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## MATERIAL SAFETY DATA SHEET (MSDS)

### N-OCTANE AR (FOR SYNTHESIS)

#### 1. Identification of the substance/mixture and of the company/undertaking

##### 1.1. Product identifier

Trade name : N-OCTANE AR (FOR SYNTHESIS)

Product code : SS0120600100

Identification of the product : Octane  
 CAS No: 111-65-9  
 EC No :203-892-1

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

Use : Industrial. For professional use only.

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

Company identification SUVCHEM  
 Chaitanya Tower, 2nd Floor, Office # 206,  
 Siddharth Nagar, S.V. Road,  
 Goregaon (West), Mumbai - 400062,  
 Maharashtra, India.  
 Contact: +91 22 28725393 / 94 / 95  
 Email ID: info@suvchem.com/care@suvchem.com

##### 1.4. Emergency telephone number

Phone no. : + 91 22 28725393 / 94 / 95 (9:00am - 6:00 pm) [ Office hours ]

#### 2. Hazards identification -DSD

##### 2.1. Classification of the substance or mixture

##### Classification EC 67/548 or EC 1999/45

Classification : F; R11  
 Xn; R65  
 R67  
 Xi; R38  
 N; R50-53

##### Hazard Class and Category Code(s), Regulation (EC) No 1272/2008 (CLP)

Health hazards : Specific Target Organ Toxicity - Single exposure - Narcotic effects - Category 3 -  
 Warning (CLP : STOT SE 3) H336  
 Aspiration hazard - Category 1 - Danger (CLP : Asp. Tox. 1) H304  
 Skin irritation - Category 2 - Warning (CLP : Skin Corr. 2) H315

Physical hazards : Flammable liquids - Category 2 - Danger (CLP : Flam. Liq. 2) H225

Environmental hazards : Hazardous to the aquatic environment - Acute hazard - Category 1 - Warning (CLP :  
 Aquatic Acute 1) H400  
 Hazardous to the aquatic environment - Chronic hazard - Category 1 - Warning (CLP :  
 Aquatic Chronic 1) H410

**MATERIAL SAFETY DATA SHEET (MSDS)**
**N-OCTANE AR (FOR SYNTHESIS)**
**2. Hazards identification -DSD (continued)**
**2.2. Label elements**
**Labelling EC 67/548 or EC 1999/45**
**Symbol(s)**

**Symbol(s)**

: F : Highly flammable  
 Xn : Harmful  
 N : Dangerous for the environment

**R Phrase(s)**

: R11 : Highly flammable.  
 R38 : Irritating to skin.  
 R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
 R65 : Harmful : may cause lung damage if swallowed.  
 R67 : Vapours may cause drowsiness and dizziness.

**S Phrase(s)**

:  
 S16 : Keep away from sources of ignition - No smoking.  
 S29 : Do not empty into drains.  
 S33 : Take precautionary measures against static discharges.  
 S60 : This material and its container must be disposed of as hazardous waste.  
 S61 : Avoid release to the environment. Refer to special instructions/Safety data sheets.  
 S62 : If swallowed, do not induce vomiting : seek medical advice immediately and show this container or label.

**Contains**

: Octane

**Labelling Regulation EC 1272/2008 (CLP)**
**Hazard pictograms**

**Signal words**

: Danger

**Hazard statements**

: H225 : Highly flammable liquid and vapour.  
 H304 : May be fatal if swallowed and enters airways.  
 H315 : Causes skin irritation.  
 H336 : May cause drowsiness or dizziness.  
 H410 : Very toxic to aquatic life with long lasting effects.

**Precautionary statements**
**• Prevention**

: P240: Ground/bond container and receiving equipment.  
 P241: Use explosion-proof electrical, ventilating, lighting, ..., equipment.  
 P210: Keep away from heat, sparks, open flames or hot surfaces. - No smoking.  
 P280: Wear protective gloves, protective clothing, eye protection, face protection.  
 P271: Use only outdoors or in a well-ventilated area.  
 P261: Avoid breathing dust, fume, gas, mist, vapours, spray.  
 P273: Avoid release to the environment.

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## MATERIAL SAFETY DATA SHEET (MSDS)

### N-OCTANE AR (FOR SYNTHESIS)

#### 2. Hazards identification -DSD (continued)

- Response**
- P233: Keep container tightly closed.  
 P264: Wash thoroughly after handling.
- P301+P310: IF SWALLOWED : Immediately call a POISON CENTER or doctor.  
 P302+P352: IF ON SKIN : Wash with plenty of soap and water.  
 P332+P313: If skin irritation occurs : Get medical advice.  
 P391: Collect spillage.  
 P304+P340: IF INHALED : Remove to fresh air and keep at rest in a position comfortable for breathing.  
 P303+P361+P353: IF ON SKIN (or hair) : Remove immediately all contaminated clothing. Rinse skin with water/shower.  
 P363: Wash contaminated clothing before reuse.  
 P370+P378: In case of fire: Use for extinction.
- Storage**
- P403+P233: Store in well-ventilated place. Keep container tightly closed.  
 P403+P235: Store in well-ventilated place. Keep cool.  
 P405: Store locked up.
- Disposal considerations**
- P501: Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
- Contains**
- : Octane

#### 2.3. Other hazards

- Other hazards**
- : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

#### 3. Composition/information on ingredients

**Substance / Preparation** : Octane

EC No :203-892-1  
 Substance.

| Substance name | Contents | CAS No   | EC No     | Annex No | REACH Ref. | Classification  |
|----------------|----------|----------|-----------|----------|------------|---|
| Octane         | : > 99 % | 111-65-9 | 203-892-1 | ----     | ----       | F; R11<br>Xn; R65<br>R67<br>Xi; R38<br>N; R50-53<br>-----<br>Flam. Liq. 2 _ H225<br>Asp. Tox 1 _ H304<br>Skin Irrit. 2 _ H315<br>STOT SE 3 _ H336<br>Aquatic Acute 1 _ H400<br>Aquatic Chronic 1 _ H410 |

Contains no other components or impurities which will influence the classification of the product.

#### 4. First aid measures

##### 4.1. Description of first aid measures

- Inhalation**
- : Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

**MATERIAL SAFETY DATA SHEET (MSDS)**
**N-OCTANE AR (FOR SYNTHESIS)**
**4. First aid measures (continued)**

|                     |   |
|---------------------|---|
| <b>Skin contact</b> | : Get medical advice. If skin irritation occurs : Wash contaminated clothing before reuse. Specific treatment (see on this label). Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water. |
| <b>Eye contact</b>  | : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.  |
| <b>Ingestion</b>    | : Immediately call a POISON CENTER or doctor. Do NOT induce vomiting. Rinse mouth.  |

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

|                                 |  |
|---------------------------------|--|
| <b>Symptoms relating to use</b> | : May be fatal if swallowed and enters airways.<br>Causes skin irritation.<br>May cause drowsiness or dizziness. |
|---------------------------------|--|

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

|                            |   |
|----------------------------|---|
| <b>General information</b> | : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). |
|----------------------------|---|

**5. Fire-fighting measures**
**5.1. Extinguishing media**

|                                       |  |
|---------------------------------------|--|
| <b>Suitable extinguishing media</b>   | : Foam. Dry powder. Carbon dioxide. Water spray. Sand.   |
| <b>Unsuitable extinguishing media</b> | : Do not use a heavy water stream.                       |
| <b>Surrounding fires</b>              | : Use water spray or fog for cooling exposed containers. |

**5.2. Special hazards arising from the substance or mixture**

|                                      |   |
|--------------------------------------|---|
| <b>Flammable class</b>               | : Highly flammable liquid and vapour.                     |
| <b>Hazardous combustion products</b> | : Under fire conditions, hazardous fumes will be present. |

**5.3. Advice for fire-fighters**

|                                |  |
|--------------------------------|--|
| <b>Protection against fire</b> | : Do not enter fire area without proper protective equipment, including respiratory protection.              |
| <b>Special procedures</b>      | : Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment. |

**6. Accidental release measures**
**6.1. Personal precautions, protective equipment and emergency procedures**

|                                 |   |
|---------------------------------|---|
| <b>For emergency responders</b> | : Equip cleanup crew with proper protection.<br>Ventilate area.<br>Avoid breathing dust, fume, gas, mist, vapours, spray. |
|---------------------------------|---|

**MATERIAL SAFETY DATA SHEET (MSDS)**
**N-OCTANE AR (FOR SYNTHESIS)**
**6. Accidental release measures (continued)**

|                             |   |
|-----------------------------|---|
| Technical measures          | : Use special care to avoid static electric charges.    |
| Special precautions         | : Remove ignition sources. No naked lights. No smoking. |
| For non-emergency personnel | : Evacuate unnecessary personnel.                       |

**6.2. Environmental precautions**

|                           |   |
|---------------------------|---|
| Environmental precautions | : Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.<br>Avoid release to the environment. |
|---------------------------|---|

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

|                  |  |
|------------------|--|
| Clean up methods | : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. |
|------------------|--|

**6.4. Reference to other sections**

See section 8. Exposure controls/personal protection

**7. Handling and storage**
**7.1. Precautions for safe handling**

|                               |   |
|-------------------------------|---|
| Handling                      | : Handle empty containers with care because residual vapours are flammable. Wash thoroughly after handling.<br>Use only outdoors or in a well-ventilated area.  |
| Technical protective measures | : Provide good ventilation in process area to prevent formation of vapour. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof electrical, ventilating, lighting, ..., equipment. |
| Special precautions           | : No naked lights. No smoking.<br>Avoid breathing dust, fume, gas, mist, vapours, spray.  |

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

|                     |  |
|---------------------|--|
| Storage             | : Keep only in the original container in a cool, well ventilated place. Keep in fireproof place. Ground/bond container and receiving equipment. Keep container tightly closed. |
| Storage - away from | : Strong bases. Strong acids. Sources of ignition. Direct sunlight. Heat sources.  |

**7.3. Specific end use(s)**

|                     |         |
|---------------------|---------|
| Specific end use(s) | : None. |
|---------------------|---------|

**8. Exposure controls/personal protection**
**8.1. Exposure controls**

**MATERIAL SAFETY DATA SHEET (MSDS)**
**N-OCTANE AR (FOR SYNTHESIS)**
**8. Exposure controls/personal protection (continued)**

|                                 |  |
|---------------------------------|--|
| <b>Personal protection</b>      | : Avoid all unnecessary exposure.  |
| • <b>Respiratory protection</b> | : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended.<br>Wear respiratory protection. |
| • <b>Hand protection</b>        | : Wear protective gloves.  |
| • <b>Skin protection</b>        | : Wear suitable protective clothing.   |
| • <b>Eye protection</b>         | : Chemical goggles or safety glasses.  |
| • <b>Others</b>                 | : When using, do not eat, drink or smoke.  |

**8.2. Control parameters**

|                                     |                      |
|-------------------------------------|----------------------|
| <b>Occupational Exposure Limits</b> | : No data available. |
|-------------------------------------|----------------------|

**9. Physical and chemical properties**
**9.1. Information on basic physical and chemical properties**

|   |                                       |
|---|---------------------------------------|
| <b>Physical state at 20 °C</b>              | : Liquid.                             |
| <b>Colour</b>                               | : Colorless                           |
| <b>Odour</b>                                | : Characteristic.                     |
| <b>Odour threshold</b>                      | : No data available.                  |
| <b>pH value</b>                             | : No data available.                  |
| <b>Melting point [°C]</b>                   | : - 57 °C - lit                       |
| <b>Decomposition point [°C]</b>             | : No data available.                  |
| <b>Critical temperature [°C]</b>            | : No data available.                  |
| <b>Auto-ignition temperature [°C]</b>       | : 220°C                               |
| <b>Flammability (solid, gas)</b>            | : Highly flammable liquid and vapour. |
| <b>Flash point [°C]</b>                     | : 13,0 °C - closed cup                |
| <b>Initial boiling point [°C]</b>           | : 125 - 127 °C - lit                  |
| <b>Final boiling point [°C]</b>             | : No data available.                  |
| <b>Evaporation rate</b>                     | : No data available.                  |
| <b>Vapour pressure [20°C]</b>               | : 14,7 hPa at 20 °C                   |
| <b>Vapour density</b>                       | : No data available.                  |
| <b>Density [g/cm<sup>3</sup>]</b>           | : 0,703 g/cm <sup>3</sup> at 25°C     |
| <b>Relative density, liquid (water=1)</b>   | : No data available.                  |
| <b>Solubility in water</b>                  | : ca.0,007 g/l at 20 °C               |
| <b>Log Pow octanol / water at 20°C</b>      | : No data available.                  |
| <b>Viscosity at 40°C [mm<sup>2</sup>/s]</b> | : No data available.                  |

**9.2. Other information**

|                             |                      |
|-----------------------------|----------------------|
| <b>Explosive properties</b> | : No data available. |
|-----------------------------|----------------------|

**MATERIAL SAFETY DATA SHEET (MSDS)**
**N-OCTANE AR (FOR SYNTHESIS)**
**9. Physical and chemical properties (continued)**

|                              |                                     |
|------------------------------|-------------------------------------|
| Explosion limits - upper [%] | : Upper explosion limit : 6,5 %(V)  |
| Explosion limits - lower [%] | : Lower explosion limit : 0,96 %(V) |
| Oxidising properties         | : No data available.                |

**10. Stability and reactivity**
**10.1. Reactivity**

|            |                    |
|------------|--------------------|
| Reactivity | : Not established. |
|------------|--------------------|

**10.2. Chemical stability**

|                    |  |
|--------------------|--|
| Chemical stability | : Stable under recommended storage conditions. |
|--------------------|--|

**10.3. Possibility of hazardous reactions**

|                     |                    |
|---------------------|--------------------|
| Hazardous reactions | : Not established. |
|---------------------|--------------------|

**10.4. Conditions to avoid**

|                     |  |
|---------------------|--|
| Conditions to avoid | : Direct sunlight. Extremely high or low temperatures. Open flame. |
|---------------------|--|

**10.5. Incompatible materials**

|                    |                               |
|--------------------|-------------------------------|
| Materials to avoid | : Strong acids. Strong bases. |
|--------------------|-------------------------------|

**10.6. Hazardous decomposition products**

|                                  |   |
|----------------------------------|---|
| Hazardous decomposition products | : Fumes. Carbon monoxide. Carbon dioxide.<br>May release flammable gases. |
|----------------------------------|---|

**11. Toxicological information**
**11.1. Information on toxicological effects**
**Acute toxicity**

|              |   |
|--------------|---|
| • Inhalation | : LC50-inhalation-rat-4h-118.000 mg/m3                              |
| • Dermal     | : Based on available data, the classification criteria are not met. |
| • Ingestion  | : May be fatal if swallowed and enters airways.                     |

**Corrosion**

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

**Irritation**

: Causes skin irritation.

**Sensitization**

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

**Mutagenicity**

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

**Carcinogenicity**

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



**MATERIAL SAFETY DATA SHEET (MSDS)**
**N-OCTANE AR (FOR SYNTHESIS)**
**11. Toxicological information (continued)**

|                               |   |
|-------------------------------|---|
| <b>Toxic for reproduction</b> | : Based on available data, the classification criteria are not met. |
| <b>STOT-single exposure</b>   | : May cause drowsiness or dizziness.                                |
| <b>STOT-repeated exposure</b> | : Based on available data, the classification criteria are not met. |
| <b>Aspiration hazard</b>      | : May be fatal if swallowed and enters airways.                     |

**12. Ecological information**
**12.1. Toxicity**

|                             |   |
|-----------------------------|---|
| <b>Toxicity information</b> | : Very toxic to aquatic life with long lasting effects. |
|-----------------------------|---|

**12.2. Persistence - degradability**

|                                    |   |
|------------------------------------|---|
| <b>Persistence - degradability</b> | : May cause long-term adverse effects in the environment. |
|------------------------------------|---|

**12.3. Bioaccumulative potential**

|                                  |                    |
|----------------------------------|--------------------|
| <b>Bioaccumulative potential</b> | : Not established. |
|----------------------------------|--------------------|

**12.4. Mobility in soil**

|                         |                    |
|-------------------------|--------------------|
| <b>Mobility in soil</b> | : Not established. |
|-------------------------|--------------------|

**12.5. Results of PBT and vPvB assessment**

|   |   |
|---|---|
| <b>Results of PBT and vPvB assessment</b> | : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH. |
|---|---|

**12.6. Other adverse effects**

|                                  |                                     |
|----------------------------------|-------------------------------------|
| <b>Environmental precautions</b> | : Avoid release to the environment. |
|----------------------------------|-------------------------------------|

**13. Disposal considerations**
**13.1. Waste treatment methods**

|                            |   |
|----------------------------|---|
| <b>General</b>             | : Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations.<br>Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. |
| <b>Special precautions</b> | : Handle empty containers with care because residual vapours are flammable.<br>Hazardous waste due to toxicity.   |



**MATERIAL SAFETY DATA SHEET (MSDS)**
**N-OCTANE AR (FOR SYNTHESIS)**
**14. Transport information**
**14.1. Land transport (ADR-RID)**

Proper shipping name : OCTANES  
 UN N° : 1262  
 H.I. nr : 33  
 ADR - Class : 3  
 Labelling - Transport : 3 : Flammable liquid.



ADR - Classification code : F1  
 ADR - Group : II  
 ADR - Packing instructions : P001 R001  
 ADR - Limited Quantity : 1 L  
 ADR - Tunnel code : D/E : Bulk or tank carriage: Passage forbidden through tunnels of category D and E. Other carriage: Passage forbidden through tunnels of category E.


**14.2. Sea transport (IMDG) [English only]**

Proper shipping name : OCTANES  
 UN N° : 1262  
 IMO-IMDG - Class or division : 3 : Flammable liquid.  
 IMO-IMDG - Packing group : II  
 IMO-IMDG - Packing instructions : P001  
 IMO-IMDG - Limited quantities : 1 L  
 IMO-IMDG - Marine pollution : Yes  
 EMS-Nr : F-E S-E

**14.3. Air transport (ICAO-IATA) [English only]**

Proper shipping name : OCTANES  
 UN N° : 1262  
 IATA - Class or division : 3 : Flammable liquid.  
 IATA - Packing group : II  
 IATA - Passenger and Cargo Aircraft : ALLOWED  
 - Passenger and Cargo - Packing instruction : 353

**MATERIAL SAFETY DATA SHEET (MSDS)**
**N-OCTANE AR (FOR SYNTHESIS)**
**14. Transport information (continued)**

|                                    |           |
|------------------------------------|-----------|
| - Passenger and Cargo - Maximum    | : 5 L     |
| Quantity/Packing                   |           |
| IATA - Cargo only                  | : ALLOWED |
| - Cargo only - Packing instruction | : 364     |
| - Cargo only - Maximum Quantity/   | : 60 L    |
| Packing                            |           |
| IATA - Limited Quantities          | : 1 L     |
| ERG-Nr                             | : 3H      |

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

|  |  |
|--|--|
| Safety, health and environmental regulations/legislation specific for the substance or mixture | : Ensure all national/local regulations are observed.              |
| REACH Restrictions - Annex XVII  | : The components of this product are not subject to restrictions.  |
| REACH Authorisation - Annex XIV  | : The components of this product are not subject to authorization. |

**15.2. Chemical Safety Assessment**

|                            |                                |
|----------------------------|--------------------------------|
| Chemical Safety Assessment | : It has not been carried out. |
|----------------------------|--------------------------------|

**16. Other information**

|  |   |
|--|---|
| Revision                                       | : Revision - See : *  |
| Abbreviations and acronyms                     | : PBT: persistent, bioaccumulative and toxic.<br>vPvB: very persistent and very bioaccumulative   |
| Sources of key data used                       | : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006            |
| List of relevant R phrases (heading 3)         | : R11 : Highly flammable.<br>R38 : Irritating to skin.<br>R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.<br>R65 : Harmful : may cause lung damage if swallowed.<br>R67 : Vapours may cause drowsiness and dizziness.           |
| List of full text of H-statements in section 3 | : H225 : Highly flammable liquid and vapour.<br>H304 : May be fatal if swallowed and enters airways.<br>H315 : Causes skin irritation.<br>H336 : May cause drowsiness or dizziness.<br>H400 : Very toxic to aquatic life.<br>H410 : Very toxic to aquatic life with long lasting effects. |
| Further information                            | : None.   |

## MATERIAL SAFETY DATA SHEET (MSDS)

### N-OCTANE AR (FOR SYNTHESIS)

In accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation (CE) N° 1272/2008

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