg	Rat		

GB

Page 10 of 16  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revised on / Version: 07.03.2013 / 0003  
 Replaces revision of / Version: 28.01.2011 / 0002  
 Valid from: 07.03.2013  
 PDF print date: 18.02.2014  
 51126- Octane Booster

Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rabbit		
Acute toxicity, by inhalation:	LC50	>5	mg/l/4h	Rat		
Skin corrosion/irritation:						Repeated exposure may cause skin dryness or cracking.
Aspiration hazard:						Yes
Symptoms:						unconsciousness, headaches, dizziness

<b>Tricarbonyl(methylcyclopentadienyl)manganese</b>						
Toxicity/effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	58-175	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	140-795	mg/kg	Rabbit		
Acute toxicity, by inhalation:	LC50	0,247	mg/l/1h	Rat		
Acute toxicity, by inhalation:	LC50	0,076	mg/l/4h	Rat		
Germ cell mutagenicity (in vivo):	NOAL			Mouse		Negative
Reproductive toxicity:	NOEL	30,2	µg/l			
Specific target organ toxicity - repeated exposure (STOT-RE):	NOAL	0,3	µg/l	Rat		

<b>Solvent naphtha (petroleum), heavy arom.</b>						
Toxicity/effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>2000	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rabbit		
Acute toxicity, by inhalation:	LC50	>5	mg/l/4h	Rat		
Skin corrosion/irritation:						Repeated exposure may cause skin dryness or cracking.
Serious eye damage/irritation:						Mild irritant
Respiratory or skin sensitisation:				Guinea pig		Not sensitizing
Aspiration hazard:						Yes
Symptoms:						dizziness, headaches, drowsiness, dizziness

<b>1,2,4-trimethylbenzene</b>						
Toxicity/effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>2000	mg/kg	Rat		
Acute toxicity, by inhalation:	LC50	18	mg/l/4h	Rat		
Symptoms:						dizziness, unconsciousness, headaches, fatigue, dizziness, nausea

<b>Naphthalene</b>						
Toxicity/effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	490	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>2500	mg/kg	Rat		
Acute toxicity, by inhalation:	LC50	>110	mg/l/4h			

Page 11 of 16  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revised on / Version: 07.03.2013 / 0003  
 Replaces revision of / Version: 28.01.2011 / 0002  
 Valid from: 07.03.2013  
 PDF print date: 18.02.2014  
 51126- Octane Booster

Symptoms:							lack of appetite, ataxia, breathing difficulties, unconsciousness, diarrhoea, cornea opacity, headaches, cramps, gastrointestinal disturbances, mucous membrane irritation, dizziness, nausea and vomiting.
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## SECTION 12: Ecological information

Possibly more information on environmental effects, see Section 2.1 (classification).

51126- Octane Booster							
Toxicity/effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:							n.d.a.
Toxicity to daphnia:							n.d.a.
Toxicity to algae:							n.d.a.
Persistence and degradability:							n.d.a.
Bioaccumulative potential:							n.d.a.
Mobility in soil:							n.d.a.
Results of PBT and vPvB assessment:							n.d.a.
Other adverse effects:							n.d.a.

Naphtha (petroleum), hydrotreated heavy							
Toxicity/effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:	LC50	96h	>100	mg/l			
Toxicity to daphnia:	EC50	48h	>1000	mg/l	Daphnia magna		
Persistence and degradability:		28d	70	%			Readily biodegradable
Bioaccumulative potential:	Log Pow		5 - 6,7				

Tricarbonyl(methylcyclopentadienyl)manganese							
Toxicity/effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to daphnia:	EC50	48h	0,83	mg/l			
Persistence and degradability:							
Water solubility:			29	mg/l			

Solvent naphtha (petroleum), heavy arom.							
Toxicity/effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:	LC50	96h	1-10	mg/l			
Toxicity to daphnia:	EC50	48h	1-10	mg/l			
Toxicity to algae:	IC50	72h	1-10	mg/l			
Persistence and degradability:							Not readily biodegradable
Bioaccumulative potential:	Log Pow		>3,8-4,8				
Bioaccumulative potential:	BCF		<100				
Other information:	BOD		52	%			

1,2,4-trimethylbenzene							
Toxicity/effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:	LC50	96h	7,72	mg/l			

Page 12 of 16  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revised on / Version: 07.03.2013 / 0003  
 Replaces revision of / Version: 28.01.2011 / 0002  
 Valid from: 07.03.2013  
 PDF print date: 18.02.2014  
 51126- Octane Booster

Toxicity to daphnia:	EC50	48h	3,6	mg/l		
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<b>Naphthalene</b>							
<b>Toxicity/effect</b>	<b>Endpoint</b>	<b>Time</b>	<b>Value</b>	<b>Unit</b>	<b>Organism</b>	<b>Test method</b>	<b>Notes</b>
Toxicity to fish:	LC50	96h	1,99	mg/l	Pimephales promelas		
Toxicity to daphnia:	EC50	48h	2,19	mg/l	Daphnia magna		
Toxicity to algae:	LC50	4h	2,96	mg/l	Selenastrum capricornutum		
Other information:	BOD5		0	%			
Other information:	COD		22	%			

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### For the substance / mixture / residual amounts

EC disposal code no.:

The waste codes are recommendations based on the scheduled use of this product.  
 Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2001/118/EC, 2001/119/EC, 2001/573/EC)  
 13 07 03 other fuels (including mixtures)

Recommendation:

Pay attention to local and national official regulations  
 Implement substance recycling.  
 E.g. suitable incineration plant.

#### For contaminated packing material

Pay attention to local and national official regulations  
 Empty container completely.  
 Untamined packaging can be recycled.  
 Dispose of packaging that cannot be cleaned in the same manner as the substance.  
 Do not perforate, cut up or weld uncleaned container.  
 Residues may present a risk of explosion.

## SECTION 14: Transport information

### General statements

UN number: n.a.

#### Transport by road/by rail (ADR/RID)

UN proper shipping name:  
 Transport hazard class(es): n.a.  
 Packing group: n.a.  
 Classification code: n.a.  
 LQ (ADR 2011): n.a.  
 LQ (ADR 2009): n.a.  
 Environmental hazards: Not applicable  
 Tunnel restriction code:

#### Transport by sea (IMDG-code)

UN proper shipping name:  
 Transport hazard class(es): n.a.  
 Packing group: n.a.  
 Marine Pollutant: n.a.  
 Environmental hazards: Not applicable

#### Transport by air (IATA)

UN proper shipping name:  
 Transport hazard class(es): n.a.  
 Packing group: n.a.  
 Environmental hazards: Not applicable

Page 13 of 16  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revised on / Version: 07.03.2013 / 0003  
 Replaces revision of / Version: 28.01.2011 / 0002  
 Valid from: 07.03.2013  
 PDF print date: 18.02.2014  
 51126- Octane Booster

### Special precautions for user

Unless specified otherwise, general measures for safe transport must be followed.

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

Non-dangerous material according to Transport Regulations

## SECTION 15: Regulatory information

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

For classification and labelling see Section 2.

Observe restrictions: Yes

Comply with trade association/occupational health regulations.

Observe youth employment law (German regulation).

Observe law on protection of expectant mothers (German regulation).

Regulation (EC) No 1907/2006, Annex XVII

VOC 1999/13/EC: ~ 98,5 w/w%

### 15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

## SECTION 16: Other information

These details refer to the product as it is delivered.

Revised sections: 1, 2, 15

### Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):

Classification in accordance with regulation (EC) No. 1272/2008 (CLP)	Evaluation method used
.	
Asp. Tox. 1, H304	Classification according to calculation procedure.
Aquatic Chronic 3, H412	Classification according to calculation procedure.

The following phrases represent the posted R phrases / H phrases, Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents (specified in Section 2 and 3).

20 Harmful by inhalation.

22 Harmful if swallowed.

24/25 Toxic in contact with skin and if swallowed.

26 Very toxic by inhalation.

36/37/38 Irritating to eyes, respiratory system and skin.

40 Limited evidence of a carcinogenic effect.

50 Very toxic to aquatic organisms.

50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

51 Toxic to aquatic organisms.

52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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

65 Harmful: may cause lung damage if swallowed.

66 Repeated exposure may cause skin dryness or cracking.

67 Vapours may cause drowsiness and dizziness.

H330 Fatal if inhaled.

Page 14 of 16  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revised on / Version: 07.03.2013 / 0003  
 Replaces revision of / Version: 28.01.2011 / 0002  
 Valid from: 07.03.2013  
 PDF print date: 18.02.2014  
 51126- Octane Booster

H301 Toxic if swallowed.  
 H302 Harmful if swallowed.  
 H304 May be fatal if swallowed and enters airways.  
 H311 Toxic in contact with skin.  
 H315 Causes skin irritation.  
 H319 Causes serious eye irritation.  
 H332 Harmful if inhaled.  
 H335 May cause respiratory irritation.  
 H336 May cause drowsiness or dizziness.  
 H351 Suspected of causing cancer.  
 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.

Flam. Liq. — Flammable liquid  
 Asp. Tox. — Aspiration hazard  
 Aquatic Chronic — Hazardous to the aquatic environment - chronic  
 Acute Tox. — Acute toxicity - oral  
 Acute Tox. — Acute toxicity - dermal  
 Aquatic Acute — Hazardous to the aquatic environment - acute  
 Acute Tox. — Acute toxicity - inhalation  
 STOT SE — Specific target organ toxicity - single exposure - narcotic effects  
 Eye Irrit. — Eye irritation  
 STOT SE — Specific target organ toxicity - single exposure - respiratory tract irritation  
 Skin Irrit. — Skin irritation  
 Carc. — Carcinogenicity

**Any abbreviations and acronyms used in this document:**

AC Article Categories  
 acc., acc. to according, according to  
 ACGIH American Conference of Governmental Industrial Hygienists  
 ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 AOEL Acceptable Operator Exposure Level  
 AOX Adsorbable organic halogen compounds  
 approx. approximately  
 Art., Art. no. Article number  
 ATE Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP)  
 BAM Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)  
 BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)  
 BCF Bioconcentration factor  
 BGV Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation)  
 BHT Butylhydroxytoluol (= 2,6-Di-t-butyl-4-methyl-phenol)  
 BMGV Biological monitoring guidance value (EH40, UK)  
 BOD Biochemical oxygen demand  
 BSEF Bromine Science and Environmental Forum  
 bw body weight  
 CAS Chemical Abstracts Service  
 CEC Coordinating European Council for the Development of Performance Tests for Fuels, Lubricants and Other Fluids  
 CESIO Comité Européen des Agents de Surface et de leurs Intermédiaires Organiques  
 CIPAC Collaborative International Pesticides Analytical Council  
 CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)  
 CMR carcinogenic, mutagenic, reproductive toxic  
 COD Chemical oxygen demand  
 CTFA Cosmetic, Toiletry, and Fragrance Association  
 DMEL Derived Minimum Effect Level  
 DNEL Derived No Effect Level  
 DOC Dissolved organic carbon

Page 15 of 16  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revised on / Version: 07.03.2013 / 0003  
 Replaces revision of / Version: 28.01.2011 / 0002  
 Valid from: 07.03.2013  
 PDF print date: 18.02.2014  
 51126- Octane Booster

DT50 Dwell Time - 50% reduction of start concentration  
 DVS Deutscher Verband für Schweißen und verwandte Verfahren e.V. (= German Association for Welding and Allied Processes)  
 dw dry weight  
 e.g. for example (abbreviation of Latin 'exempli gratia'), for instance  
 EC European Community  
 ECHA European Chemicals Agency  
 EEA European Economic Area  
 EEC European Economic Community  
 EINECS European Inventory of Existing Commercial Chemical Substances  
 ELINCS European List of Notified Chemical Substances  
 EN European Norms  
 EPA United States Environmental Protection Agency (United States of America)  
 ERC Environmental Release Categories  
 ES Exposure scenario  
 etc. et cetera  
 EU European Union  
 EWC European Waste Catalogue  
 Fax. Fax number  
 gen. general  
 GHS Globally Harmonized System of Classification and Labelling of Chemicals  
 GWP Global warming potential  
 HET-CAM Hen's Egg Test - Chorionallantoic Membrane  
 HGWP Halocarbon Global Warming Potential  
 IARC International Agency for Research on Cancer  
 IATA International Air Transport Association  
 IBC Intermediate Bulk Container  
 IBC (Code) International Bulk Chemical (Code)  
 IC Inhibitory concentration  
 IMDG-code International Maritime Code for Dangerous Goods  
 incl. including, inclusive  
 IUCLID International Uniform Chemical Information Database  
 LC lethal concentration  
 LC50 lethal concentration 50 percent kill  
 LCLo lowest published lethal concentration  
 LD Lethal Dose of a chemical  
 LD50 Lethal Dose, 50% kill  
 LDLo Lethal Dose Low  
 LOAEL Lowest Observed Adverse Effect Level  
 LOEC Lowest Observed Effect Concentration  
 LOEL Lowest Observed Effect Level  
 LQ Limited Quantities  
 MARPOL International Convention for the Prevention of Marine Pollution from Ships  
 n.a. not applicable  
 n.av. not available  
 n.c. not checked  
 n.d.a. no data available  
 NIOSH National Institute of Occupational Safety and Health (United States of America)  
 NOAEC No Observed Adverse Effective Concentration  
 NOAEL No Observed Adverse Effect Level  
 NOEC No Observed Effect Concentration  
 NOEL No Observed Effect Level  
 ODP Ozone Depletion Potential  
 OECD Organisation for Economic Co-operation and Development  
 org. organic  
 PAH polycyclic aromatic hydrocarbon  
 PBT persistent, bioaccumulative and toxic  
 PC Chemical product category  
 PE Polyethylene  
 PNEC Predicted No Effect Concentration  
 POCP Photochemical ozone creation potential  
 ppm parts per million  
 PROC Process category

Page 16 of 16  
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
Revised on / Version: 07.03.2013 / 0003  
Replaces revision of / Version: 28.01.2011 / 0002  
Valid from: 07.03.2013  
PDF print date: 18.02.2014  
51126- Octane Booster

PTFE Polytetrafluorethylene  
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)  
REACH-IT List-No. 9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.  
RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)  
SADT Self-Accelerating Decomposition Temperature  
SAR Structure Activity Relationship  
SU Sector of use  
SVHC Substances of Very High Concern  
Tel. Telephone  
ThOD Theoretical oxygen demand  
TOC Total organic carbon  
TRGS Technische Regeln für Gefahrstoffe (=Technical Regulations for Hazardous Substances)  
UN RTDG United Nations Recommendations on the Transport of Dangerous Goods  
VbF Verordnung über brennbare Flüssigkeiten (= Regulation for flammable liquids (Austria))  
VOC Volatile organic compounds  
vPvB very persistent and very bioaccumulative  
WEL-TWA, WEL-STEL WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period), WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period) (EH40, UK).  
WHO World Health Organization  
wwt wet weight

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.  
No responsibility.

These statements were made by:

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