



Safety Data Sheet

Date of Issue: 01.09.2020

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1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name: : **ECP Limited**
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Product	n-Octane			Code	34658
CAS#	HSNO#	UN #	DG Class/es	Packing group #	
111-65-9	HSR001415	1262	3	II	

Recommended use : Laboratory Investigations

2: Hazards identification

2.1 GHS Classification

Flammable Liquids (Category B)
Acute toxicity, Oral (Category E)
Skin irritation (Category A)
Aquatic toxicity (Acute or Chronic) (Category A)

2.2 GHS Label elements, including precautionary statements

Hazard Pictogram



Signal Word : **Danger**

Hazard statement(s)

H225 : Highly flammable liquid and vapour.
H304 : May be fatal if swallowed and enters airways.
H315 : Causes skin irritation.
H410 : Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

Prevention

P210 : Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233 : Keep container tightly closed.
P240 : Ground/bond container and receiving equipment.
P241 : Use explosion-proof electrical/ventilating/lighting/equipment.
P242 : Use only non-sparking tools.
P243 : Take precautionary measures against static discharge.
P264 : Wash skin thoroughly after handling.
P273 : Avoid release to the environment.
P280 : Wear protective gloves/protective clothing/eye protection/face protection.

Response

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

P303 + P361 + P353 : IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P331 : Do NOT induce vomiting.
 P332 + P313 : If skin irritation occurs: Get medical advice/attention.
 P362 : Take off contaminated clothing and wash before reuse.
 P370 + P378 : In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
 P391 : Collect spillage.

Storage

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

Disposal

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

3: Composition/information on ingredients

3.1 Substances

Synonyms : n-Octane
 Formula : C₈H₁₈
 Cas. : 111-65-9
 Index-No. : 601-009-00-8
 EC-No. : 203-892-1
 Molecular weight : 114.23 g/mol

Hazardous components (REGULATION (EC) No 1272/2008)

Chemical name	Classification	Concentration
n-Octane		
	Flammable liquid, Category 2, H225 Skin irritation, Category 2, H315 Specific target organ toxicity - single exposure, Category 3, H336 Aspiration hazard, Category 1, H304 Short-term (acute) aquatic hazard, Category 1, H400 Long-term (chronic) aquatic hazard, Category 1, H410	<= 100 %

3.2 Mixture

Not applicable

4: First aid measures

4.1 Description of first aid measures

After inhalation : fresh air. Call in physician.
 In case of skin contact : Take off immediately all contaminated clothing. Rinse skin with water/shower
 After eye contact : rinse out with plenty of water. Remove contact lenses.
 After swallowing : caution if victim vomits. Risk of aspiration! Keep airways free. Call a physician immediately. Pulmonary failure possible after aspiration of vomit.

4.2 Most important symptoms and effects, both acute and delayed

It generally applies for aliphatic hydrocarbons with 6 - 18 carbon atoms that they may cause pneumonia, in some cases also pulmonary oedema, upon direct inhalation, i.e. in conditions that can occur only in very special circumstances (nebulization's, spraying, inhalation of aerosols and similar). After absorption of very

large quantities: narcosis.
irritant effects, Headache, Dizziness, Nausea, Vomiting, agitation, somnolence,
Drowsiness, Unconsciousness, respiratory arrest
Drying-out effect resulting in rough and chapped skin.

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Foam, Carbon dioxide (CO₂), Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Combustible.

Pay attention to flashback.

Forms explosive mixtures with air at ambient temperatures.

Vapours are heavier than air and may spread along floors.

Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

Special protective equipment for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information

Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

6.2 Environmental precautions

Do not let product enter drains. Risk of explosion.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

Indications about waste treatment see section 13.

7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Observe label precautions.

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

Recommended storage temperature see product label.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits Table

Component	CAS No	Value	Control parameters	Basis
Octane	111-65-9	WES-TWA	300 ppm 1,400 mg/m ³	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants
		WES-STEL	375 ppm 1,70 mg/m ³	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards.

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type or respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards.

Environmental exposure controls

Do not let product enter drains. Risk of explosion.

9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	: liquid
Colour	: colourless
Odour	: characteristic
Odour Threshold	: No information available.
pH	: No information available.
Melting point	: -57 °C
Boiling point/boiling range	: 125 - 126 °C at 1.013 hPa
Flash point	: 13 °C Method: c.c.
Evaporation rate	: No information available.
Flammability (solid, gas)	: No information available.
Lower explosion limit	: 0,8 %(V)
Upper explosion limit	: 6,5 %(V)
Vapour pressure	: 14 hPa at 20 °C
Relative vapour density	: No information available.
Density	: 0,702 - 0,704 g/cm ³ at 20 °C
Relative density	: No information available.
Water solubility	: 0,0007 g/l at 20 °C
Partition coefficient:	
noctanol/water	: log Pow: 5,18 (experimental)
	Potential bioaccumulation
Auto-ignition temperature	: No information available.
Decomposition temperature	: No information available.
Viscosity, dynamic	: No information available.
Explosive properties	: Not classified as explosive.
Oxidizing properties	: none

9.2 Other data

Ignition temperature : 210 °C

10: Stability and reactivity

10.1 Reactivity

Vapours may form explosive mixture with air.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

Violent reactions possible with:
Strong oxidizing agents

10.4 Conditions to avoid

Warming.

10.5 Incompatible materials

various plastics

10.6 Hazardous decomposition products

no information available

11: Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity

This information is not available.

Acute inhalation toxicity
LC50 Rat: 118 mg/l; 4 h ; vapour
Symptoms: somnolence, Drowsiness
(RTECS)

Acute dermal toxicity
This information is not available.
Skin irritation
Drying-out effect resulting in rough and chapped skin.
Causes skin irritation.

Eye irritation
Possible damages: slight irritation

Sensitisation
This information is not available.

Germ cell mutagenicity
This information is not available.

Carcinogenicity
This information is not available.

Reproductive toxicity
This information is not available.

Teratogenicity
This information is not available.

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

Specific target organ toxicity - repeated exposure
This information is not available.

Aspiration hazard
Aspiration hazard, Aspiration may cause pulmonary oedema and pneumonitis.

11.2 Further information

Systemic effects:

After uptake of large quantities:

Headache, Dizziness, Nausea, Vomiting, agitation, somnolence, Drowsiness,
Unconsciousness, respiratory arrest

It generally applies for aliphatic hydrocarbons with 6 - 18 carbon atoms that they may cause pneumonia, in some cases also pulmonary oedema, upon direct inhalation, i.e. in conditions that can occur only in very special circumstances (nebulization's, spraying, inhalation of aerosols and similar). After absorption of very large quantities: narcosis.

Handle in accordance with good industrial hygiene and safety practice.

Other dangerous properties cannot be excluded.

12: Ecological information

12.1 Toxicity

Toxicity to daphnia and other aquatic invertebrates
EC50 Daphnia magna (Water flea): 0,38 mg/l; 48 h
(ECOTOX Database)

12.2 Persistence and degradability

Theoretical oxygen demand (ThOD)

3.500 mg/g

(Lit.)

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water

log Pow: 5,18 (experimental)

Potential bioaccumulation

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Other adverse effects

Discharge into the environment must be avoided.

13: Disposal considerations

13.1 Waste treatment methods

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14: Transport Information Table

		ADR/RID – European packaging certification	IMDG International Maritime Dangerous Goods Code	IATA – DGR International Air Travel Association – Dangerous Goods Regulations
14.1	UN Number	1262	1262	1262
14.2	UN Proper Shipping name	OCTANES	OCTANES	Octanes
14.3	Transport Hazard Class	3	3	3
14.4	Packaging group	II	II	II
14.5	Environmental Hazards	Yes	Yes	yes
14.6	Special precautions for user	None		

15: Regulatory information

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

HSNO Approval Code: HSR001415

HSNO Group Standard Approval: HSR002596 - Laboratory Chemicals and Reagent Kits Group Standard 2006

Tracking Required: not required

Approved Handler Cert.: not required

16: Disclaimer

The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied, with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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