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

1.1. Product identifier

Octane Booster Premium

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

Use of the substance/mixture

Increase the ROZ-octane number.

1.3. Details of the supplier of the safety data sheet

Company name:	CTP GmbH	
Street:	Saalfelder Strasse 35h	
Place:	D-07338 Leutenberg	
Telephone:	+49 (0)36734 230-0	Telefax: +49 (0)36734 230-22
e-mail:	msds@bluechemgroup.com	
Contact person:	Jens Moeller, Dipl.-Chem.	Telephone: +49 (0)36734 230-19
Internet:	www.bluechemgroup.com	

1.4. Emergency telephone number:

GBK GmbH: +49-(0)6132-84463 (24/7)

Further Information

Article Number: P2281, P2289, P2282, P2287, P2285, P2283

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:
Flammable liquid: Flam. Liq. 3
Acute toxicity: Acute Tox. 4
Acute toxicity: Acute Tox. 4
Skin corrosion/irritation: Skin Irrit. 2
Serious eye damage/eye irritation: Eye Irrit. 2
Carcinogenicity: Carc. 2
Specific target organ toxicity - single exposure: STOT SE 3
Specific target organ toxicity - repeated exposure: STOT RE 2
Aspiration hazard: Asp. Tox. 1
Hazardous to the aquatic environment: Aquatic Chronic 2
Hazard Statements:
Flammable liquid and vapour.
Harmful if swallowed or if inhaled.
May be fatal if swallowed and enters airways.
Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.
Suspected of causing cancer.
May cause damage to organs through prolonged or repeated exposure.
Toxic to aquatic life with long lasting effects.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

xylene
tricarbonyl(methylcyclopentadienyl)manganese (MMT)
Hydrocarbons, C10, aromatics, >1% naphthalene

Signal word: Danger

Pictograms:

Hazard statements

H226	Flammable liquid and vapour.
H302+H332	Harmful if swallowed or if inhaled.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P331	Do NOT induce vomiting.
P312	Call a POISON CENTER/doctor if you feel unwell.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P391	Collect spillage.
P405	Store locked up.
P501	Dispose of this material and its container to hazardous or special waste collection point.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Ignition improver

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
1330-20-7	xylene			85 - < 90 %
	215-535-7		01-2119488216-32	
	Flam. Liq. 3, Acute Tox. 4, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1; H226 H332 H312 H315 H319 H335 H373 H304			
12108-13-3	tricarbonyl(methylcyclopentadienyl)manganese (MMT)			5 - < 10 %
	235-166-5		01-2119495971-23	
	Acute Tox. 1, Acute Tox. 2, Acute Tox. 3, Skin Irrit. 2, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1; H330 H310 H301 H315 H372 H400 H410			
64742-94-5	Hydrocarbons, C10, aromatics, >1% naphthalene			5 - < 10 %
	919-284-0		01-2119463588-24	
	Carc. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H351 H336 H304 H411			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
1330-20-7	215-535-7	xylene	85 - < 90 %
	inhalation: LC50 = 21,7 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: LD50 = 3200 mg/kg; oral: LD50 = 4300 mg/kg		
12108-13-3	235-166-5	tricarbonyl(methylcyclopentadienyl)manganese (MMT)	5 - < 10 %
	inhalation: LC50 = 0,22 mg/l (vapours); inhalation: LC50 = 0,076 mg/l (dusts or mists); dermal: LD50 = 196,7 mg/kg; oral: LD50 = 58 mg/kg		

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Move victim to fresh air. Put victim at rest and keep warm.

After inhalation

Move victim to fresh air. Put victim at rest and keep warm.
In case of difficulties of breathing consult physician.
If victim is at risk of losing consciousness, position and transport on their side.

After contact with skin

Take off immediately all contaminated clothing, including underwear and shoes .
After contact with skin, wash immediately with plenty of water and soap.
Rub greasy ointment into the skin.

After contact with eyes

Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart.
Consult physician.

After ingestion

Let water be drunken in little sips (dilution effect). Consult physician.

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

Frequently or prolonged contact with skin may cause dermal irritation.
Irritation of eyes: Irritant effect possible.
After ingestion: Harmful: may cause lung damage if swallowed.
Harmful by inhalation.

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

Warning about danger of aspiration.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Extinguishing powder.
Sand.
alcohol resistant foam.
Carbon dioxide (CO2).

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Formation of decomposition products possible.
In case of fire and/or explosion do not breathe fumes.

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Cool endangered container in case of fire.
Contaminated fire-fighting water must be collected separately.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

In case of fire: Wear self-contained breathing apparatus.
Keep away from sources of ignition - No smoking.

6.2. Environmental precautions

Beat down gas/vapours/mist with water spray.
Do not allow to enter into surface water or drains.
In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

Prevent spreading of spillages (e.g. by oil barrier).
Wipe up with absorbent material (eg. cloth, fleece).

6.4. Reference to other sections

No data

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Closed devices. Vapours / aerosols must be extracted by suction immediately at point of origin.
Avoid contact with skin and eyes.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking.
Take precautionary measures against static discharges.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed in a cool, well-ventilated place.

Further information on storage conditions

Packaging materials: metal.

7.3. Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

CAS No	Substance	ppm	mg/m³	fib/cm³	Category	Origin
12108-13-3	Methylcyclopentadienyl manganese, tricarbonyl (as Mn)	-	0.2		TWA (8 h)	
1330-20-7	Xylene, mixed isomers	50	221		TWA (8 h)	
		100	442		STEL (15 min)	

8.2. Exposure controls

Protective and hygiene measures

When using do not eat, drink or smoke.
Wash hands before breaks and after work.

Eye/face protection

Wear tightly sealed safety glasses against possible splashes into the eyes. (DIN EN 166)

Hand protection

Tested protective gloves are to be worn: Butyl rubber. (EN ISO 374)

Skin protection

Wear suitable solvent-proof protective clothing according to EN 465.

Respiratory protection

In case of accumulation of fumes/aerosols, provide adequate ventilation.
In case of insufficient ventilation, wear suitable respiratory equipment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	reddish brown
Odour:	characteristic

Changes in the physical state

Flash point:	24 °C
Density (at 15 °C):	0,87 - 0,89 g/cm³
Water solubility: (at 20 °C)	insoluble

Solubility in other solvents

Organic solvents

9.2. Other information

No data

SECTION 10: Stability and reactivity

10.1. Reactivity

No information available.

10.2. Chemical stability

No decomposition when used as intended.

10.3. Possibility of hazardous reactions

No dangerous reactions are known.

10.4. Conditions to avoid

Only use the material in places where open light, fire and other flammable sources can be kept away.

10.5. Incompatible materials

Oxidizing agents.
acid, concentrated.
Alkalis (alkalis), concentrated.

10.6. Hazardous decomposition products

Carbon monoxide (CO).
Carbon dioxide (CO2).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Harmful if swallowed or if inhaled.

ATEmix tested

	Dose	Species	Source
LD50, oral	1000 mg/kg	Rat	
LD50, dermal	2958 mg/kg	Rabbit	
LC50, inhalation (vapour) (4 h)	14,79 mg/l	Rat	
LC50, inhalation (aerosol) (4 h)	1,17 mg/l	Rat	
LC50, inhalation (gas) (4 h)	7142 ppm	Rat	

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
1330-20-7	xylene					
	oral	LD50 mg/kg	4300	Rat		
	dermal	LD50 mg/kg	3200	Rabbit		
	inhalation (4 h) vapour	LC50	21,7 mg/l	Rat		
	inhalation aerosol	ATE	1,5 mg/l			
12108-13-3	tricarbonyl(methylcyclopentadienyl)manganese (MMT)					
	oral	LD50	58 mg/kg	Rat		
	dermal	LD50 mg/kg	196,7	Rabbit		
	inhalation (4 h) vapour	LC50	0,22 mg/l	Rat		
	inhalation (4 h) aerosol	LC50 mg/l	0,076	Rat		

Irritation and corrosivity

Causes skin irritation.
Causes serious eye irritation.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Suspected of causing cancer. (Hydrocarbons, C10, aromatics, >1% naphthalene)
Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Reproductive toxicity: Based on available data, the classification criteria are not met.

STOT-single exposure

May cause respiratory irritation. (xylene)

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure. (xylene; tricarbonyl(methylcyclopentadienyl)manganese (MMT))

Aspiration hazard

May be fatal if swallowed and enters airways.

Practical experience

Other observations

No information available.

SECTION 12: Ecological information

12.1. Toxicity

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] | [d]	Species	Source	Method
1330-20-7	xylene						
	Acute fish toxicity	LC50 mg/l	26,7	96 h	Pimephales promelas		
12108-13-3	tricarbonyl(methylcyclopentadienyl)manganese (MMT)						
	Acute fish toxicity	LC50 mg/l	0,21	96 h	Cyprinus carpio (Carp)		
	Acute algae toxicity	ErC50	1,7 mg/l	72 h	Algae		
	Acute crustacea toxicity	EC50 mg/l	0,83	48 h	Daphnia magna		
64742-94-5	Hydrocarbons, C10, aromatics, >1% naphthalene						
	Acute fish toxicity	LC50	2-5 mg/l	96 h	Fish		
	Acute algae toxicity	ErC50	1-3 mg/l	72 h	Algae		
	Acute crustacea toxicity	EC50 mg/l	3-10	48 h	Daphnia magna		

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

Low potential of bio-accumulation.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
12108-13-3	tricarbonyl(methylcyclopentadienyl)manganese (MMT)	3,4

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Do not dispose with household waste.
Do not allow to enter into surface water or drains.
Have to add a Special treatment in compliance with official regulations in contact with approved waste disposal companies and with authorities in charge.
Arrange about the exact waste code with the local waste disposal expert.

Contaminated packaging

Contaminated packing must be completely emptied and can be re-used following appropriate cleaning.
Do not pierce, cut up or weld unclean container. (Explosion hazard.)

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number:	UN 1307
14.2. UN proper shipping name:	XYLENES
14.3. Transport hazard class(es):	3
14.4. Packing group:	III
Hazard label:	3

Classification code:	F1
Special Provisions:	-
Limited quantity:	5 L
Excepted quantity:	E1
Transport category:	3
Hazard No:	30
Tunnel restriction code:	D/E

Inland waterways transport (ADN)

14.1. UN number:	UN 1307
14.2. UN proper shipping name:	XYLENES
14.3. Transport hazard class(es):	3
14.4. Packing group:	III
Hazard label:	3

Classification code:	F1
Special Provisions:	-
Limited quantity:	5 L
Excepted quantity:	E1

Marine transport (IMDG)

14.1. UN number:	UN 1307
14.2. UN proper shipping name:	XYLENES
14.3. Transport hazard class(es):	3
14.4. Packing group:	III
Hazard label:	3

Marine pollutant:	P
Special Provisions:	223
Limited quantity:	5 L
Excepted quantity:	E1
EmS:	F-E, S-D

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number:	UN 1307
14.2. UN proper shipping name:	XYLENES
14.3. Transport hazard class(es):	3
14.4. Packing group:	III
Hazard label:	3

Special Provisions:	A3
Limited quantity Passenger:	10 L
Passenger LQ:	Y344
Excepted quantity:	E1
IATA-packing instructions - Passenger:	355
IATA-max. quantity - Passenger:	60 L
IATA-packing instructions - Cargo:	366
IATA-max. quantity - Cargo:	220 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: Yes

Danger releasing substance: tricarbonyl(methylcyclopentadienyl)manganese (MMT)
Hydrocarbons, C10, aromatics, >1% naphthalene

14.6. Special precautions for user

No information available.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

No information available.

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3

Additional information

Contains:
> 30 % hydrocarbons, aromatic.

National regulatory information

Water hazard class (D): 2 - obviously hazardous to water

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:
xylene
tricarbonyl(methylcyclopentadienyl)manganese (MMT)
Hydrocarbons, C10, aromatics, >1% naphthalene

SECTION 16: Other information

Relevant H and EUH statements (number and full text)

H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H302+H332	Harmful if swallowed or if inhaled.
H304	May be fatal if swallowed and enters airways.
H310	Fatal in contact with skin.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H372	Causes damage to organs through prolonged or repeated exposure.
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.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.
The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)